EXPO 2030 ROMA
FOR AFRICA
PROJECTS FOR
A COMMON GROWTH
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A COMMON GROWTH
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In an increasingly interconnected world, it is evident how the global challenges that we are facing affect all People and the Territories we inhabit. Challenges of an unprecedented scale which put the future of humanity at stake. In this context, collaboration is the only key to address the major issues of our time, and education and research are the most powerful tools to fuel both growth and social development.

The Expo 2030 Roma Italian candidacy, with the theme ‘People and Territories: Regeneration, Inclusion, Innovation’, aims to identify, together with all the Participating Countries, sustainable solutions to meet these challenges through new ideas and more effective tools. Expo 2030 Roma is based on scientific cooperation, which is at the heart of every prosperous society and is the key to ensure a better future for future generations. With this in mind, our project will act as an accelerator to promote the growth of relations between Italy and Africa, focusing on education and research.

The relation between Italy and Africa has both ancient roots and a bright future. It represents a bridge between continents, cultures and traditions and it holds great opportunities encompassing a broad spectrum of sectors that are fundamental to human life, such as food, health, agriculture, climate change, energy transition, environmental protection and digital innovation. Issues that we want to address and overcome together.

This book is a collection of projects implemented by fifty Italian universities and it highlights initiatives that bring together the heart of Italy and the soul of Africa, exploring new patterns of collaboration towards development and sustainability. The academic cooperation between our regions is built on the desire to work together to create new partnerships and to promote a positive change. It is an extraordinary communion of intentions whose potential is unlimited.
Expo 2030 Roma is not just intended to be a Universal Exhibition but an inclusive event, a unique platform to build international collaborations and to support scientific research. The Tor Vergata site chosen to host the Exposition has been conceived from the outset to become, in the Post-Expo period, a ‘Park of Open and Collaborative Knowledge for Sustainable People and Territories’, in which the Participating Countries will have their own scientific centre to carry out joint research, and where the excellence of the Italian academic world will merge with the skills, knowledge and experience of the African Countries.

Scientific collaboration between Italy and Africa will therefore stand as a great opportunity to improve the quality of life on our planet. Health, food, education, environmental protection and equal opportunities are key components of the common good, which must be the main measure of the success of every society, because there is no true development if it is not shared by all.

When the routes of our international cooperation intersect with those of the development and the promotion of growth for African Countries, a long-lasting, reliable and effective relationship ensues. Our action to promote Rome as the city to host the Universal Exposition in 2030 has also been constantly inspired by this pattern: no single events, but long-term paths to be built together.

For this reason, on behalf of the Expo 2030 Roma Bid Committee, I express my great pride to be part of this initiative and I thank the Italian Universities, the Conference of Italian University Rectors (CRUI) and the University Coordination for Development Cooperation (CUCS) for the projects presented as evidence of a long and fruitful path of academic and scientific collaboration to undertake together.

Amb. Giampiero Massolo
Chairman of the Expo 2030 Roma Bid Committee
The numerous projects presented within this publication perfectly illustrate the equal and collaborative relationship that characterises the bond that unites Italy and Africa. A renewed bond today that we want to strengthen and intensify with our African friends and partners, because it is only through cooperation that we can overcome the challenges that the entire international community is called upon to address in this increasingly complex and in many ways difficult historical time.

With this spirit, the Italian government has launched the idea of a new ‘Mattei Plan’, on which the Council of Ministers recently approved a Decree-Law, as a concrete commitment towards a renewed partnership on equal and non-predatory bases to strengthen our presence in fields of common interest, starting with economics and education. The aim is to bring stability to the African continent. Desertification, the rising of oceans and global temperature, droughts, food insecurity and migration are some of the challenges that drive us to act more fervently in search of effective and shared solutions.

An extremely dynamic continent, theatre of epochal phenomena such as unprecedented demographic growth, Africa is for Italy an indispensable and unavoidable partner in tackling these common issues, offering a vast number of opportunities for the development of collaborations, in the name of scientific research, innovation and sustainability.

The projects illustrated in this publication express Italy’s commitment to promote dialogue, thanks to the numerous initiatives implemented by Italian universities and civil society organisations in close connection with our African partners, and to establish long-term cultural partnerships with all African countries, also in the framework of the candidacy of Rome to host the Expo in 2030.

I would like to thank the Italian Universities involved in this activity, the Conference of Italian University Rectors (CRUI) and the University Coordination for Development Cooperation (CUCS) for the projects submitted and the Expo 2030 Roma Bid Committee that coordinated this initiative.

Antonio Tajani
Vice President of the Council of Ministers
Minister of Foreign Affairs and International Cooperation
MESSAGE FROM THE ITALIAN MINISTER OF UNIVERSITY AND RESEARCH
TO PROMOTE A LONG-LASTING COLLABORATION BETWEEN ITALY AND AFRICA FOR SUSTAINABLE DEVELOPMENT

In view of emerging challenges but also new opportunities for growth, collaboration is the essential strategy to address the major issues of our time. Under this epochal challenge, education, training and research are the fundamental pillars to nurture human and social development and to ensure a future of peace and well-being for the new generations.

The candidacy of Rome to host the Expo in 2030, with the theme ‘People and Territories: Regeneration, Inclusion, Innovation’, aims to find sustainable solutions to these challenges through new ideas and tools, within a fruitful collaboration with other nations. Expo 2030 Roma will be much more than a Universal Exhibition, becoming an inclusive platform for international collaboration and broad support for scientific research. The Tor Vergata site, chosen to host the event, will become a ‘Park of Open and Collaborative Knowledge’, built to remain vibrant and dynamic even in the post-Expo period. Within this future Park numerous research projects will enrich the international debate and will trace the path to provide answers to yet unresolved questions.

With this common objective, the ancient bond between Italy and Africa represents a natural bridge between cultures and opportunities, involving crucial sectors such as food, health, agriculture, climate, energy, environment and digital innovation: a bridge that should primarily contribute to the transfer of knowledge and to nurture new solutions and new opportunities for life.

International cooperation for the growth of the African states must be continuous and durable: Expo 2030 Roma strongly embraces this long-term approach. The projects presented in this book by fifty Italian universities are conceived precisely with this aim in mind: to promote a long-lasting collaboration between Italy and Africa for sustainable development. As the Italian Minister of Universities and Research, I am proud of this initiative and I thank the Italian universities, the CRUI and the CUCS for their fructuous collaboration on these projects and for their commitment to show that the City of Rome and the entire Italian system are ready to host a Universal Exposition under the banner of inclusion and growth.

Prof. Sen. Anna Maria Bernini
Italian Minister of University and Research

MESSAGE FROM THE ITALIAN MINISTER OF FOREIGN AFFAIRS
AFRICA AND ITALY:
PARTNERS FOR GROWTH
The UN 2030 Agenda with its seventeen Sustainable Development Goals and the ongoing challenges characterised by environmental, economic and geopolitical uncertainties, call for innovative strategies and multi-actor synergies to combine economic growth with multidimensional sustainability goals, including environmental protection and social inclusion. In this framework, the academic world and the scientific community play a key role. The University Coordination for Cooperation and Development (CUCS), established in 2007, is located within this context. The CUCS was originally coordinated by the Politecnico di Milano and, since 2020, by the University of Trento, and involves forty-four Italian universities. It promotes the cultural debate on the role of the university and partnerships as a key operational modality to create integrated and systemic development processes everywhere in the world, in accordance with Law 125/2014.

Since 2020, the CUCS has been a network recognised by the Conference of Italian University Rectors (CRUI), with which it works in constant synergy to foster institutional coordination between universities engaged in cooperation and development and to promote the organic incorporation of cooperation in university internationalisation procedures.

There are three areas of academic actions in the cooperation processes:

**Higher Education**
- To enrich training courses and to create new professional skills, targeting both Italian students who will work in the world of cooperation and students from partner countries to be trained in Italy and in their country of origin, often supported by special scholarship programmes.
- To prepare and to create professionals able to play an effective role in the transformation of societies in the entire world.
- Sustainable development issues should be integrated into the curricula of any university course, preparing training packages contextualised to specific needs.

**Research for local development**
- University scientific research is an indispensable tool for development: it innovates cooperation practices and improves their effectiveness, also through the development of participatory technology transfer models capable of supporting autonomous development processes. The university has a consolidated tradition of scientific cooperation characterised by dialogue with local stakeholders and the prospect of mutual learning.
- Even in the analysis of the results and impact of cooperation interventions, universities are qualified institutional evaluators and are capable of developing up-to-date evaluation methodologies, appropriate to the specific interventions and programmes, and are able to process the knowledge required to plan long-term strategies.
Scientific Diplomacy (and Territorial Partnerships)

- Scientific diplomacy offers a new vision of internationalisation, conceived as a response to the need to endow the economies of less advanced countries with instruments and policies capable of preventing crises arising from external shocks (economic, environmental, socio-political).
- It consolidates the heritage of international scientific relations, an invaluable network of knowledge and dialogue, a flywheel of development for further relations for our country in the private or public sphere.
- In conjunction with the public and private sectors, it enhances the transfer of knowledge and the local creation of entrepreneurial and artisanal activities and local development. Numerous Italian universities contribute to the training of the future managerial class in countries that have close connections with our country. Other universities work on capacity building and empowerment operations with local universities, but also in cooperation with companies, institutions and civil society organisations.

The mapping of the university projects operating in Africa, highlighted in the following pages, demonstrates the extent and value of academic commitment to cooperation in the three areas highlighted. We would therefore like to thank all the universities that have contributed to the implementation of this book, as well as the Expo 2030 Roma Bid Committee that has enabled it to be produced, hoping that it will be an inspiration for further developments in the relations between Italy and Africa.
+ 200 Projects, involving almost all the African countries and open to future developments

47% Education and Institutional Capacity Building

47% Research for Local Development

6% Science Diplomacy and Territorial Cooperation
INTER-UNIVERSITY PROJECTS
Rural development, just like urban development, has long been addressed at the educational and policy-operational level with a sectoral logic. However, rampant urbanization and the crisis faced by systems of traditional agriculture in the Global South are revealing deep interconnections, which connect urban and rural transformation processes, both at the local and global scale. The land-use, functionality and quality of life in most urban areas in the Global South are often critical, while the resources used up by urban systems (soil, water) generate major imbalances from the point of view of environmental sustainability for large parts of the earth’s surface. In this context, an integrated approach to land management is necessary for achieving sustainable development. Under PfK Rural Development and Land Management, the universities of Florence (in the leading position), Padua, Pisa, Siena and Turin have provided 19 grants for Master’s programmes and 8 for PhD programmes in order to provide training in analyzing economic, social and cultural processes affecting land transformations, and to support the preparation of sustainable land management plans, informed by a balanced relationship between cultural landscape, settlement structures and agricultural practices.

RESULTS

Between 2019 and 2022 the PfK programme provided 27 scholarships (19 for Master’s Programmes and 8 for PhD programmes). The students got to attend courses at the Italian universities that were involved in the initiative and were given the opportunity to deepen their knowledge regarding ongoing crucial transformative processes in the Global South. They thus acquired the theoretical and methodological tools needed to analyse and carry out the spatial reorganization of rural and urban contexts. In their thesis, they were able to apply their acquired expertise with the aim of addressing similar issues in their country of origin. Workshops on specific topics jointly organized by the universities involved gave the students the opportunity to gain insight into different methodological approaches and research perspectives.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

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Partnership for Knowledge is a higher education initiative funded in the a.y. 2019-22 by AICS in partnership with several Italian universities. The initiative aims to create high-level training and research opportunities dedicated to young people from priority countries for Italian cooperation and to make available a tool for dialogue with the Italian university system in order to reflect in a coordinated and constructive manner on the more effective development policies and actions. Platform 2 focuses on environmental and health issues that influence morbidity and mortality in tropical countries training experts in biotechnology, molecular biology, genetics and neuroscience, as well as in civil engineering for water sanitation and hygiene. It also provides graduates with interdisciplinary knowledge in the field of international cooperation and economic development. The project financed 18 scholarships: 6 two-year Master’s degree scholarships and 12 three-year PhD scholarships.

RESULTS
- Activation of the platform
- Creation of an integrated and synergistic higher education system with the strategies of the Italian Cooperation for the theme of Health, Water Sanitation and Good Hygiene through a program of 6 graduate scholarships master’s degree and 12 PhD;
- Creation of an alumni network;
- Drafting of the position paper “Areas of University Cooperation from the experience of the Partnership for Knowledge - a dynamic white paper”

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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Partnership for Knowledge is a higher education initiative of the Italian Cooperation system aimed at providing life-changing opportunities to researchers, public administration officers, social entrepreneurs and young leaders who are committed to developing their professional and academic skills, strengthen their capacities, widen their networks and experience the Italian culture to make a contribution in their home contexts. The programme, funded in years 2019-2022 by the Italian Agency for Development Cooperation in partnership with several Italian universities, offers a number of Master of Science scholarships and PhD fellowships in the following thematic domains, grouped in four academic platforms. Platform 03 aims at providing advanced competencies in the sectors of energy, environment and industrial innovation. The energy platform trains highly skilled technicians in renewable energy systems, energy efficiency and energy planning. The environment platform focuses on risk protection and prevention, climate change and water management. The industrial innovation platform promotes the new frontiers of innovation such as industry 4.0, Internet of Things/Big Data/Data Analytics, social innovation and circular economy.

The overall PFK program is aimed at producing a batch of graduates from Afghanistan, Albania, Bolivia, Cuba, El Salvador, Egypt, Ethiopia, Eritrea, Kenya, Lebanon, Jordan, Mozambique, Myanmar, Niger, Pakistan, Palestine, Senegal, Sudan, and Tunisia, thanks to scholarships at Italian universities.

Platform 03 is dedicated to the fields of Sustainable Energy, Environment and Industrial Innovation and has delivered:
- 19 scholarships for Master of Science Programs and 6 scholarships for Ph.D. Programs in the fields of Sustainable Energy, Environment and Industrial Innovation;
- a network of Alumni in the fields of Sustainable Energy, Environment and Industrial Innovation.

A virtual class of Platform 03

**RESULTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

**FUTURE PROSPECTS**

**ACADEMIC COORDINATOR**

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Partnership for Knowledge is a higher education initiative funded in the a.y. 2019-22 by AICS in partnership with several Italian universities. The initiative aims to create high-level training and research opportunities dedicated to young people from priority countries for Italian cooperation and to make available a tool for dialogue with the Italian university system in order to reflect in a coordinated and constructive manner on the more effective development policies and actions. Platform # 4 aims at building value around cultural heritage and sustainable tourism as engines for sustainable development. The academic offer in this field trains experts in the conservation of cultural heritage, as well as it provides graduates with the competences required to fill highly qualified roles of responsibility in tourist destinations and tourism companies, tour operators, travel agencies, hospitality, tourist attractions and events organization firms, nationally and internationally.

**RESULTS**
- Creation of an integrated and synergistic higher education system with the strategies of the Italian Cooperation for the topic of Cultural Heritage and Sustainable Tourism through a program of 13 master’s degree scholarships and 8 research doctorates;
- Creation of an alumni network;
- Drafting of the position paper “Areas of University Cooperation from the experience of the Partnership for Knowledge - a dynamic white paper”

**FUTURE PROSPECTS**
- Potential replicability of the project: yes
- Other potential partner countries: All African countries

**ACADEMIC COORDINATOR**
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The National Somali University has played, since 2014, the role of State University with the aim of offering a quality lay alternative and therefore a different perspective to today’s Somali youth. Since 2014, the Italian government has funded several programmes involving Italian universities working jointly to strengthen NSU both from the infrastructural and academic sides.

Within this framework, the UNS5 project offers a group of students from the National Somali University the opportunity to receive training at Italian universities in the following areas: Agriculture, Economics, Law, Engineering, Medicine, and Veterinary. The initiative intends to give students the opportunity to acquire knowledge, skills and a study approach aimed at problem solving. The scholarship project addresses the need to continue to train the young teaching staff by providing more tools to develop an increasingly modern and effective teaching methodology, through a dedicated MOOC. The project also aims to consolidate the collaboration between Italy and Somalia. Fellows, students, and teachers of the Somali National University are offered online tools for learning the Italian language and culture.

**RESULTS**

The project foresees that the fellows will achieve a Master Degree in the fields of Agriculture, Economics, Law, Engineering, Medicine, and Veterinary, while candidates in Medicine will attend an annual specialization course. Upon returning to Somalia, the fellows will return the skills acquired, in order to transfer the knowledge acquired in Italy to their colleagues. They will also have the opportunity to discuss any specific opportunities for further collaboration with the university directly with UNS. The project also provides for the creation of an online Italian language and culture course, and a MOOC for the development of new teaching methodologies.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries
Six Italian universities together with the Italian Ministry of Education and Research, founded the IHEA Foundation that aims at contributing to facilitate and strengthen the collaboration and the integration between Italian and African higher education institutions. The IHEA Foundation was formally launched in October 2020, during the COVID-19 crisis, activating virtual training mobility programs to support African Universities during the lockdowns. The program involved more than 30 Universities from 13 African countries. Inspired by the Agenda 2030’s SDGs and the aspiration of the African Union’s Agenda 2063, a specialising Master “Sustainable Management of Resources and Cultural Heritage for Local Development: Empowering Higher Education in Africa” was launched in the academic year 2021/2022 as a training programme to work with young lectures and researchers in Ethiopia. Currently the IHEA foundation is establishing, together with local African institutions in Ethiopia and Tunisia different specialising Master and capacity building programme to provide solid academic education for future professionals and experts who will face the societal and global challenges thus requiring multidisciplinary and interdisciplinary methodologies.

RESULTS

• To offer high quality training, both basic and specialized, to students who aspire to acquire a university education of high technical and scientific level that will enable them to work in various sectors of the production and services in the countries concerned;
• Virtual mobility courses;
• Specialized training. The Master “Sustainable Management of Resources and Cultural Heritage for Local Development: Empowering Higher Education in Africa” was delivered in 2022;
• A perspective degree-level training

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African countries

ACADEMIC COORDINATOR
Emanuela Colombo, Giovanni Lozza, Politecnico di Milano; Alessandra Scaglioni, Università di Bologna; Piergiorgio Sonato, Università di Padova; Giorgia Giovannetti, Università di Firenze; Carlo Cereti, La Sapienza; Guido D’Urso, Università Federico II

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(President)
CUCS is the network of Italian Universities for Development Cooperation. It is promoted by CRUI (Conference of Italian University Rectors) to bring together the reflections and actions of the academic world related to international cooperation for sustainable development. The CUCS network was founded in 2007 moving from networking among Italian universities, to encourage the exchange among especially university students together with their professors, on the themes of international cooperation for development.

The main goals of the network are:

- to strengthen Development Cooperation within universities, cross-cutting higher education, research, outreach and networking;
- to be a representative actor for the Italian universities committed in international cooperation for development with the other institutional and civil society actors of development cooperation;
- to facilitate sharing of experiences, knowledge and best practices.

In 2007 the first Memorandum of Understanding was signed, and CUCS has presently 46 national universities members. CUCS has been coordinated by Politecnico di Milano from its origin until 2019 and is now coordinated by the University of Trento.

**RESULTS**

- Bi-annual CUCS conference on universities and cooperation for development
- Supports the participation of universities in institutional bodies related to cooperation for development.
- JUNCO – Journal of Universities and International Development Cooperation
- Facilitates processes of networking and cooperation, rather than competition, among universities at different levels.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
PROJECTS OF ITALIAN UNIVERSITIES
Unibo has a long history of cooperation in Africa in different fields including institutional capacity building. During the last 10 years peer collaboration with African partners have become a distinguishing feature of Unibo international engagement strategy. Institutional relations increased through bilateral (10 HEIs) and Erasmus+ agreements (20 HEIs). Unibo is an active member of the UNIMED network and of the IHEA Foundation – Italian Higher Education with Africa. Unibo is active in the European Intra-Africa programme and in Erasmus+ Capacity Building projects in Sub-Saharan Africa and North Africa. In 2023 Unibo joined the TheGuild-ARUA Clusters of Research Excellence initiative and in 2021 launched the Unibo Global South programme, a self-funded initiative promoting development cooperation projects linked to the SDGs, involving students and staff and focusing on African priority countries of the Italian government and Emilia-Romagna Region Cooperation. The 5 projects are a sample of key collaborations that cover: engineering, environment studies and Space Sciences in Botswana, Egypt, Ethiopia, Ghana, Kenya, Morocco, Nigeria, South Africa and Zambia; European studies, cultural heritage, sustainable tourism and environmental studies in Morocco and Senegal; One Health in Ethiopia, Tanzania and South Africa; Food Sciences and technologies in Ethiopia, Kenya, Morocco, Tanzania, Tunisia and Uganda.
FoodLAND is an Horizon2020 joint research project led by 28 African and EU partners funded under the EU-Africa R&I Partnership. It aims to develop, implement and validate innovative, scalable and sustainable technologies to support the nutrition performance of local food systems in Africa, while strengthening agro-biodiversity and food diversity as well as diversity of healthy diets. FoodLAND adopts a bottom-up approach, the initiatives are based on producers’ and consumers’ motivation, needs and choices. By combining surveys with experimental economics, the research measures to what extent risk attitude, intertemporal choices, trust and interest towards collaboration affect the propensity for innovation such as adoption of new technologies and new food products. FoodLAND will contribute to the reinforcement of the long-standing relationships between EU and African Universities as well as to the enhancement of their research cooperation on sustainable agriculture and food and nutrition security.

**RESULTS**

- **6 OPEN TECHNOLOGICAL INNOVATIONS** for crop and fish farming and food processing, tested, implemented and validated together with local smallholder farmers and local food processors, both to strengthen nutrition-responsive agro-biodiversity and boost their capacity.
- **4,000 INNOVATOR FARMERS** will benefit from the project, by participating in the research activities of developing, implementing and validating the innovations.
- **14 FOOD HUBS, paired with 14 cities.** Food Hubs will join together local smallholder farmers, food processors, authorities, researchers and NGOs.
- **17 NOVEL FOOD INGREDIENTS / PRODUCTS**, ranging from fresh, dried and processed vegetables and fish to composite flours and therapeutic foods, enhancing balanced, healthy diets, and contributing to the reduction of malnutrition.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partners countries: African Universities / Research Centres, NGOs, and SMEs from

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STUDY OF SUSTAINABLE WATER MANAGEMENT TO SUPPORT AGRO-FORESTRY-PASTORAL ACTIVITIES IN THE BAO BOLONG VALLEY, KAFFRINE REGION (SENEGAL)

Unibo Global South project

Category: RESEARCH FOR LOCAL DEVELOPMENT
Health, water and hygiene, One Health

Geographical area: Africa – Senegal

Donor(s): Università di Bologna

Project duration: 2022 - 2023

PARTNERS

• Università di Bologna
• Inspection des Eaux et Forêts – IREF
• COMI – Cooperazione per il mondo in via di sviluppo
• CIM ONLUS – Centro Studi Cooperazione Internazionale e Migrazione

RESULTS

• A GIS database of the project data, which will be made available to local authorities and will provide a valuable tool for land management and planning.
• A manual of guidelines for the local management of water resources, including the evaluation of a set of water management solutions and their transferability to the valley context.
• Synergies with other Global South projects (‘Service Learning, Innovation, Translation (SLIT)’) to translate dissemination material into African languages relevant for local communities (e.g. Wolof language)

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: Senegalese universities for future projects in the field of research, education, students and staff exchange

The aim of the project is to acquire in-depth knowledge of water management issues in the Kaffrine region of Senegal: on the one side, by improving understanding of the territory; and on the other side, by training the populations of 20 rural villages spread along the course of the Bao Bolong River about best practices in terms of water supply and the sustainable management of water resources to support agro-forestry-pastoral activities. Activities included: monitoring groundwater, the course of the river and its main tributaries, as well as geomorphologic and topographic surveys using a drone. All the activities have involved the participation of the local population: round tables with local administrators and open training sessions have been organised to raise awareness among the population and students about local environmental issues and encourage them to adopt better practices in the various productive activities (agriculture and livestock farming) in order to preserve the quality of water and soil.
The goal of SME2KE project is to reform postgraduate manufacturing curricula at the 6 African partner universities fostering or introducing laser-based manufacturing (LbM) technologies to strengthen future manufacturing engineers’ competences to fabricate products sustainably without defects and wastes. By promoting the reduction of wastes and making the manufacturing production processes more efficient, SME2KE wishes to contribute to the SDGs and the Green Deal. In addition, SME2KE will introduce innovative pedagogical methods based on problem-based learning (PBL) methods, students-centred teaching and real-life manufacturing challenges wishing to increase the employability of graduates and their entrepreneurial skills. SME2KE project is the result of a fruitful collaboration between the University of Bologna and BIUST started within the Education in Laser-based Manufacturing project funded in 2020 by the Intra-Africa programme and promoted within the UNESCO Chair on Advanced Manufacturing established at BIUST in 2022. The cooperation in this field will also take advantage of the Marie Curie project Lasers for Accelerated Net-Zero Transition (“Lasers4NetZero”) awarded in 2023 and coordinated by Unibo with the active participation of BIUST.

**RESULTS**

- 6 master curricula (one at each African partner university) will be updated by incorporating taught modules including elements of LbM applications, Big Data Science (BDS), Machine Learning (ML) and Artificial Intelligence (AI) towards empowering graduates with skills to fabricate products sustainably without defects and wastes;
- 1 unique African e-platform will be created to support education and training related to LbM technology at Postgraduate level

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: African Universities / Research Centres, Industries and SMEs. For example, results will be also disseminated within the Intra-Africa consortia ELbM and the recently funded NeDMEV involving also Ghana and Nigeria

**PARTNERS**

- Università di Bologna
- BIUST - Botswana International University of Science & Technology (Coordinator)
- University of Botswana
- Jomo Kenyatta University of Agriculture and Technology (Kenya)
- Dedan Kimathi University of Technology (Kenya)
- University of the Witwatersrand (South Africa)
- Nelson Mandela University (South Africa)
- Council for Scientific and Industrial Research (South Africa)
- Technische Universitaet Ilmenau (D)

**ACADEMIC COORDINATOR @ UNIBO:**
Alessandro Ascarl

**ACADEMIC COORDINATOR @ BIUST:**
Eyitayo Olatunde Olakanmi

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FAST4Future aims at strengthening Science, Technology, Engineering and Mathematics (STEM) in Africa Higher education by promoting Planetary and Space Science and Technology (PSST) for the sustainable growth and jobs creation in a continent that is rapidly embracing the 4th industrial revolution. PSST has been identified as key area of investment in Africa as it provides graduates and young scientists with both the necessary soft and practical skills to face 21st century challenges such as digital innovation and job creation. The aims of FAST4Future are: a) to increase the accessibility to STEM in African Higher Education; b) to modernize existing PSST programmes in collaboration with industry and policy makers; c) to foster the internationalization of partner HEIs by promoting mobility of staff; d) to promote standardization of PSST in Africa in support of students’ mobility. Fast4Future project is the result of a fruitful collaboration between the University of Bologna and BIUST started within the PanAfrican Planetary and Space Science Network (PAPSSN) project funded in 2020 by the Intra-Africa programme and promoted also within the EUROPLANET Research Infrastructure Society.

**RESULTS**

- 1 Centre of Excellence in PSST linked to a virtual platform to increase the accessibility and collaborative actions
- 8 existing PSST Master programs reviewed in order to fill the mismatches between academic offer and job market requirements
- 1 White paper for the credit recognition of PSST courses across African institutions
- 1 Report on the conditions of women in STEM in the African continent
- 18 academics and 10 administrative staff trained

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Universities/Research Centres, Space Agencies, Industries and SMEs from African countries. For example, results will be also disseminated within the PAPSSN (involving also Ethiopia) and the EUROPLANET society
## JOINT MASTER DEGREE IN EUROPEAN LITERATURE CULTURES

**Erasmus Mundus Joint Master Degree**

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<th>Category</th>
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<th>Donor(s)</th>
<th>Project duration</th>
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<td>HIGHER EDUCATION</td>
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<td>European Union</td>
<td>2007 - ongoing</td>
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The CLE Master is a two-year academic program that aims to promote education with a close eye on the multicultural aspects of Europe. Students are required to study in two or three partner universities and at the end receive two or three diplomas issued by all the universities of the consortium where they spent at least one semester. CLE Master’s program teaches students how to manage the manifold aspects of the European scene, offering them a multicultural education along 3 main methodological lines: a) **Cultural education** in at least three domains of the European thought, ranging from literature to history and language sciences; b) **Dynamic education**: thanks to its program of international exchange, CLE wants to train dynamic and critical experts in the humanities, with a good awareness of country-specific problems and the ability to make competent decisions; c) **Skill-based education** intended to prepare the students to meet the needs of the job market. The CLE Master programme has been awarded the Erasmus Mundus label since 2007 and Université Cheikh Anta Diop de Dakar (UCAD) has joined CLE consortium in 2013.

### RESULTS

Since UCAD joined the CLE consortium in 2013:
- 23 CLE students have spent 1 semester at UCAD
- 3 Senegalese students have enrolled in CLE
- 13 Visiting scholars from UCAD has taught and held seminars within the CLE master programme

Following the collaboration within CLE, in 2019 a bilateral agreement has been signed between Unibo and UCAD which has also become a Unibo Erasmus+ International Credit Mobility partner, since then:
- 10 Unibo students spent 1 semester at UCAD
- 15 UCAD students spent 1 semester at Unibo
- 10 UCAD Staff spent a Visiting period at Unibo

### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: Museums, publishing houses and other non-academic actors in Senegal to host students for internships.
  To increase the number of enrolled students from Africa.

### PARTNERS

- Università di Bologna
- Université de Haute-Alsace (Mulhouse)
- Université de Strasbourg
- Panepistimion Thessaloniki
- Universidade de Lisboa
- Université Cheikh Anta Diop de Dakar (UCAD)
- University of Mumbai
- Ivane Javakhishvili Tbilisi State University
  Georgia (the agreement is being finalized)

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**CLE Staff at the joint graduation ceremony in Lisbon**
International cooperation is one of our most important missions at Humanitas University. A special relationship with African countries has demonstrated a spirit of solidarity that forms the basis not only of the University, but even before this, of Humanitas Research Hospital. This relationship has developed through various initiatives. Many of our doctors and students have had experiences volunteering in Madagascar, Eritrea, Congo, Mali, Senegal, Kenya, Tanzania and Uganda. Thanks to the Humanitas Foundation, some African nurses left Mozambique for the very first time and were able to carry out a training period at our hospital. In 2020, the hospital hosted two senior doctors from the Central African Republic who underwent training and in-depth instruction in the use of ultrasound and CT diagnostics. They stayed in ICH for five months. Today, Humanitas University plays its part by contributing to the training of doctors in the Central African Republic, while our Scientific Directorate actively participates in campaigns for the transfer of vaccines to the African continent. Furthermore, there are many students of African origin present at our University, who, through the ‘African Society’, are able to promote a better understanding of African culture.
STUDENTS IN AFRICA
Six months of training and field experience for Humanitas doctors

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In response to global health challenges faced by Humanitas University, the University offers a programme for residents in the African continent, connected to the project “Junior Project Officer” (JPO) created by the organisation Doctors with Africa CUAMM. As such, Hunimed offers a combined theory and practical training opportunity structured as a ‘Cooperating for Health in Africa’ training course, including six months of field experience. The programme is aimed at residents who wish to prepare for work in international cooperation. The areas currently included are: • Internal Medicine • Emergency Medicine • General Surgery • Vascular Surgery • Orthopaedics • Otorhinolaryngology • Anaesthesia and Resuscitation. Twelve doctors from Humanitas Research Hospital who were enrolled in these residency schools applied to take part in the training in the 22/23 Academic Year. Seven of them were accepted and will go to Africa.

Results
Residents are offered the opportunity to spend a six-month period in an African hospital identified by CUAMM, and this experience is recognised as an integral part of the cv. Further hospital sites have been identified that may welcome residents in the future, starting as early as next year (Mtendere Mission Hospital, Chirundu - Zambia and Centre Medico Chirurgical Saint Paul, Ampfy - Madagascar with Change onlus). The aim of this project is to offer residents the opportunity to experience in a context different from their own and to support the activities of the hospital that welcomes them.

Future Prospects
• Potential replicability of the project: yes
• Other potential partner countries: All African countries

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As part of the University’s educational programme, students of medicine, nursing and physiotherapy are offered a 3-4 week experience in an African hospital. At present, we are in cooperation with Mtendere Mission Hospital in Chirundu, Zambia, and the Centro Sanitario Polispecialistico St. Paul in Ampfy, Madagascar. The project includes a training and selection phase, starting with the students’ reasons for applying, with in-depth meetings and training. During the experience, each group of students is accompanied by a mentor (doctor or nurse) who also has the task of helping them to reflect on what they have experienced. This path enriches both the professional development in humanities and the awareness of the diverse availability of resources in healthcare, as well as the necessity to adapt to working without the advanced technological support we are accustomed to.

**RESULTS**

The purpose of this proposal is primarily educational: Humanitas University believes it is important that sensitivity and knowledge of low- and middle-income countries and their health facilities are included in the education of a future health professional. On their return, participants share and exchange their experiences with their colleagues within and outside of the University. This communication helps to make the experience common knowledge and to motivate new people to apply.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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### TRAINING COURSES

*Lessons for health personnel in low and middle income countries*

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<th>Category</th>
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University teaching staff have been willing to contribute to training courses on specific topics for health personnel in countries with inadequate resources. At the request of the Bambino Gesù Paediatric Hospital in Rome (OPBG), a collaboration was initiated with the Bangui Paediatric Hospital in the Central African Republic. In particular, our University has been providing courses in immunology, endocrinology, pharmacology and embryology for the residency school at Bangui University for approximately five years. The pandemic greatly reduced the possibility of travel, but courses continued regularly via the learning management platform. In addition, training activities included a five-year scholarship for a young doctor to carry out the residency programme in paediatric surgery at the University of Dakar in Senegal. The course will end in 2025.

### RESULTS

Contribution to the reopening of the Residency School in Paediatrics (activity had been stopped due to the war. Ten new paediatricians are now working in the area).

### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
Luiss University has demonstrated exceptional expertise in fostering joint projects and cultivating relationships with Africa, exemplified by its strategic partnership with Eni.

This collaboration is dedicated to establishing a dynamic international network of African experts hailing from various think tanks, research centers, and universities. The primary objective is to empower and enhance public discourse and policy formulation within African nations, particularly in the realm of energy transition.

Luiss University, in tandem with Eni, is committed to facilitating the exchange of invaluable resources and expertise. By engaging these experts, Luiss is actively contributing to the development and consolidation of progressive policies that address the critical challenges and opportunities presented by the energy transition in African countries.

This partnership showcases Luiss University’s dedication to advancing sustainable development and fostering meaningful connections with Africa to drive positive change on the continent.
OBSERVATORY ON THE AFRICAN CONTINENT

The Observatory on the African Continent represents the first initiative of its kind in Italy focused on the study of this region of the world, as well as on the phenomena of student migration and the so-called “brain circulation,” which is crucial for shaping the new generations of global citizens. The perspective is one of continuous integration and inclusion of students from diverse cultures and multiple nationalities. As highlighted throughout the activities of the Diaspora Program, the University serves as the place to experiment with change and discontinuity in order to build a sustainable future based on values of responsibility and inclusivity. The skills acquired in this multicultural environment empower students to become global actors capable of applying their knowledge both internationally and in their respective countries of origin, becoming decision and policy makers, as well as promoters of knowledge, growth, and development.

The Observatory will serve as a center for analysis and the development of strategies to promote international knowledge exchange and sharing. This will begin with programs related to student circular migration, with the aim of fostering mutual enrichment between Italy and the 54 African countries and supporting paths towards sustainable cultural and social growth. Through the Observatory, there will be ongoing monitoring of student mobility flows to and from African countries, in connection with the educational offerings of European universities and the dynamics of growth and social evolution in the students’ countries of origin. In addition to this analysis, strategies will be developed to position the University more effectively within the European framework of international student mobility. The Observatory will be integrated into Luiss University’s Center for International and Strategic Studies (CISS).

RESULTS

The aimed results of the Observatory’s work include: Analysis of student mobility to and from Africa, as well as intra-African student mobility; Examination of how African media represents Italy and, specifically, Italian educational offerings in comparison to other European alternatives; Evaluation of promotional efforts and visibility initiatives for Africa undertaken by European and Italian universities, including their impact on student enrollments and the engagement of African students; Analysis of the contribution of international development cooperation to international student mobility among students of African origin, with a focus on knowledge sharing in the context of sustainable development in the home countries of young individuals and global growth in alignment with the Sustainable Development Goals of the 2030 Agenda; Assessment and in-depth exploration of the impact of Luiss University’s Diaspora Program on the behaviors and choices of prospective students of African origin.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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**The International Network on African Energy Transition (INAET)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Geographical area</th>
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<tbody>
<tr>
<td>RESEARCH FOR LOCAL DEVELOPMENT</td>
<td>Africa – Maghreb and Sub-Saharan countries</td>
</tr>
</tbody>
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**Donor(s)**
- ENI

**Project duration**
- 2023-ongoing

Luiss-ENI will proceed with the activation of a network development strategy composed of experts from think tanks, research centers, universities, national schools of public administration, the private sector, and independent professionals with relevant expertise in the sustainable energy and socioeconomic development of the African continent and the energy transition in Africa.

This network will provide intellectual resources and policy-relevant insights to develop robust analyses capable of influencing public debates in African countries on the topic.

The analyses will have a general theme of the development of Smart cities on the African continent, understood not only as urban realities but as systems for sustainable management of socioeconomic development in Africa as a whole.

### Results

This event aims to organize a discussion among experts from the institutional and academic worlds, research centers, and think tanks to promote debate on topics related to socioeconomic development, climate change, and energy. The workshop aims to identify and delve into collaboration opportunities between Italy and Africa, contributing to the creation and nurturing of a network of experts capable of influencing public discourse with the intention of promoting the exchange of projects, resources, and know-how. In order to collect the effort, Luiss University launched a call for paper.

### Future Prospects

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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The Sub-Saharan Africa Project began in 2019 through a partnership agreement between Eni and Luiss for the joint implementation of programs in the field of education, orientation, and geopolitical analysis.

The collaboration offers scholarships for African students who can study in Rome at Luiss University, and it aims to educate the future African leadership by enabling talented young individuals to pursue an excellent educational path through scholarships.

In order to offer the best learning experience in Luiss, the beneficiaries of this program are supported by a team of tutors and members of Luiss staff throughout their entire career in Rome.

RESULTS

Thanks to this project, 17 students from countries such as Ghana, Mozambique and Angola are pursuing their academic path in Luiss University. 12 students already obtained a degree.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All Sub-Saharan African countries
“Diaspora” refers to foreign-origin communities that, for various reasons such as economic, political, or security concerns, have left their country of origin to settle elsewhere. The role of Diasporas is fundamental in establishing stable and lasting relations between our country and the countries of origin of migrants residing in Italy. They represent cultural bridges and economic development levers for emerging countries. The motivations behind the project lie in the valorization of talents within foreign-origin communities in Italy in support of internationalization and knowledge sharing. Cosmopolitan education is a mission of the university, which has made a strategic choice to focus on the sub-Saharan area, confirmed by the increase in recent years in the number of students at the university originating from these regions.

In addition to international recruitment motivations, the program arises from the need to reach the horizon of circular migration, focusing on economic and social development. This is to ensure that the skills acquired in the multicultural environment of Luiss make students global actors, capable of acting ethically and rigorously and of reapplying their knowledge in major global companies and institutions as well as in their respective countries of origin, becoming decision-makers and promoters of growth and development.

Luiss thus becomes a multicultural meeting place, with Diasporas as protagonists, through which to promote in Africa and the world an inclusive and sustainable educational offer. These themes and commitments are at the heart of the university’s strategic plan for the 2021-2024 period.

**RESULTS**

The project developed by the Luiss International Orientation team aims to increase future international applications, admissions, and enrollments through the establishment of a network and by inviting participation and discussion on the strategic themes of the university. The project, in 2022-2023, has already led to a 40% increase in international students at Luiss University.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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EXECUTIVE FIRST LEVEL MASTER IN GLOBAL PUBLIC DIPLOMACY AND SUSTAINABLE DEVELOPMENT

As detailed in its 2020 Strategy “A Partnership with Africa”, the Italian Ministry of Foreign Affairs and International Cooperation (MAECI) has detailed scenarios for the African continent and the role of Italy in genuinely contributing to the further development and well-being of African states and societies. Specific attention has been directed to thematic priorities (such as peace, security, human rights, development cooperation, migration and mobility, commercial, cultural, scientific and environmental collaboration). The Strategy has also identified four geopolitical areas of intervention (the Mediterranean, Horn of Africa, Sahel and Southern Africa) requiring diversified and multidimensional approaches. Overall, building upon the notion of Value Oriented Diplomacy, this Strategy represents syncretism for Italy, between its vision of Africa and, at the same time, the perception by Africa of our country: trust and mutual respect, leading to concrete and virtuous initiatives which pursue the key goal of promoting peace and stability within African communities as well as their sustainable development.

The need to foster this dialogue with Africa is part of the overarching collaboration with the European Union aimed at forging a new, shared partnership apart from the outdated “benefactor/beneficiary” dynamic. The overarching goal into “build bridges” to the benefit of European and international partners in addressing great global challenges and opportunities, such as peace and security, governance and human rights, migratory phenomena, investments and cooperative development, climate change and sustainability cultural and scientific cooperation.

RESULTS

Furthering the implementation of this Strategy and the achievement of expected objectives require the sharing of common knowledge and approaches, as well as a common language. Hence the need for training and education initiatives as vehicle for transmitting profound messages and multilateral approaches. Jointly organized by the United Nations Institute for Training and Research (UNITAR) and School of Government at Luiss Guido Carli (SOG), the Executive First Level Master in Global Public Diplomacy and Sustainable Development represents an advanced academic and professional training program aimed at the consolidation of the relationship between Africa and Italy with a global and multilateral approach.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All Sub-Saharan countries

PARTNERS

- Italian Ministry of Foreign Affairs (MAECI)
- UNITAR

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Over the past two decades Polimi has institutionalized its vocation for academic cooperation through interventions that cross-cut the fields of architecture, design and engineering, with more than 100 initiatives mapped in the past ten years. Over 60% of Research for local Development initiatives, as well as 50% of Higher Education and Capacity Building projects focus on Africa. Moreover, the majority of Science Diplomacy actions involve the Continent, confirming the interest for the continent.

Polimi’s initiatives register partnerships in over 25 African countries with a focus on Mozambique, Tunisia, Egypt, Kenya, Ethiopia, Morocco, Senegal, Somalia, Tanzania, Algeria.

The 5 research projects represent examples of our different activities: taken from HORIZON 2020 also considered flagship projects of the AU-EU High Level Policy Dialogue in Science and Technology. The third project is selected from the PRIMA programme and the last two are taken from the Polisocial Award, our internally funded competition for responsible researches.

Science is a valuable asset for promoting networks of learning, mutual knowledge and dialogue. Polimi is committed to train the future generations of professionals and citizens by adopting a long term and a multistakeholder perspective with international organizations, private and civil society players, recognizing the centrality of human capacity for both local and global sustainable and equitable development.
The LEAP-RE program seeks to create a long-term partnership of African and European stakeholders in a quadruple helix approach: government, research, academia, private sector and civil society. The aim is to reduce fragmentation by aligning existing bilateral and multilateral frameworks. LEAP-RE establishes and jointly implements research, innovation, and capacity-building activities that respond to the Multi-Annual Roadmaps (MARs) developed in PRE-LEAP-RE. The program opted for a large-scale, inclusive consortium of 83 partners from 34 countries and 2 international organizations, to ensure a broad coverage and build trust in view of a long-term partnership addressing the post-2025 period. LEAP-RE draws on the experience and partnership developed in PRE-LEAP-RE, which conceptualized and developed a framework for long-term, bi-regional cooperation in research, innovation, and capacity building in renewable energies. This partnership is further strengthened by previous collaboration between partners in other projects supporting the EU-Africa HLPD on STI, such as LEAP-Agri, ERAfrica, LEAP4FNSSA, RINEA, and CAAST-Net Plus. Furthermore, the proposal includes a number of R&I partners, 8 individual projects (formalized as Work Packages), which were chosen among expressions of interest received in late 2019.

### RESULTS

Planning and modeling future sustainable energy systems; Including society as an important stakeholder in scientific research; Market, pricing and business models for future sustainable energy systems; Strengthening basic research and technology development. The approach encourages the development of scenarios that are appropriate to local contexts and can be further utilized to support policy makers. Moreover, this approach requires the development of capacity-building activities to increase local empowerment and ownership.

### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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The project aims to identify and document African & European bioclimatic and passive design and use of local materials, and to generate updated guidelines and tools able to deal with the XXI century climate and social challenges. Bioclimatic design has a rich history in Europe and Africa, which ABC21 aims at reviving and updating. Consistent use of standardized concepts, definitions, and nomenclature in the building sector is crucial for knowledge structuring and transmission, and is currently underestimated.

The assessment of the regulatory and training infrastructure in the EU, and North-West Africa revealed that neither one has developed reliable and openly available “future weather files” representing the local manifestation of global warming and increased frequency of extreme events, as a base for effective bioclimatic design. ABC21 offers a review of procedures to generate such files and examples we generated for a city in each partner’s state. Earth and clay-based materials, stone-based materials, and plant-based materials were analysed and compared in terms of their mechanical, physicochemical, and thermal performances. ABC21 conducted a screening of existing infrastructure for production of these bio- and geo-sourced materials in Northwest Africa and the EU, which highlighted the presence of a set of dynamic local manufacturers and the need to enhance the certification procedures.

**RESULTS**

- Identification and documentation of African and European affordable bioclimatic and passive techniques and local materials
- Exchange activities for policy makers on low-cost and effective bioclimatic construction
- Detailed documentation of 24 exemplary case studies
- Monitoring energy and comfort performances in a selection of case studies
- Promotion of innovation on state-of-the-art finishing of surfaces and future weather files
- Development of updated guidelines and tools able to deal with the XXI century climate and social challenge

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: All African countries

**PARTNERS**

- UN-Habitat
- Agence Marocaine de l’Éfficacité Énergétique
- e7 energy innovation and engineering
- Associação para a Investigação e Desenvolvimento de Ciências
- Direction de l’Environnement et des Etablissements Classés
- Ministry of National Territory Planning, Urban Planning, Housing and City Policy
- Université de La Réunion
- Ecole Africaine des Métiers de l’Architecture et de l’Urbanisme
- Al Akhawayn University in Ifrane
Global population growth and increasing economic prosperity are driving greater demand for energy, food, and water in the Mediterranean region. However, this heightened demand threatens the sustainable use of natural resources and risks underestimating the negative impact on vital ecosystem services. The main objective of the AWESOME project is to develop a decision-analytic platform using a multi-level, integrated WEF model. AWESOME integrates models at different spatial scales, allowing for the characterization of innovative technologies at the national scale (e.g., hydroponics, aquaculture, aquaponics) and their influence on river basin planning.

This platform will facilitate the understanding of WEF tradeoffs, capitalize on potential synergies, and explore interdependencies across various spatial scales. These scales range from the macroeconomic development of the Mediterranean region to national, regional (river basin), and local (single farm) levels. It also considers global processes and regional policies affecting land use, water, energy demands, and ecosystem services. AWESOME represents a vital step towards addressing the complex challenges of resource sustainability in the Mediterranean region by fostering integrated, stakeholder-driven solutions that balance the Water-Ecosystem-Food Nexus and ensure a resilient and secure future for both agriculture and the environment.

**RESULTS**

Evaluate the macroeconomic implications of WEF policies and assess the impact of climate-related policies. Analyze the economic effects of alternative water, crop, and energy supply options to adapt to climate and demographic changes. Create a decision-analytic framework at the river basin scale. It will simulate water availability, distribution systems, and new agricultural technologies, integrating hydrological models with multi-objective optimization algorithms. Explore and demonstrate innovative technological solutions at the micro-scale, such as hydroponics, aquaculture, and aquaponics, coupled with renewable energy and desalination.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: **All African countries**

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**AWESOME**

Managing water, ecosystems and food across sectors and scales in the south Mediterranean

**Category**

RESEARCH FOR LOCAL DEVELOPMENT
RURAL DEVELOPMENT, LAND MANAGEMENT, AGRIFOOD AND FOOD SUPPLY CHAINS

**Geographical area**

Africa – Ethiopia, Sudan and Egypt

**Donor(s)**

PRIMA

**Project duration**

2020 - 2023

**SDGs**

- **1**: No Poverty
- **2**: Zero Hunger
- **6**: Clean Water and Sanitation
- **7**: Affordable and Clean Energy
- **9**: Industry, Innovation and Infrastructure
- **11**: Sustainable Cities and Communities
- **12**: Responsible Consumption and Production
- **13**: Climate Action
- **14**: Life Below Water
- **15**: Life on Land
- **17**: Partnerships for the Goals

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**PARTNERS**

- Athens University of Economics and Business (AUEB)
- Yezreel Valley College (YVC)
- University of Haifa (UH),
- Zon Gardens
- RWTH Aachen University (RWTH)
- Fondazione Eni Enrico Mattei (FEEM)

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Boa_Ma_Nhã, Maputo! is a research project based at Politecnico di Milano in partnership with the Eduardo Mondlane University in Maputo and the Italian Cooperation Agency. The research team studied a metropolitan area that is fragmented from the administrative point and lacking statistical and cartographic data. The objective was to contribute to the integrated development of the region and to spread the culture of an effective territorial planning, providing local administrations with a development plan and a methodology. One of the focal points of the research is the creation of a model on the nexus water-energy-food in support of regional strategic planning, with particular reference to the agricultural sector and applicable in additional contexts.

**RESULTS**

An increase of the land use planning culture by improving the legal framework, policies and public plans in the Mozambican state; Improvement of the daily land management and administration practices in the studied area; Capacity building at the university level, and training of professionals, Institutions, organizations and companies working in the area; Framework for development scenarios and production of study area-specific strategic plans, applicable for further analysis in different geographic contexts; Set of guidelines for local government; Development of a pilot project for Namaacha; Development of scientific papers, editorial products, and web tools for project communication.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: the research methodology can be applied to other urban–agricultural regions in Africa

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**TID MEKII**

*Diagnostic test lab-on-chip for malaria*

**Category**

RESEARCH FOR LOCAL DEVELOPMENT  
HEALTH, WATER AND HYGIENE, ONE HEALTH

**Geographical area**

Cameroon

**Donor(s)**

Polisocial Award (Polimi internal funding)

**Project duration**

2019 - 2020

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**PARTNERS**

- Malattie Infettive 3° Unit of Università degli Studi di Milano/Ospedale Sacco (Italy);
- Centre Médical “Mgr. Jean Zoà” (Cameroon)

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**RESULTS**

A preliminary validation study of TMeK has been carried out in Cameroon, in April 2019. Results obtained on 75 patients with clinical suspect of malaria shows on-field operability, without false negative and a few false positive results. The details of this study can be found in the recently published paper: M. Giacometti, et al., "A Lab-on-chip Tool for Rapid, Quantitative, and Selective Diagnosis of Malaria", Advanced Science, 5, 2021. (Back cover of the issue).

These findings indicate the potential of TMeK as a quantitative, stage-selective, rapid test for malaria. In 2019 TMeK has been the winner of the 2018 edition of the Switch 2 product Innovation Challenge for ready-formed start-ups. In 2020 TMeK got a first investment by a venture capital (Poli360) for a feasibility study on the development of TMeK as rapid diagnostic test. The project is now in the acceleration phase towards the creation of a start-up for the development and exploitation of the diagnostic test.

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**FUTURE PROSPECTS**

- Potential replicability of the project: yes  
- Potential partner countries: All African regions where malaria is endemic

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Africa, a continent prone to a variety of natural and man-made disasters, requires robust emergency management strategies to safeguard lives and mitigate damages. Earth observation, with its advanced satellite technology, emerges as a powerful tool to enhance disaster preparedness, response, and recovery efforts. This project aims to highlight the critical importance of Earth observation in revolutionizing emergency management across African nations.

Earth observation provides real-time data and imagery crucial for disaster monitoring, early warning systems, and damage assessment. By harnessing satellite technology, African countries can accurately predict and prepare for natural disasters such as floods, droughts, and wildfires. Additionally, it facilitates efficient response coordination during emergencies, ensuring timely and targeted assistance to affected regions. Timely and accurate information is pivotal in issuing early warnings. Earth observation enables the monitoring of weather patterns, water levels, and seismic activities. By integrating this data into early warning systems, African nations can alert vulnerable communities well in advance, minimizing casualties and property damage during disasters.

Earth observation provides high-resolution imagery for precise disaster mapping and damage assessment. In the aftermath of disasters, this data aids emergency responders in identifying affected areas, assessing infrastructure damage, and planning rescue operations effectively. It expedites decision-making processes, leading to swift and targeted humanitarian responses.

Post-disaster recovery and resilience building are paramount for sustainable development. Earth observation assists in monitoring the progress of recovery projects, ensuring resources are allocated efficiently. Additionally, it aids in assessing the effectiveness of resilience-building initiatives, enabling African nations to learn from past experiences and strengthen their preparedness for future emergencies.

Collaborative efforts with international partners can facilitate capacity building programs in African countries. Training local professionals in the effective utilization of Earth observation data enhances their ability to manage emergencies autonomously. Moreover, knowledge transfer initiatives ensure the sustainability of emergency management practices, empowering African nations to adapt to evolving challenges.

Earth observation technology stands as a cornerstone for revolutionizing emergency management in Africa. By integrating satellite data into their disaster management frameworks, African nations can significantly enhance their ability to prepare for, respond to, and recover from emergencies. This project advocates for the establishment of partnerships, knowledge transfer, and capacity building initiatives to empower African nations in harnessing the full potential of Earth observation. Together, we can build resilient communities, save lives, and create a safer future for all Africans.
URBANISATION 4 CHANGE - U4C
Socio-economic inclusion in Agadez: principles, resources and local needs combined with universal knowledge and traditions of earthen architecture

**Category**
RESEARCH FOR LOCAL DEVELOPMENT
Sustainable Energy, Environment And Natural Resource Management

**Geographical area**
Africa – Niger

**Donor(s)**
EU Emergency Trust Fund for Africa; AICS; UNESCO

**Project duration**
2020-2023

**SDGs**

**RESULTS**
The Politecnico di Torino (Department of Architecture and Design - DAD), as associate partner, contributes to the project through the analysis and research of strategies for a possible incrementality and for the improvement of bioclimatic control of raw earth dwellings.

**FUTURE PROSPECTS**
- Potential replicability of the project: yes
- Other potential partner countries: All African Countries

The project, funded in the framework of the D.E.S.E.R.T Programme, is a part of the response to the unprecedented migratory crisis in Europe and the fight against the root causes of irregular migration. In particular, combating the issue of trafficking and offering both direct and indirect alternatives for the social and professional integration of young people through the immense architectural tradition of Niger.

The project aims to offer housing alternatives to the population of Agadez, Niger. The objective of the project is to operate on a district on the outskirts of the city, where to prepare a model of spatial planning and design of incremental housing using local materials (raw earth) in line with the passive strategies of bioclimatic architecture. The focus of the project is on the socio-economic inclusion of the most vulnerable groups, through vocational training initiatives and activation of local development opportunities.

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The project has been addressed to design, prototyping and utilization of a new manually operated press, named FLOAT-RAM, which has the purpose of facilitating a construction technology that uses compressed earth blocks, CEB. Buildings and houses made of CEB have better quality than traditional ones in poor regions. The design process is focused on the users, their needs and requirements: safety, simplicity of use, effectiveness and efficiency, sustainability, human wellbeing, ergonomics and performance. This project has impact mainly on SDG11, target “ensure access for all to adequate, safe and affordable housing” and on SDG1, targets 1.4, “ensure that all men and women, in particular the poor and the vulnerable, have access to appropriate new technology” and 1.5 “build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events” These solutions have been validated in the field, building schools, kindergartens, houses in Tanzania and in other countries.

**RESULTS**

The construction of a kindergarten made it possible to observe a fundamental effect: access to quality education for children with different cultures and religions (see photo), in adequate spaces, is the necessary condition for guaranteeing a peaceful future and for having people who can shape the sustainable development of society. The same technology has made it possible to build quality schools, hospitals and homes in rural regions of Tanzania, and has been used in other African nations and in South America. A nursing school is currently under construction in Ikelu, Tanzania, and in the future it will enable better health conditions.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Rural regions in Africa

**PARTNERS**

- Noi con Voi, OdV
- Mattone su Mattone, Onlus
- Pamoja, Onlus
- Diocese of Njombe, Tanzania
- Mkiu village, Tanzania
- Saint Joseph University (Tanzania)
The research focuses on women-owned enterprises in Africa, a context where a substantial number of micro-, small-, and medium-sized businesses are under female ownership. However, these women entrepreneurs often face distinct challenges, including limited access to resources and opportunities. The existing literature suggests that while improved energy access for women may bring forth a range of potential benefits, the empirical foundation supporting these claims remains notably sparse. Our research brings forward valuable insights, highlighting variations both within and between these nations and advocating for a transition towards renewable energy technologies, particularly in regions with high unit tariffs and elevated electricity and fuel consumption. Our recommendation for capacity-building programs targeted at enhancing women entrepreneurs’ knowledge of electricity and fuel usage, pricing dynamics, and the adoption of sustainable energy solutions aligns seamlessly with SGDs strategy. The research includes surveys as well as field trips for energy audits and business models evaluation.

RESULTS

Main results of research are:
- Productive energy use patterns and data of women-owned enterprises
- Energy audits understanding most relevant energy services, consumption and actual energy supply mix
- Identification of potential of renewable energy integration in investigated productive uses
- Potentiality, barriers and business models

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
UN World Food Programme (WFP) is implementing its own Spatial Data Infrastructure (SDI), in the framework and following the guidelines developed by United Nations Geographic Information Working Group (UNGIWG) with the UNSDI initiative. Especially for the use during emergencies, up-to-date information, system availability, redundancy and performances are key factors; for that reason, WFP SDI architecture is based on a federated geodatabase structure, with replicas distributed at regional and local offices. Furthermore, streaming features are used to create and maintain aligned a set of read-only geodatabase instances; streaming environment is created and set to maintain geodatabase integrity, without having to establish strict constraints on the configuration of the different nodes.

The project has evolved, and its objective is to provide all the necessary tools to guarantee capacity building in relation to the use of earth observation data to support emergency management. The project, currently under discussion, will involve the European Union (through DG Intpa) and the European Space Agency (ESA).

**RESULTS**

The previous project resulted in the creation of a Spatial Data Infrastructure for the entire WFP (Headquarters, Regional and Local offices), while the development of the extension of the project will lead to the creation of centers dedicated to the use of Earth observation data for the management of natural and manmade emergencies.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
The project “Setting up a multidisciplinary joint master degree dedicated to the Next Production Revolution – NEPREV” (609702-EPP-1-2019-1-IT-EPPKA2-CBHE-JP) had the overall objective of development of a knowledge framework in order to support Tunisia in its transformation towards modern and sustainable industrial manufacturing.

As a major result, a research master in the Next Production Revolution has been designed and introduced at the National Engineering School of Tunis (ENIT); furthermore, updated and new courses in the field of modern manufacturing, sustainable production, industrial innovation and entrepreneurship – still under the Next Production Revolution paradigm - have been designed and started in other Tunisian universities. All universities have been equipped with modern laboratories including equipment for designing, programming and testing robots, additive manufacturing stations and smart production systems simulating the industry 4.0 environment.

**RESULTS**

The most important achievements of the NEPREV project have been:

1. Design and implementation of a master in the Next Production Revolution including artificial intelligence, robotics, management and innovation, renewable energy and carbon neutrality of industrial production.
2. Design and development of laboratories for industry 4.0 for innovative teaching, promoting innovation and technology transfer and being an opportunity for lifelong education.
3. Promotion and creation of a wide network of universities, companies and individuals around the topic of industry 4.0 in Tunisia.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

**PARTNERS**

- Politecnico di Torino (coordinator)
- Politecnico di Torino
- Centrale Supelec
- Obreal – Global Observatory
- National Engineering School of Tunis
- Institut Supérieur de Gestion Industrielle de Sfax
- University of Jendouba
- National School of Engineers of Gafsa

**SDGs**

- Higher Education
- Industry, Infrastructure and Innovation
- Sustainable Industry, Innovation and Infrastructure
- Sustainable Industrial and Innovation Growth
Sapienza social responsibility at international level is expressed through enhancement of cooperation activities, according to the objectives of the 2030. In 2017 a Charter of Principles and the Mission Statement for International Development Cooperation taking the MDGs as an international shared platform was unanimously approved by the Academic Senate.

Academic cooperation between Sapienza and African universities has been constantly growing in recent years, thanks to increased sources of funding, mainly from the EC, but also from national and own funding. The geographical areas of greatest presence of Sapienza are Benin, Egypt, Ethiopia, Ghana, Kenya, Morocco, Mozambique, Rwanda, Senegal, Somalia, Tanzania, Tunisia, Uganda, Yemen. The sectors of intervention are: a) environmental sustainability b) health c) food safety d) fight against rural and urban poverty e) anthropology f) safeguarding of cultural heritage g) urban planning h) development of local partnerships i) support for local training systems and for the modernization of HE.

Building partnerships with African and Mediterranean universities outside Europe is an important strategic aim of CIVIS, Sapienza’s European Alliance. CIVIS and its member universities have signed an ambitious partnership agreement with 6 prestigious African universities.
EARLY DIAGNOSIS OF BREAST CANCER IN BENIN: A SCREENING PROJECT CARRIED OUT BY STUDENTS

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<tr>
<th>Category</th>
<th>RESEARCH FOR LOCAL DEVELOPMENT</th>
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<tbody>
<tr>
<td>Health</td>
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<tr>
<th>Geographical area</th>
<th>Africa – Benin</th>
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<tr>
<th>Donor(s)</th>
<th>Sapienza - Azimut onlus</th>
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<tr>
<th>Project duration</th>
<th>2018-2024</th>
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PARTNERS

- University of Parakou
- Azimut onlus
- Gruppo Solidarietà Africa onlus
- Education Prévention Santé ONG (EPS ONG)
- Hopital Saint Jean de Dieu de Tanguïëta

Early detection of diseases is the most effective approach to health safeguarding and ensuring better treatment results. Screening activities are usually very expensive and difficult to organize especially in Africa because health care workers are few and very busy. We therefore decided to involve students in medicine and nursing at the end of university studies with the supervision of their university Professors. The final year of the degree programmes in Benin is dedicated exclusively to practical internships on the field. Six scholarships for selected students were awarded. Video lessons in French were created by Sapienza and Parakou Professors to prepare the students for women clinical and instrumental (first level breast ultrasound) evaluation. The video lessons were then uploaded to the Azimut onlus website for remote consultation by students in advance.

RESULTS

Azimut onlus purchased a portable ultrasonography for screening activities on the field and a digital mammography for the University Hospital of Parakou. After delivering everywhere clear, simple and stimulating brochures, the students started the screening free of charge using data collection cards suitable for collecting risk factors for breast cancer and patients’ clinical data. Patients with suspected breast cancer were referred to local hospitals. A total of 830 women were evaluated and for those with a suspected of cancer, the treatment programme were launched.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: Togo, Burkina Faso, Senegal, Gabon, Ivory Coast

ACADEMIC COORDINATOR

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HABITABLE – Linking Climate Change, Habitability and Social Tipping Points: Scenarios for Climate Migration – is an EU-funded project aiming at significantly advance our understanding of the current interlinkages between climate impacts and migration and displacement patterns, and to better anticipate their future evolution. Bringing together 22 partners from 18 countries, HABITABLE will run for 4 years (2020-2024). This project is the largest research project on climate change and migration to have ever been funded by the European Commission’s Horizon 2020 programme. The project aims to significantly advance our understanding of the current interlinkages between climate change impacts, migration and displacement patterns, and to better anticipate their future evolution. HABITABLE is divided into three research domains: 1) Web of Casualties, 2) Adaptation, and 3) legal research combining climate change law and human rights.

RESULTS
Sapienza University team leads the Working package 6 and by using a human rights-based approach, it assesses the potential of existing legal frameworks and policies to address major climate-migration challenges identified by HABITABLE. A “long list” of legal and policy options has been created and current best practice have been identified through regional and international workshops. In June 2023, the Policy Dialogue took place in Geneva to examine preliminary findings of the research and share perspectives on a human rights-based approach to human mobility related to climate change.

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African countries
The objective of the proposed project (AFRI4Cast) is to develop a modeling platform making full exploitation of satellite remote sensing of PRISMA and ECOSTRESS sensors for climate change impact analyses on agriculture and making it available to African stakeholders for shaping future agricultural policies in the African Continent.

The AFRI4CAST EO processing, and crop growth monitoring system will provide national, regional, parcel, pixel-specific in season production estimates, mycotoxin formation risk and disease outbreak probability. Apart from the in-season yield forecast production line, AFRI4CAST will execute seasonal and long-term model simulations for multiannual yield predictions and mycotoxigenic fungi contamination risk under various climate scenarios at a coarse spatial scale.

Relevant African Early Adopters that will potentially benefit from the developed experimental EO analysis technique/s have been involved in the project. The Contractor shall work in close collaboration with African EO research groups and if needed ensure full knowledge transfer and capacity development with respect to the developed EO analysis technique/s. Some of the African Entities participating in the AFRI4CAST project are EO research groups.

### RESULTS

_Exploitation of PRISMA and ECOSTRESS EO data:_

The core of the system will be built on PRISMA satellite, through the acquisition and pre-processing of hyperspectral data and calculation of Vegetation Indices over registered agricultural wheat and maize parcels.

_Disease Early Warning for mycotoxin disease:_

AFRI4CAST will develop a forecasting and alerting system with the intention to be integrated into Fusarium Head blight (Fusarium spp.) and Aspergillus spp. management to effectively use fungicides in conjunction with other strategies, such as biological control agents.

_Early Warning for rust disease:_

AFRI4CAST will develop a continuous crop monitoring framework, with the aim to detect rust disease outbreaks in maize and wheat crops.

_Climate Change and mycotoxin contamination:_

AFRI4CAST mycotoxin contamination module will be to predict mycotoxin production under climate change. Projected weather scenarios will be fed into the system to provide useful information for decision makers at different levels.

### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries potentially affected by rust disease and mycotoxins contamination,
# MANGROWTH

## Ecosystems Conservation for Sustainable Development

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<tr>
<th>Category</th>
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<tr>
<td><strong>HIGHER EDUCATION</strong></td>
<td><strong>Africa – Mozambique</strong></td>
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<tr>
<td>Scholarships, Support to local universities, Transnational education, Capacity building</td>
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<td><strong>Italian Agency for Development Cooperation</strong></td>
<td><strong>2022 - 2025</strong></td>
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**ManGrowth** contributes to the design and implementation of climate change mitigation and adaptation strategies for vulnerable ecosystems in Mozambique (mangroves) to maintain their critical role in stabilizing coastal areas, providing ecosystem goods and services, and sequestering atmospheric carbon. This result will be achieved supporting Eduardo Mondlane University (UEM) and Inhaca Marine Biology Station (EBMI) in carrying out research activities aimed at the conservation, management, sustainable use, and ecological restoration of mangroves. The Project will foster the growth of the local research capacities through: the renovation of part of the EBMI to accommodate national and international students, the creation of a dedicated international Summer School between UEM and Sapienza University, the funding of 30 scholarships to attend the Summer School, and the capacity building of the EBMI researchers.

## RESULTS

The outcomes expected of the Project are:

- **Outcome 1:** Functional renovation of the Marine Biology Station with a guest house capable of housing students and researchers, and a laboratory/nursery for mangrove seedling reproduction.
- **Outcome 2:** Knowledge capabilities on mangrove conservation, management, sustainable use and ecological restoration increased.
- **Outcome 3:** Capacity to do applied research in conservation, management, sustainable use and ecological restoration of mangroves increased.

## FUTURE PROSPECTS

- **Potential replicability of the project:** yes
- **Other potential partner countries:** Kenya, Angola

## PARTNERS

- Eduardo Mondlane University of Maputo, Mozambique
- Inhaca Marine Biology Station, Mozambique
- Zoological Station Anton Dohrn Naples, Italy

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**ACADEMIC COORDINATOR**

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The NISHATI project, which means Energy in Swahili, aims to bring growth and innovation to six universities in Africa (two in Tanzania, two in Uganda and two in Rwanda) in the field of Eco-agriculture, water management, and green energy for agriculture through the improvement and increase of the educational offer and the acquisition of transversal skills, in particular related to business and development of new economies that, together with the creation of a network of stakeholders, will lead to a concrete enhancement of professional competitiveness.

The core of the project addresses the integration and/or creation of new curricula on the basis of the findings of the needs analysis focusing on responding to the regional priorities, especially the Green Deal and Sustainable growth and jobs. Business Skills Labs will provide the final competences to support the development of new business ideas coming from research and answering local needs.

### RESULTS

The NISHATI goals are the design of an innovative teaching method based on a triangle approach (theoretical and practical competences and the training of local trainers), the innovation of existing curricula and the integration with new courses, the installation of green labs and the access to the local communities. The Multidisciplinary approach in teaching will be focused on four main aspects: technical, economic, governance and societal, moreover Practical Labs (installed at the Universities or supporting local needs of villages) will be offered to design installation and monitoring of performance.

### PARTNERS

- University of Rome La Sapienza (IT)
- Universidad de Cadiz (ES)
- Gulu University (UG)
- Kabale University (UG)
- University of Technology and Arts of Byumba (RW)
- Catholic University of Rwanda (RW)
- Mzumbe University (TZ)
- Sokoine University of Agriculture (TZ)
- Hydrowatt Spa (IT)
- Studio Santi (IT)

### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
Scuola Superiore Sant’Anna (SSSA - https://www.santannapisa.it/en) is a public university committed to standards of excellence, accredited by the Italian Government through the Ministry of Education, University and Research. SSSA looks to the future to respond with competence and commitment to the challenges the world is facing. Today, those who look to the future, with particular regard to combating the negative effects of climate change and decisive action towards a model of sustainable development, cannot ignore the African continent. With a population of 1.3 billion people, Africa combines some of the most dynamic economies on the globe with some of the most unequal societies. The challenges that the Green Deal poses to the EU acquire their fullest relevance only from a global perspective, in which Africa plays a decisive role for the sustainability of the entire planet. With its consolidated experience in several Africa countries (see Figure), SSSA believes it can play a role in this context as a point of reference and aggregator of expertise for the Italian university system and for the various governmental players. For this reason, in July 2021 SSSA established AfricaConnect (https://africaconnect.santannapisa.it/), an internal strategic program stemming from more than a decennial experience of research and education in Africa, with Africa and for Africa. The program aims to contribute to the inclusive and sustainable development of the continent’s enormous potential. With AfricaConnect, SSSA pursues its mission based on excellence in education and research with a strong international orientation and proposes itself as an aggregator of transversal and interdisciplinary skills on the African continent. Here we have selected five examples from the most recent projects carried out/ongoing with African partners, to provide the sense of the broad commitment SSSA in education and research in Africa.
1. The overarching objective of PREVEX is to put forward more fine-tuned and effective approaches to preventing violent extremism, through strengthening societal resilience. Focusing on the broader MENA region, context-sensitive, in-depth case studies of the occurrence and non-occurrence of violent extremism are carried out and brought together in a regional comparison. Particular emphasis will be placed on how to strengthen resilience through investigating non-occurrence of violent extremism in ‘enabling environments’.

2. The project aims at exploring the role and potential of traditional authorities with respect to local, national and regional dynamics of violent conflict and peace. It also aims at analyzing how traditional authorities can promote mediation initiatives based on interreligious collaboration aimed at fostering social cohesion, community resilience and peace.

RESULTS

- Building of the second-largest fine-grained database on violent extremism factors and precursors in the Sahel and MENA
- Better understanding of perverse loop effects between terrorism and counterterrorism
- Clarification of scope conditions for fruitful involvement of traditional and religious authorities in conflict mediation to enhance societal resilience

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries:
  - Burkina Faso
  - Senegal
  - Ivory Coast
  - Guinea
  - Ghana
  - Togo
  - Benin
1. **FOCUS-AFRICA** works in Southern African Development Community (SADC) region to advance science of climate services and producing tailored climate service delivery. It is meant to become a repository for knowledge and tools necessary in the development of practical and useful climate services to better tackle the risks of climate change. Research activities have been focused on Mozambique.

2. This project, focusing on Malawi, utilizes a participatory breeding approach that involves geneticist, economist and climate scientists who will work together to select a group of local rice varieties with promising agronomic and genotypic adaptation to the climate crisis. These local varieties will then be directly evaluated by the farmers through an intense participatory selection process.

**RESULTS**

In its third year now, FOCUS-Africa has been conducting participatory testing of two climate services developed for small-scale farmers in northern Mozambique: seasonal forecasts for the onset and cessation of the agronomic rainy season, achieved through the development of the R package AquaBEHER, and the characterization of cowpea and rice varieties through molecular markers developed through DNA. Combining this information with climate data will enable the estimation of environmental adaptation potential and vulnerability to future climates. The Climate Smart Project is currently in its inception phase. Stakeholders engagement is under way.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: The developed project methodologies offer a level of replicability for all countries in Southern Africa. Feasibility studies for replication are currently underway in Ethiopia, Niger, and Kenya

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**PARTNERS**

Mozambique:
- World Meteorological Organization; LGI Consulting; Plan International; Agricultural Research Institute of Mozambique

Malawi:
- International Committee for the Development of Peoples (CISP); Save the Children; Christian Blind Mission (CBM); Translate into meaning (TriM); Umunthu Plus; Rice Development Trust
1. LEAP-RE is a joint project of the European Union and the African Union to promote renewable energy sources through support for technological development and the identification and preparation of management and engagement strategies for consumers and citizens. Specifically, the project is aimed at creating a long-term partnership between stakeholders identified. To this end, it jointly promotes and implements research, innovation and capacity-building activities responding to the Multi-Annual Roadmap (MAR) implemented within the previous PRE-LEAP-RE project. Within LEAP-RE, SSSA's team is involved in two WPs: Geothermal Atlas for Africa and Geothermal Village. In both the projects, SSSA is responsible for social scientists' activities.

2. AfricaMaVal supports the development of a sustainable Europe-Africa supply chain in the procurement of critical raw materials. Specifically, it aims to develop an EU-Africa partnership in order to ensure responsible extraction of mineral resources for European industry, while ensuring co-development processes based on compliance with ESG (Environmental, Social and Governance) criteria and the long-term development of European and African companies.

**RESULTS**

LEAP-RE: the activities carried out so far have shown interest from the community side in participating in the development of geothermal energy, also contributing with in-house resources, to answer to basic needs. Regarding public authorities, they are willing to contribute and see geothermal energy as a lever to develop rural context. On the private side, there is interest in the economic scenario opened by energy access, even if a lack of skills can work as a barrier for local companies.

AfricaMaVal: So far, the project has identified a robust framework of ESG challenges in the mining sector. A parallel regulatory analysis shows a heterogeneous situation in African countries, although issues often arise in policies' enforcement. Nevertheless, preliminary results provide some best cases to be investigated further.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Egypt, Tanzania, Mozambique, Algeria, Rift valley countries, for geothermal energy. Panafrian, for ESG in the mining sector.
The main objectives of **PES-AHD** project are: i) to consolidate and improve the Performance Evaluation System developed and implemented starting from 2019 in the hospitals and districts supported by Doctors with Africa CUAMM in Ethiopia, Tanzania and Uganda; ii) to implement in the reference contexts a data return web platform, based on the principle of interoperability; and iii) to carry out training activities aimed at local professionals for the construction of solid managerial skills.

The goal of the **SS-GYPE** is to plan and implement training courses for midwifery and nursing students on safe delivery management. High-fidelity smart simulators are designed to be compliant with African resources and brought to hospitals to organize training courses to improve local maternal and neonatal care, particularly on umbilical cord and placenta management after delivery in collaboration with doctors with Africa CUAMM and the St Luke Hospital in Wolisso.

### RESULTS

For **PES-AHD** the three countries collect every year around 130 indicators graphically represented through the target diagram for each hospital or district and the musical staves for each healthcare pathway. At least 28 local managers actively participate in all the stages of the performance evaluation system: from the data collection to the local and international workshops sharing ideas for improvement. To support this process in 2023 a web platform has been put in place.

For **SS-GYPE**, we organized a 4-day training course with 67 students of St Luke Hospital to compare the performance of the smart simulator with the standard simulators. The high-fidelity smart simulator had higher performance in terms of perceived usefulness and perceived ease of use with respect to real human placenta.

### FUTURE PROSPECTS

- Potential replicability of the project: **yes**
- Other potential partner countries: The project could be replicated in other African hospitals and districts. Other potential partner countries could be governative as well as non governative agencies
The project, funded by the Italian Ministry of Foreign Affairs and International Cooperation, aims at building the local capacities of the key actors in the justice sector of selected African countries (Cameroon, Chad, Mali, Mauritania and Niger) to address the current and emerging security challenges plaguing the region. The program includes a number of thematic on-site courses, particularly in the fields of counter-terrorism, the fight against organized crime, cybersecurity and the protection of personal data, the fight against human trafficking, the protection of victims and witnesses, and international judicial cooperation.

RESULTS
Direct and cascade training of judicial system operators and other civil servants of selected African countries.
Expected impact: 1. strengthened application of human rights in the administration of justice; 2. ability of training and public institutions in African countries to organize courses for their staff and create specific training programs.
Activities carried out from 2015 to 2023 saw an increase in the involvement of personnel in key positions of the State’s public institutions in the design, organization and participation in the courses (28 new courses with 99% participation of public officials) and an ever-increasing demand to organize courses for trainers.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: Mauritania, Ghana, and other Sahel and Horn of Africa Countries
Ca’ Foscari University of Venice is specialized in education and research in the fields of art and humanities, languages, sciences, economics, and management. The university has historical, cultural, linguistic, and academic connections with countries in the Mediterranean Africa, leading to the development of specific academic programs in languages, cultures of Asia and the Mediterranean Africa, migrations, and international relations. With the new 2021-2026 Strategic Plan, there is a strong emphasis on international cooperation, particularly with developing regions, involving universities and institutions in circular migration pathways and expanding cooperation in Sub-Saharan Africa, an area with which the university had less collaboration in the past.

International cooperation projects at Ca’ Foscari mainly revolve around international research, Capacity Building activities, and international mobility for teaching and learning. Ca’ Foscari boasts research expertise in sustainable development and international cooperation, as evidenced by projects focusing on themes such as energy for sustainable development, environmental and chemical science, nanomaterials, governance of emergency medical services, and social sciences. The university develops Capacity Building projects aimed at modernizing, internationalizing, and expanding access to higher education and establishes new international mobility collaborations through Erasmus+ International Credit Mobility, with a specific focus on the Sub-Saharan Africa region. Additionally, the university collaborates with the Italian Ministry of the Interior-CRUI in managing scholarships for refugee students, offering financial support and exempting them from university fees.

As highlighted by the United Nations 2030 Agenda for Sustainable Development, achieving the Sustainable Development Goals requires strong global partnerships and cooperation based on shared principles and values that prioritize people and the planet. Ca’ Foscari promotes the SDGs and collaborates with national and international university networks, such as RUS network (Universities Network for Sustainable Development), CUCS network (University Coordination for Development Cooperation), and UNIMED (Union of Mediterranean Universities). Furthermore, Ca’ Foscari has joined EUTOPIA European University, an alliance of 10 universities, sharing a vision to shape the universities of the future. Recognizing the importance of global perspectives, EUTOPIA has established cooperation with Global Partners, including two institutions from Africa, to facilitate responsible internationalization. The Global Partners network will play a crucial role in EUTOPIA’s global engagement while promoting values like equity, peace, and inclusion, based on principles of reciprocity, mutual understanding, and respect.
Energy production and consumption are inextricably linked with the economy and the environment. The quantity and type of energy play crucial roles in shaping the sustainable development path of a country. The interlinkages are particularly important in low-income countries such as Ethiopia where biomass fuels account for more than 85% of the total energy consumed. Access to reliable energy enhances economic productivity and fosters industrialization. However, depending on the fuel type, energy consumption may result in detrimental effects on the quality of the environment and human health. As such, for a meaningful policy impact, energy research in developing countries should assess the linkages between energy, economy, and the environment. The project Modeling Energy for Sustainable Development in Ethiopia – MEND aimed to assess the implications of alternative energy system pathways to the economy, quality of the environment, human health, and the SDGs in Ethiopia.

### RESULTS

The project results are three peer-reviewed publications depicting the interlinkages between energy and the economy in the Ethiopian context and a conference presentation on the economy-wide implications of electricity sector subsidy reforms in the country. The project methodology can be replicated and applied to other African countries where biomass fuels are dominant sources of energy and households are the main energy consumers.

### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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**PARTNERS**

- Ca’ Foscari University of Venice

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**ACADEMIC COORDINATOR**

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The PlaGE project will be the first research to investigate the use of theatrical practices at the very core of the migration process: the transit-phase in the Reception centres of the Mediterranean migratory route. It will map and analyse the emerging presence of intercultural performative practices at the thresholds of Europe, focusing on four case studies in two crucial countries: Italy (which hosts the majority of the Reception Centres) and Morocco (a main EU partner in Reception policies). The researcher has tailored an innovative approach combining the latest methods of Social Research and Performance Analysis. Besides conducting a qualitative study through the use of semi-structured interviews and participant observation, the research will adopt the practice-led method of “PAR” (Performance as Research), to explore the aesthetical and societal impact of theatre on the newcomers’ conditions, on the local territory and on the contemporary artistic environment.

The expected project outcomes are as follows: collaboration with local associations focusing on migrants, particularly single women, and artists working with migrants in Morocco; data collection related to projects involving cultural and artistic practices for immigrants, asylum seekers, or transiting migrants in Morocco; theoretical development on the topic of the right to culture for transiting migrants; a final conference in February 2024; production of 5 scientific articles and a monograph. In Morocco, the researcher has worked with various academic institutions.
RESULTS

The still ongoing project aims to develop and implement multi-component nanomaterials with the goal of ensuring both the unique functionalities of the final material and the safety of all components throughout the material’s entire lifecycle. The purpose is to acquire and develop as much knowledge as possible about these new materials through specific case studies, particularly in the construction, agri-food, medical, energy, and transportation sectors. Another goal of the project, which is already characterized by a strong sustainability focus, is to promote dialogue between the industrial sector and regulatory bodies.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

SUNSHINE is an industry-oriented project, where leading research and technology organisations will cooperate with SMEs and large industries to develop and implement simple, robust, and cost-effective Safe and Sustainable by Design (SSbD) strategies for materials and products incorporating advanced multi-component nanomaterials. To this end, the project will establish a user-friendly e-infrastructure to foster dialogue, collaboration, and information exchange between actors along entire product supply chains. The SSbD strategies will modify products and processes involving advanced multi-component nanomaterials in order to reduce their potential for release or hazard potency. The goal is to develop technologies that are safe and sustainable, but also retain the desired functionality for their intended uses. In addition to promoting safe and sustainable innovation, SUNSHINE will facilitate a two-way dialogue between innovators and regulators, which can help raise awareness and address regulatory concerns in the early stages of innovation. Ideally, this can shorten the time of novel nanotechnology products to reach the market.
The project aims at strengthening emergency health services managed by local authorities in the district of Beira, with a focus on obstetric and paediatric emergencies, contributing to the reduction of mortality and morbidity related to medical emergencies. Specifically, the project aims to promote a greater access to quality emergency medical services offered at the Central Hospital of Beira and at health centres in its catchment area, through the adoption of a centralised emergency management model endorsed by the district and national authorities. The project aims to achieve the above-mentioned objectives through the realization of activities aimed at reinforcing capacities of local health authorities in planning and coordinate medical emergency services and actions aimed at improving the clinical and organizational quality of emergency services at Central Hospital of Beira and at health centres in its catchment area.

**RESULTS**

UR-BEIRA’s objective is to strengthen emergency healthcare services in Mozambique’s Beira district, with a focus on obstetric and pediatric emergencies, aiming to reduce mortality and morbidity. The still ongoing project enhances access to these services, especially for pregnant women and children under 5, through a centralized emergency management model. It achieves its goals by building the capacity of local authorities to plan and coordinate emergency services and improving the quality of care at Beira Central Hospital and affiliated health centers.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
ESAGOV is an Erasmus+ Capacity Building project, funded by the European Commission. The project supports the transformation process of governance within the Algerian university system, with a focus on the implementation of strategic plans and the enhancement of evaluation processes and quality assurance. It aims to strengthen the skills of the university staff in terms of governance and quality assurance, while contributing to the development of leadership engagement. In the long term, ESAGOV will increase the awareness of the benefits of governance and its challenges at University and institutional level, on both a national and regional scale. The specific objectives are:

- Empowering the role of universities in defining their own missions;
- Enhancing the strategic skills of university leaders and academic and administrative staff;
- Strengthening the evaluation mechanism and the quality approach within the universities.

RESULTS

Ca’ Foscari led the instructor training activities by organizing online and in-person training programs on quality assurance and university governance for faculty and administrators from the Algerian institutions. The project’s most significant outcome was the development of Strategic Plans by the Algerian universities, which were presented during the final conference. The presentations of the Plans demonstrated the engagement and awareness of the university community in governance and quality self-assessment processes. Algerian institutions successfully integrated a participatory approach into their strategic planning processes.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: Tunisia, Mauritania and Niger
The University Campus Bio-Medico of Rome (UCBM) has extended experience of joined programs and experience of collaborations with Africa in three main areas: medicine, one health, biomedical engineering (BME).

This collaboration falls mainly in the health domain.

UCBM built proactive partnership with donor (i.e., Med’Or and Fondazione Cariplo, Fondazione Compagnia di San Paolo), which provided financial support for PhD scholarships, research projects, and science diplomacy and territorial cooperation.

At UCBM, we are making an effort for moving the paradigm of international cooperation from “capacity building” to “capacity strengthening”, because we are aware of the existing capacity of our African partners, which we try to strength.

Particularly extended is the work of UCBM scholars, as proactive members (secretariat) of the International Federation of Medical and Biological Engineering (IFMBE): promoting worldwide African BME excellences, best practices and success stories; facilitating the inclusion of African experts in ongoing international discussion on MedTech and AI for health; empowering local scholars with international networking, for limiting and inverting brain-drain; promoting the inclusion of African BME scholars in Horizon Europe.
Oxygen therapy in Sub Saharan Africa (SSA) is delivered mainly via oxygen concentrators, due to the lack of suitable hospital plants. Oxygen concentrators are essential medical devices used during surgery, in ICU and for newborns. As many other medical devices, oxygen concentrators last very little in Africa, if compared to the same systems when used in EU. This is because medical devices are mainly designed for EU, USA and Japan, which represent most of the global market and are not resilient to SSA working conditions (e.g., temperatures, humidity, dusts, limited maintenance and poor supply-chain).

This project is systematically analyzing how oxygen concentrators lifespan can be prolonged, using circular economy principles, focusing on local regeneration of zeolites (material that allows extracting oxygen from air) and local manufacturing of spare parts such as filters, which are not easy to find in most of the Sub-Saharan Africa rural areas.

This project is supervised by a multidisciplinary team (biomedical engineers, chemical engineers, biomedical technicians, clinicians) working together for finding pragmatic solutions that can be deployed locally, following circular economy principles. Exhausted zeolites will be used for agriculture application, if possible.

**RESULTS**

We demonstrated that oxygen concentrators inlet filter can be locally manufactured using activated charcoal.*

The team is now analyzing exhausted zeolites. Preliminary results demonstrated which contaminants (metals, humidity, dust) deteriorates zeolites in Ethiopia, and developing a process for zeolites regeneration using simple methods that can be reproduced also in SSA rural areas. This will allow a new ways for reprocessing and reconditioning oxygen concentrators. This will pave the way to new local business following circular economy principles.

* https://doi.org/10.1016/j.deveng.2022.100094

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: Benin Mozambique South Africa

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EXPO 2030 ROMA FOR AFRICA

141 - INNOVATION FOR INCLUSION
Sustainable 3D technology for the inclusion of people with disabilities in Uganda

Category: RESEARCH FOR LOCAL DEVELOPMENT
Health, water and hygiene, One Health

Geographical area: Africa – Uganda

PARTNERS
• Medere srl (Italy)
• CBM Italia (Italy)
• CoRSU Hospital (Uganda)

The project “Sustainable 3D technology for the inclusion of people with disabilities in Uganda” aims to improve the quality of inclusive rehabilitation services provided by the CoRSU rehabilitation hospital and orthopedic center of excellence in Uganda, and therefore to improve the lives of people with disabilities. The challenge that the project wanted to address, aligned with the COOPEN’s Health and Wellbeing axis, is twofold. On the one hand, the need to maximize the use of 3D printing technology – already present at CoRSU – by increasing the number of printable products, self-producing single-use medical supports for the hospital, improving the quality of products and the maintenance of machines with the indirect effect of making such technology sustainable within the hospital (in terms of material costs, human resources and tool life). On the other hand, the need to improve the quality of life of people with disabilities: the diversification of printed orthopedic orthoses allows to reach a larger number of patients and, a better product, is more durable (reduced costs for families).

RESULTS

The project 141 obtains a strengthening in the use of 3D printing, the Medere team and the staff of the 3D printing laboratory at Corsu collaborated to create a database of spare parts and products needed by the hospital to be tested as prototypes for 3D printing. Moreover, two cycles of technical training were carried out by Medere staff to CoRSU staff with the aim of strengthening the technical skills of the staff of the CoRSU 3D printing laboratory. The objective of the training was also to test the 3D printing of new products identified in the database and their effectiveness.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: Rwanda
Kenya

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Empowering Sub-Saharan Africa (SSA) University strengthening research focused teaching

Many Universities in SSA are mainly teaching oriented. In the last 10 years, our team was active in training African Lecturers in delivering research-intensive teaching. The aim of the current project is to train African scholars in performing top-class research and designing research-oriented teaching programs, while transferring this approach to peers, which have not had the opportunity to study in Europe. One fully-funded PhD scholarship is offered each year to candidates from SSA. PhD students are fully integrated in the alive and vibrant research community of our university, offered placement in top Italian research hospitals, and encouraged to leverage on our international networking with research institutions and manufacturers, in order to build international relations, which will last beyond their PhD. The focus of each PhD is on the re-design of health care services leveraging on innovative medtech solutions, following frugal innovation and sustainability (economic and environmental) principles. While learning cutting age methods and tools (e.g., AI, micro-ML, IoT) and the most recent design principles, students are encouraged to reflect on how to transfer those technologies in limited resourced settings and share this expertise with European scholars for making the global MedTech ecosystem fairer.

RESULTS

Two PhD scholarships granted to candidates form Sub-Saharan Africa (SSA). Both candidates are from Ethiopia and are focusing on how to design medical devices resilient to African working conditions (i.e., humidity, temperature, Saharan dust) and in limited resource settings (little maintenance, poor supply chain, luck of specialised personnel et.) typical of rural areas. Several prototypes have been designed (e.g., jaundice vest, 3D printed filters for oxygen concentrators, intrauterine balloon tamponade, AI App for diabetic ulcers prevention). Pilot studies in collaboration with SSA hospitals are under design.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All Sub-Saharan countries
The University Campus Bio-Medico of Rome (UCBM) hosts the secretariat of the International Federation of Medical and Biological Engineering (IFMBE), which is the global scientific society focusing on BME and a NGO in official relations with the World Health Organization (WHO). IFMBE has started a proactive campaign for empowering SSA community of Biomedical and Clinical Engineers and Technicians, led by IFMBE secretariat. This campaign aims at:

1. Promote worldwide the excellences of the SSA Biomedical Engineering community, disseminating best practices and success stories;
2. Facilitate the inclusion of SSA BME experts in the ongoing international discussion on MedTech and AI for health at European Parliament and World Health Organization;
3. Strengthen local BME capacities, empowering local scholars with international networking, for limiting and inverting brain-drain;
4. Promote the inclusion of African BME scholars in Horizon Europe

RESULTS

Several results had been achieved in the past 2 years, including:
- 2023, Nairobi, IFMBE 1st Africa Regional BME and Health Technology Conference, https://ifmbe2023.co.ke/
- 2023, Johannesburg, IFMBE-Africa Health event
- 2023, Brussels, European Parliament interest group on BME meeting (focus on EHDS impact on Africa), https://eambes.org/the-third-meeting/
- 2022, web, European Parliament interest group on BME (focus on EU COVID policies impact on Africa), https://eambes.org/the-fourth-eopig-meeting/
- 2022, The IFMBE Africa Region was established

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African Countries with an Established BME societies

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L’Università Cattolica del Sacro Cuore promotes and supports international development cooperation projects in various countries around the world, involving a variety of actors from the university community (lecturers, researchers, students, administrative staff) in its daily work. These projects are implemented with the direct involvement of national and international partners: universities, foundations, NGOs, non-profit organisations and congregations, thanks to funds from public institutions and private donations.

In 2006 The Università Cattolica del Sacro Cuore founded the University Centre for International Solidarity (CeSI) to coordinate the cooperation and international solidarity activities of the university: research and academic training with courses in Italy or abroad; involving the training of academic or administrative staff; social entrepreneurship, involving supporting the launch of start-ups; projects in the field managed directly or on behalf of donors.

The university’s activities in Africa cover several areas, such as human rights (e.g. the project in Cameroon with the prison population), health (e.g. Community Outreach in Uganda), training and business start-ups projects (e.g. E4Impact Foundation in several African Countries).
“The Community Outreach as a model to serve the women of the slum in the urban area of Kampala” is a project led by Università Cattolica del Sacro Cuore (UCSC) in partnership with Benedict Medical Centre (BMC) and Fondazione Italia Uganda Onlus. The two-year intervention provided for the implementation of four Community Outreach in the slums of the Kireka and Kisenyi communities in Kampala (September and November 2021, June and October 2022). By resorting to Community Outreach, the intervention aimed at proposing an agile, innovative model, fully in line with the social, economic and health conditions of the beneficiary communities, capable of providing a concrete and immediate contribution to the fight against the spread of sexually transmitted diseases, TB and Malaria in Uganda, while keeping a firm focus on the need to promote both treatment and prevention paths for the diseases covered by the intervention. The project was funded by AICS with the Global Fund’s funds.

RESULTS
Kireka and Kisenyi communities’ awareness was increased about salutation and preventive measures: during the four Community Outreachs 2,462 people were received, tested and attended trainings. Increased number of women with sexually transmitted diseases, TB and malaria who receive adequate care with visits and examinations. Maintenance in care through follow-up of more than 50% of women enrolled through the Community Outreach. 903 pregnant women were taken into care and accompanied up to the time of delivery.

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African Countries
E4Impact is a social change organization that supports the start-up and growth of new businesses in Africa. It was launched as initiative of ALTIS – Graduate School of Business and Society of Università Cattolica del Sacro Cuore and in 2015 it became a Foundation with the support of major Italian companies.

With its unique Global MBA in Impact Entrepreneurship, developed in partnership with local African Universities, E4Impact supports passionate African entrepreneurs to build and scale strong, sustainable and innovative businesses, that create jobs and provide solutions to their country’s challenges. It also empowers an Alliance of 24 African Universities to offer action oriented entrepreneurial programs and commit in joint academic research.

E4Impact has also been involved in several development projects, has developed an international PhD for African scholars and has opened local Entrepreneurship Centers to foster commercial relations between African and international companies.

RESULTS

E4Impact is committed to increasing its impact on the entrepreneurial environment of the 24 African countries where it operates. To date, the MBA has reached 61 editions, has trained more than 1,600 entrepreneurs, who have created an average of 6 jobs each. 34% of these entrepreneurs are women. Among these entrepreneurs involved in the project, 98% increased their revenue; 41% gained access to financing; 57% started a new business, while 22% opened new branches. Over 47,000 other people have been trained through development projects and short programs.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All other African Countries

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The project, led by COE, aimed at the promotion of an inclusive and right-conscious society regarding prisoners in four cities in Cameroon: Douala, Mbalmayo, Garoua e Bafoussam. Here prisoners and ex-prisoners are one of the most exposed categories to unemployment, exclusion, and poverty. The project focused on the re-educational purpose of punishment and on the role that each individual citizen can play in the process of resocialization and protection of human rights. Università Cattolica carried out research on the perception of prisoners and ex-prisoners on their social inclusion and implemented a civic education course. UCSC also coordinated a training course for local operators. The course was aimed at the creation of coordination tables between local authorities to deal with problems affecting prisoners and their living conditions in prisons.

RESULTS

A culture of attention to the person of the prisoner was promoted and the role of civil society in the humanization of the conditions of prisoners in Douala, Mbalmayo, Garoua and Bafoussam was strengthened. The response to health, nutritional and education needs of prisoners by cooperatives and platforms operating in prisons was organized. The capability of civil society to forsee the application of alternative punishment to detention was promoted.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African Countries
NEET’S NET
Networked for inclusive and sustainable economic growth. Decent work, entrepreneurship, skills acquisition and participation of vulnerable girls and boys

Category
RESEARCH FOR LOCAL DEVELOPMENT

Geographical area
Africa – Camerun

Donor(s)
AICS – Italian Agency for Development Cooperation

Project duration
2022-2025

The project aims at ensuring long-lasting, inclusive and sustainable economic growth, full employment and decent work for all. Responding to the needs and aspirations of young people, including ex-offenders, young people at risk, disabled people, migrants and internally displaced people, the Neet’s net project promotes decent employment, entrepreneurship, skills acquisition and participation in inclusive and sustainable economic growth, especially young women and young people in vulnerable situations, in the cities of Mbalmayo, Bafoussam and Garoua, Cameroon. The activities on which the contribution of the Catholic University focuses concern the updating and/or drafting from scratch of training curricula on energy, health and agro-industry at some high schools in the regions affected by the intervention, in order to adapt the teachings within professional courses to the needs of the local labor market.

RESULTS
The project, in addition to increasing the well-being of the young people directly involved and the one of their families, proposes scalable and replicable processes, systems and services and promotes a more equitable and inclusive society in which the awareness that young people, including the most vulnerable ones, can aspire to decent work and can contribute to the sustainable development of their country is spread.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: All African Countries

PARTNERS
• Associazione Centro Orientamento Educativo (COE), leading partner
• Università Cattolica del Sacro Cuore (UCSC)
• ARCS Arci Culture Solidali APS
• Comune di Milano
• Centre d’Orientation Educative du Cameroun
• Ingegneria Senza Frontiere – Milano
“D.E. – AFRICA. Executive Ph.D. Programs in Management and Agriculture for Academic Professors from Africa” is led by Uganda Martyrs University (UMU), Kampala, Uganda, in partnership with Università Cattolica del Sacro Cuore (UCSC) and E4Impact Foundation. The project aims at improving the quality of higher education in Africa through the activation of two international PhD programs for professors from African universities: the PhD in AgriSystems and the PhD in Management and Innovation. Each PhD program lasts three years and lead to the release of a qualification accredited by the UCSC. Each program includes classroom work both at UCSC and UMU. The African professors involved in the first edition of the PhD programs come from Cameroon, Ivory Coast, Ethiopia, Ghana, Kenya, Morocco, Mozambique, Democratic Republic of Congo, Rwanda, Sierra Leone, South Africa, Tunisia and Uganda. The candidate selection phase for the second edition of the two PhDs is in the final stage.

RESULTS

The first edition of the two PhD programs involved a total of 23 professors from African universities, of which 8 enrolled in the doctorate in AgriSystems and 15 enrolled in the doctorate in Management and Innovation. The first lessons in Italy took place in 2023 for both the PhD in AgriSystems, at the UCSC’s Piacenza headquarters, and for the PhD in Management and Innovation, at the Milan headquarters.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African Countries

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As of the academic year 1982/83, the University of Molise (UNIMOL) was established in Campobasso, where it has established and consolidated relations with bodies and institutions, favouring integration with the entire regional and national territory. The University operates with 6 Departments, named as follows: Department of Agriculture, Environment and Food, Department of Biosciences and Territory, Department of Economics, Department of Law, Department of Medicine and Health Sciences and finally the Department of Humanities, Social and Education Sciences. The University of Molise also has 24 cultural centres and is equipped with several laboratories, multimedia and language laboratories, a rich library and a sports centre. The total number of students enrolled for the 2022/2023 academic year is 8024.

The total number of teaching staff as at 31.12.2022, pertaining to the various departments is 589.

In recent years, the University of Molise has consolidated its educational offerings by implementing a University project that, by introducing and updating its study courses, is aimed at meeting students’ need to create a solid cultural and professional preparation.

At the University there are 39 national and international degree courses hinged on the 6 Departments.

The productivity of research and supporting its quality, also at an international level, is one of the University’s strategic elements, both in terms of its qualitative impact on the University, and in the light of funding distribution policies (Ordinary Financing Fund (FFO), Departments of Excellence, national and international calls for proposals, etc. etc.) which increasingly reward the quality of the research of the individual and of the structure to which they belong (University, Department).
ENVIRONMENTALLY EFFECTIVE control of key-pests for olive, peach and citrus crops is of paramount socio-economic importance for the Mediterranean region. This requires effective e-monitoring and Integrated Pest Management ground spraying control e-solutions based on technological innovations. The former FruitFlyNet project, introduced a Location Aware System (LAS) which has been tested, evaluated, and demonstrated in small-scale crop areas, with very promising results. FruitFlyNet-II project aims to develop a complete package solution for the farmers to e-monitor the olive fruit fly and the medfly pests. The final solution provides two prototypes consisting of e-traps, one per pest examined and a set of e-services. The two prototypes will be optimized by the inputs of living labs. They will demonstrate their performance and functionality in 8 large-scale, olive, peach, and citrus crop sites and will prepare the LAS prototypes for commercialization.

RESULTS

The project revised and updated the two prototypes in two small experimental sites and moved to eight large sites located in the partner regions to verify the LAS system and demonstrate its feasibility to control fruitfly pests in fruit orchards and olive grooves. The e-traps functionality was fully tested to perform automatic monitoring of insect pests and decision support system softwares applied to optimize the system performance and farmers expectations. Demonstrations are organized to show the prototypes to end users and IT companies for commercialization of the products.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: Mediterranean countries
The project addressed Tunisian’s needs of modernisation and internationalisation of Higher Education Institutions (HEIs) by developing an innovative 2 years Master in History and Archaeology providing labour market-oriented skills for the target audience holding Bachelor’s degree in the Humanities field. In particular, it aimed at fostering innovative teaching, learning approaches and methodologies through the delivery of blended teaching units combining in presence and on-line courses.

The project achieved most of its objectives, in some cases even surpassing forecasts; despite the COVID - which forced changes and revisions to some of the activities and which certainly had an impact on mobility and the numbers of people involved in the project - the consortium asked for and obtained an extension of 8 months, which allowed for the development of new activities and products that were not foreseen in the project application.

The consortium acted with great unity and democracy in pursuit of common ideas and goals. Teamwork, at first weakly accepted by non-European partners, eventually became an element of cohesion and strength. The students in turn became partially amalgamated, especially during their stay in Europe. The progressive involvement of all allowed the sustainability of the project: the master’s degree was renewed for the academic year 2022-2023 as well.

**RESULTS**

The project achieved its main objective, which was the accreditation of a master’s degree within the Tunisian education system. The Master’s degree is interdisciplinary and innovative - on several levels - and its realisation has led to cultural growth for those involved, but will also have an impact over time for future teachers and students. The Tunisian education system was not particularly equipped to design blended courses with mixed teaching, to cooperate between universities. We did it.

**FUTURE PROSPECTS**

- Replicability of the project: **yes**
- The Master is still active in 2 partner universities
- Other potential partner countries: **All African Countries**
PROJECTS FOR A COMMON GROWTH

MAINB10SYS
Mainstreaming Biofarming System in Ethiopian and Ugandan Higher Education Institutions

Category
HIGHHER EDUCATION
Capacity building

Geographical area
Africa - Ethiopia and Uganda

Donor(s)
Edulink II

Project duration
2014-2017

RESULTS
More than 330 training hours were organized which saw 200 participants from African universities, to apply efficiently the advanced methodologies and promoting new sustainable processes in agriculture. Demonstration sites were set up by partners Universities, consisting of biogas plant in Uganda, biocomposting by using nitrogen-fixing bacteria in Hawassa and a biofarm in Addis Ababa managed by a disadvantaged women’s cooperative, as practical training centres. 20 young researchers visited University of Molise to attend courses, training, seminars and acquire specific skills in laboratories.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: sub-Saharan coutries

PARTNERS
• Gulu University, Uganda
• Addis Ababa University, Ethiopia
• Hawassa University, Ethiopia
• Bioeconomy Africa, Ethiopia
• African Bioeconomy Capacity Development Institute, Ethiopia

THE BIOFARMING APPROACH is a science and evidence-based approach to sustainable livelihood, built upon indigenous knowledge and skills, continuously integrated and implemented with recent scientific advances and relies on holistic restorative and environmental friendly methods to improve ecosystem service provision. Model farm facilities (called BIOFARM) are integrated elements of Biofarming approach and serve for demonstration, training and research purposes, including evaluation of new technologies and their integration into a system or package. The establishment of Biofarm is of particular interest in areas where resources are scarce, diversification of production activities are required and positive impact on the ecosystem need to be ensured. In this framework, MAINB10SYS acts to provide Ethiopian and Ugandan Higher Education Institutions with the necessary competences to efficiently apply advanced research methodologies.

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THE MOBILITY PROJECT between UNIMOL and the Ethiopian Universities of Debre Markos University and Jimma University aimed at fostering the mobility of students and teachers between the various institutions, with the objective of transferring knowledge and skill to Ethiopian students in the field of Agricultural Sciences and Health, focusing especially on laboratory skills, through periods of practical training in Unimol laboratories; strengthening research and training collaborations, both by fostering student and staff exchange programs and by increasing the submission of new joint project proposals. The topics concerning the project were selected on the basis of the partners’ interests and the potential scientific, social and economic impact in the participating countries.

RESULTS

The internship periods held at Unimol allowed Ethiopian students to receive updates on advanced tools and transferable skills, such as statistics, molecular biology and analytical chemistry, focusing on introduction of emerging issues, such as sustainable protection of agricultural crops and control of vector-borne diseases. They had the opportunity to interact with local researchers, increased opportunities for scientific collaboration and networking, participated in ongoing experiments. The course lectures presented by academic staff in mobility addressed were attended by more than 300 researchers and students.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: sub-Saharan countries

Category
HIGHER EDUCATION
Scholarships

Geographical area
Africa - Ethiopia

Donor(s)
Erasmus+

Project duration
2020-2026

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The University of L’Aquila promoted numerous cooperation programmes in different spheres of action (education, research, third and fourth mission) and with all the instruments at its disposal (humanitarian aid, including the allocation of scholarships or partial or total exemption from tuition fees; bilateral and multilateral cooperation; theoretical and applied research projects).

The University’s strategic horizon has moved in two directions: the promotion of social justice and the transfer of skills and knowledge to the communities involved in projects.

The University has favoured a method that is sensitive to the needs of the populations involved and functional in encouraging an interdisciplinary and horizontal approach: this approach envisages ‘intercultural cooperation’ based on tolerance, dialogue and respect for the diversity of cultures.

In this way, cooperation initiatives have succeeded in activating forms of ‘territorial cooperation’ (i.e. cooperation of and between territories), in involving local stakeholders and in ensuring the achievement of set objectives.

The dissemination of the results in the communities concerned (both in our country and in the partner country) took place through the activation of websites illustrating each project, which made it possible both to inform the public about the purposes, organisation, timetable and results obtained, and to collect proposals, contributions and possible support from the communities concerned.
MED-QUAD
MEDiterranean Quadruple helix
Approach to Digitization

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<th>Category</th>
<th>Geographical area</th>
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<tr>
<td>RESEARCH FOR LOCAL DEVELOPMENT</td>
<td>Africa – Egypt</td>
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<th>Donor(s)</th>
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MED-QUAD is a cross-border project that aims to create the conditions for developing the regions’ potential for innovation in the water and cultural heritage sectors. By setting up cross-border Mediterranean laboratories, the project aims to achieve effective interaction between the main innovation players in the quadruple helix (academia, industry, civil society and governments) in the digital economy. By developing the quadruple helix approach, the project will provide policy makers and public authorities with guidelines containing a roadmap for innovation listing the fundamental principles and indicators on which funds should be allocated in the future.

### RESULTS

- 1. Establishing two living labs: Smart Water Use Applications and Cultural Heritage Exploitation
- 2. Launching eight joint projects between universities and SMEs
- 3. Training about eighty professionals on entrepreneurial skills
- 4. Releasing/Publishing up to six co-publications
- 5. Commercializing up to ten new innovative products or services

### FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

### PARTNERS

- Epimorfotiki Kilkis – Greece
- International Hellenic University – Greece
- Arab Academy for Science & Technology – Egypt
- Al-Balqa Applied University – Jordan
- Palestine Polytechnic University – Palestine
- University of Sousse – Tunisia

### MEETING IN L’AQUILA

MEETING IN L’AQUILA

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MOMATE
Modernising renewable energy training in the Maghreb: transferring EU experience

Category
HIGHER EDUCATION
Support to local universities - Transnational education - Capacity building

Geographical area
Africa – Morocco
Africa – Tunisia
Africa – Algeria

Donor(s)
European Union

Project duration
2015-2019

PARTNERS
• University Léon – France
• University Vigo – Spain
• University Ibn Tofail – Morocco
• University Ibn Zohr – Morocco
• International University Rabat – Morocco
• University Linnaeus – Sweden
• University Alexandru Ioan Cuza – Romania
• University Abdelmalek Essaâdi – Morocco
• University Sfax – Tunisia
• University Sousse – Tunisia
• University Constantine 1 – Algeria
• University Aboubekr Belkaid Tlemcen – Algeria
• Association pour la Promotion des Energies Renouvelables (APER)

MOMATE project was a multifaceted project which had an educational, a professional and an international cooperation component. It aimed to transfer knowledge in the field of renewable energy and to foster new concepts and approaches for promoting renewable energy through:

• the institution/development of training centres of national and regional significance;
• the improvement of laboratory equipment tests in ER and platforms for technological innovation;
• the rapprochement between laboratories and companies;
• the institution/development of specialized centres for students, young entrepreneurs and academic researchers in the field of RE.

RESULTS
• 1. A training programme at Bac+2 level (DUT) jointly taught in Maghreb universities;
• 2. Development of specialised technology centres;
• 3. Professor exchange programmes, joint conferences, shared courses and meetings to share academic, research and didactical experiences;
• 4. Online platforms for sharing didactical materials and practical exercises;
• 5. Collaboration between Maghreb universities and local, regional and EU industry.

FUTURE PROSPECTS
• Potential replicability of the project: Yes
• Other potential partner countries: All African Countries
UPGRADE aims to employ multidisciplinary education and research to help transportation businesses address the challenges of unprivileged sectors of society using innovative solutions. UPGRADE focuses on unprivileged minorities in both the EU and the MENA region as a case study to solve not only their transportation and urban mobility planning everyday problems, but also to try to upgrade their economic status.

RESULTS

1. Transferring up-to-date knowledge to the urban planning and transportation departments in Egypt for training future mobility teachers as well as students, who will be the future transportation decision-makers.
2. Transferring knowledge from urban planning and transportation departments in Egypt to local businesses, start-ups, and NGOs in the field of urban transportation
3. Transferring knowledge from the future graduates of the 16 courses of the project to society in the form of trained experts, decision-makers, planners, etc.

FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

PARTNERS

- Universitat Politecnica de Valencia – Spain
- Technische Universitat Berlin - Germany
- Ethnicon Metsovion Polytechnion – Greece
- National Housing and Building Center – Egypt
- Future University – Egypt
- Arab Academy for Science, Technology and Maritime Transport – Egypt
- University of Balamand – Lebanon
- Notre Dame University Louaize – Lebanon

MEETING AT THE FUTURE UNIVERSITY EGYPT

Upgrading Education and Research to help Transportation Businesses Address the Challenges of Unprivileged Sectors of Society Using Innovative Solutions.
One of the initiatives carried out as part of the project

Even in the art world, the artist is increasingly becoming a professional activity requiring specific economic and entrepreneurial skills. As a result, the MUSAE project aims to complement existing arts training with economic skills and to identify and develop strategies to motivate arts students to acquire these skills, maintain their interest in these disciplines and introduce them to an intercultural context.

**RESULTS**

1. Professionalise higher education in a variety of knowledge-based creative fields, focusing on some macro-fields (music, visual arts, film, performing arts)
2. Prepare future artists to improve their employability and their ability to access the creative economy
3. Develop campaigns to raise awareness of the value of arts education, its relationship with sustainable development and future employability
4. An in-depth examination of the programmes taught (theoretical and practical)
5. Engage art students (and teachers) in local, regional and international arts scene through internships, exchange programmes and joint projects

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries
Mathematical Engineering - Real Math is a project that, through the establishment of a double degree course between the University of L’Aquila and its partner universities, aims to train professional figures characterised by a solid theoretical-methodological background in mathematical modelling and scientific computing and capable of tackling increasingly complex problems with an integrated approach between mathematical modelling and the use of computational resources. The students spend one year at the partner university and one year at the University of L’Aquila and obtain, in addition to the foreign degree, an Italian master’s degree.

**RESULTS**

Graduates of the course will have an education that will enable them, either in their home country or in Italy, to successfully enter the labour market and to contribute to the country’s development with extremely high-level skills, or to continue their studies in a PhD in modelling and computational fields.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

**PARTNERS**

- Kwame Nkrumah University of Science and Technology – Ghana
- National Institute for Mathematical Sciences – Ghana
- University of the Gambia – Gambia
Bari University «Aldo Moro» has promoted scientific cooperation among the Universities of the Mediterranean Sea since 1982. In 1983 Rectors from Syria, Greece, Turkey, France, Israel, Tunisia, Egypt, Malta, Montenegro, Lebanon and Italy, the Rector of the European University of the Job (Bruxelles) and the Deputy Director of the culture (UNESCO), Prof. Mohamed Aziza founded the “Community of Mediterranean Universities” (CMU) approving unanimously the related statute. The CMU has Italian and international legal status and is represented, in all cases, by the President or the General Secretary. The CMU’S is located at the University Aldo Moro” of Bari (https://www.cmunog.eu/ ). CMU currently involves 34 African universities from Algeria, Egypt, Libya, Mauritania, Morocco and Tunisia).

Bari university has been engaged in a number of project focusing mostly on higher education and institutional capacity building offering scholarships, support to local universities and promoting territorial cooperation thanks to its international networks. Bari University, lead by prof Gesualdo, has also signed in 2019 a partnership agreement with Mbarara University Hospital, Uganda to allow Ugandan doctors to carry out an internship period in Puglia. These initiatives demonstrated the strong commitment of Bari university Aldo Moro to cooperate with international organizations adopting a long term and a multistakeholder perspective for the benefit of local, regional and global sustainable development.
COMES IN UNIBA
Incoming student transnationality and mobility agreement

Category
HIGHEDUATION
Scholarships and Support to local universities

Geographical area
Africa – Senegal, Kenya, Somalia

Donor(s)
Bari University – Aldo Moro and Apulia Region’s Cohesion Action Plan

Project duration
2018 – ongoing

P R T N E R S
- Bari University Aldo Moro
- Université Cheikh Anta Diop de Dakar in Senegal
- Strathmore University in Kenya
- Somali National University in Somalia

On 12 March 2018, the Rector of the University of Bari signed the network protocol with three Universities from the African area: Université Cheikh Anta Diop de Dakar in Senegal, Strathmore University in Kenya, and Somali National University in Somalia and three from the Latin American area (Argentina, Chile, Peru) that started inter-institutional exchanges and initiatives with the University of Bari during 2016. The Agreement on Transnationality and Incoming Student Mobility aimed at enhancing the attractiveness of university education at the University of Bari by enhancing the processes of transnationality and incoming student mobility.

RESULTS
Thirty scholarships had been granted to attend courses in the 24 Departments of the University of Bari and acquire credits that could be spent in the degree courses of the universities to which they belong. The project was financed within the framework of the Apulia Region’s Cohesion Action Plan. For each participating student, the University of Bari has provided a scholarship of €1,480 per month gross all-inclusive, in addition to a lump-sum reimbursement for return travel expenses of €592.

FUTURE PROSPECTS
- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries
PHD COOPERATION
University of Bari Aldo Moro and the “Katyavala Bwila” University of Benguela (Angola)

Category: HIGHER EDUCATION
Scholarships and Support to local universities

Geographical area: Africa – Angola

Donor(s): Bari University – Aldo Moro

Project duration: 2015 – ongoing

As partial fulfilment of the Cooperation Agreement between the University of Bari Aldo Moro and the “Katyavala Bwila” University of Benguela (Angola), signed on 04.29.2015, and aimed at encouraging the exchange of academic and scientific knowledge in the field of studies and research, the Universities signed an executive agreement for the formation of staff members of the “Katyavala Bwila” University. Pursuant to the Convention, Dr. Martinho Kahala Mbindji was admitted to the PhD course in “Legal principles and institutions between global markets and fundamental rights” - 33rd cycle.

RESULTS
Dr. Martinho Kahala Mbindji regularly attended the course, consistently participated in the training activities and obtained the title of PhD on 21th January 2022, discussing a thesis on the topic “Impersonal controls in the context of employment relationships. A comparative study between Italian, Portuguese and Angolan legal systems” (supervisor Prof. Vito Pinto, co-supervisor Prof. Vito S. Leccese).

FUTURE PROSPECTS
• Potential replicability of the project: Yes
• Other potential partner countries: All African Countries

EXPO 2030 ROMA FOR AFRICA

ACADEMIC COORDINATOR
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The project University Corridors for Refugees UNICORE is promoted by Italian universities with the support of UNHCR, Italian Ministry of Foreign Affairs and International Cooperation, Caritas Italiana, Diaconia Valdese, Centro Astalli and other partners. It aims to increase opportunities for refugees to continue their higher education in Italy.

University of Bari Aldo Mor has joined the UNICORE 3.0 project (Ethiopia 2021-23), the fourth UNICORE 4.0 (Cameron, Niger and Nigeria, Malawi, Mozambique, Zimbabwe, Zambia and South Africa 2022-24), and the fifth (Kenya, Niger, Nigeria, South Africa, Uganda, Zambia and Zimbabwe) granting no. 9 scholarships for an annual cost of € 5,000, 3 for UNICORE 3.0, 3 for UNICORE 4.0, and 3 for UNICORE 5.0.

### RESULTS

The project has enabled 6 students so far (additional 3 students for UNICORE 5.0 are due to start activities in October) to enter Italy legally and to enrol at our university in the Master courses of Physics, Computer Sciences, Innovation development in agrifood systems and International Relations and European Studies.

### FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

### PARTNERS

- UNHCR
- Italian Ministry of Foreign Affairs and International Cooperation
- Caritas Italiana
- Diaconia Valdese
- Centro Astalli

### CATEGORY

- HIGHER EDUCATION
- Scholarships and Support to local universities

### GEOGRAPHICAL AREA

Africa – Kenya, Niger, Nigeria, South Africa, Uganda, Zambia and Zimbabwe

### DONOR(S)

- UNHCR, Italian Ministry of Foreign Affairs and International Cooperation, Caritas Italiana, others

### PROJECT DURATION

2015 – ongoing
Within University of Bergamo, different groups of researchers show an interest in studying and operating in the African context in several fields, including the area of foreign languages and cultures.

One particular area of interest is financial inclusion. A research group within the Research Center CESC, named FinDev, has been operating for several years doing research:

- on the links between finance and development,
- on the policies to facilitate the access to financial services by the layers of the population in urban and rural areas otherwise excluded,
- on the innovation in financial and insurance products that can help these target people handle their financial constraints
- on the effects of exposure to climate change
- on the critical issues affecting the impact that development banks played in the past, the lessons learnt and the strategies to make their interventions effective and supportive of an ecological transition that complies with the characteristics and expectations of local target actors.

Another focus of the University of Bergamo is on the perspectives of African entrepreneurial development. In this field, the University has been operating in order to:

- Strengthen the potential for linking young entrepreneurs of Africa and Europe
- Offer students from Africa opportunities to interact with Italian students with joint programs that foresee African Universities hosting students from Bergamo and vice-versa

More generally, the University of Bergamo has already and aims at potentiating collaboration agreements with African universities. The current focus is on Ethiopia but plans include widening the scope.
The University of Bergamo (Unibg) started its relationships with Wolaita Sodo University (WSU) since the establishment in 2007. The first type of collaboration concerned support to Unibg PhD students’ research activity in the field (2009). In 2010-2013 Unibg and WSU conducted a field research in Wolaita on socio-economic conditions of rural households and risk exposure and strategies to face them. WSU made available local enumerators and coordinators. A joint experiment was also conducted. Subsequently, Unibg asked WSU to host groups of students from Unibg, attending some classes and meeting their peers through seminars where common topics were presented in the perspectives of Ethiopian and Italian students. In 2020-2023 an Erasmus+ was implemented. In October 2023 a new MOU will be signed between the two Universities.

RESULTS

Each action described above reported successful results:
• Dissertations and thesis based on the data collected
• Several publication based on the field research of 2010-2013
• 2 batches of students participating in the joint seminars and activities
• 2 professors from Unibg to WSU and 2 professors from WSU to Unibg with Erasmus+

FUTURE PROSPECTS

• Potential replicability of the project: Yes
• Other potential partner countries: All African Countries

ACADEMIC COORDINATOR
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Development cooperation has always been the center of sensitivity, of teaching and research interests of several researchers and students of the University of Brescia. The UNESCO chair “Training and strengthening of human resources for health development in resource limited countries” and the “Research Center on Appropriate Technologies for environmental management in resource limited countries (CeTAmb)” can be considered the strength points for the promotion of several initiatives that involve students and researchers to look at the less developed areas of the world.

The main expertise of the University of Brescia in the field of development cooperation involves the area of health and technologies for the environment. A specific PhD programme is available on “Appropriate methodologies and techniques for international development co-operation” (Health track and Technology track).

Several relationships have been developed with African countries both for research and cooperation projects and six agreements are still going on (Tanzania, Mozambique, Ghana, Somalia, Algeria, Libya). The University of Brescia offers economical support to foster access to higher education in Italy of students from Low income countries.

In 2010 the University of Brescia joined the University Coordination for Cooperation and Development (CUCS).
The Project, proposed by the University of Brescia (Department of Clinical and Experimental Sciences, the Unit of Infectious and Tropical Diseases, together with the UNESCO Chair) refers to a context inhabited by about 500,000 people, in the Province of Inhambane, Mozambique. Here, a significant portion of the population lives in remote areas with limited access to health services, a high rate of new HIV cases and of HIV transmission from mother to child. The two-year project has the main objective of contributing to the fight against HIV in hard-to-reach communities in Mozambique and, evaluating the implementation of innovative identification and linkage to care systems for HIV patients (pregnant women, their children and general adults), through: introduction and the analysis of innovative strategies and advanced diagnostic tools to guarantee a rapid and validated outcome; enhance clinical data collection through electronic systems and E-health platform, improving clinical planning and patient care adherence; establish a system to geolocate remote communities to better understand the area’s demographics for targeted health strategies.

The increased identification and regular follow-up of HIV patients will be achieved through the adoption of innovative diagnostic tools and strategies to promote patient adherence. Of particular significance are the results achieved in the early identification and management of the pediatric population at risk, through advanced diagnostics and linkage with mothers of exposed children. Access to early HIV diagnosis in infants is essential to ensure the prompt initiation of antiretroviral therapy and improve the survival. Determining the demographic profile of remote areas and evaluating the social determinants, barriers, and primary healthcare access challenges perceived by rural communities are fundamental prerequisites for guiding the development of healthcare strategies and interventions tailored to their specific needs.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Autres pays partenaires potentiels: Universities of Mozambique
EXPO 2030 ROMA FOR AFRICA

INTEGRATED ENVIRONMENTAL SANITATION CONCEPTS FOR POOR, UNDERSERVED AND PERI-URBAN AREAS OF IRINGA MUNICIPALITY (TANZANIA)

Category
RESEARCH FOR LOCAL DEVELOPMENT
Health, water and hygiene, One Health

Geographical area
Africa – Tanzania

Donor(s)
EU-ACP Water facility Initiative

Project duration
2014-2019

PARTNERS

- University of Brescia (IT)
- ACRA-CCS Foundation (coordinator) (IT)
- University of Brescia - CeTAmb (IT)
- Iringa Municipal Council (IMC)
- Iringa Urban Water and Sanitation Authority (IRUWASA), Tanzania
- MAMADO, Tanzania
- IDYDC Iringa, Tanzania
- BOKU (AT)
- CEWAS (CH)
- CUAMM (IT)

The project was aimed to promote and implemented affordable and environmentally sustainable sanitation systems in poor urban and peri-urban areas of Iringa Municipal Council (IMC) in Tanzania. Furthermore, sanitation facilities in schools and health centers were assessed, selected, upgraded or newly constructed, and community-based solid waste collection systems established, focusing on low environmental impact, social and economic sustainability and on the potential for scaling-up. CeTAmb (Research Center of Appropriate Technologies for Environmental Management in resource-limited Countries) of the University of Brescia contributed to develop and apply different methodologies: Community-Led Urban Environmental Sanitation (CLUES), Sanitation Safety Planning (SSP) as well as the Sanitation Marketing (SM). The final goal was to support the selection and design of an improved sanitation system and services. The optimization of the improved latrines was developed based on the Human Centered Design (HCD) approach.

RESULTS

A new methodology was developed and proposed based on the integrated use of the analyzed approaches for the design of improved sanitation systems in peri-urban areas of low-income countries. The project mobilized communities and ensured that more than 1000 households received sanitation services, as well as provided “Sanitation as a Business” training modules to small-scale entrepreneurs.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries:
  Local Universities (RUCU – Ruaha Catholic University – Iringa)
  Italian NGO

ACADEMIC COORDINATOR
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The University of Brescia and Kwame Nkrumah University of Science and Technology (KNUST) in Ghana have established a collaborative initiative under the Erasmus+ program. This partnership aims to foster academic collaboration between universities in Northern and Southern regions, facilitating the exchange of students and professors. The primary goal is to promote the sharing of knowledge and contribute to scientific advancements that address current and future global challenges, promoting sustainable development. This contributes to cultural and scientific development within their own country. This project received funding from the European Commission in 2020 through the Erasmus+ International Credit Mobility program (Key Action 107).

The University of Brescia has invested in the “Sustainable Livelihoods” project (coordinated by Prof. Mentore Vaccari) funded by the EU coordinated by the NGO CISS, in collaboration with the University for Development Studies at Tamale, Ghana.

**RESULTS**

In 2023, 4 students from KNUST participated in international mobility programs in research projects within the fields of Precision Medicine, Biomedical Sciences, and Translational Medicine. Additionally, 1 PhD student from UNIBS spent three months at a Tuberculosis clinic in Komfo Anokye Teaching Hospital, Kumasi, Ghana, contributing to collaborative research efforts in the field of tuberculosis. During the same period, 4 UNIBS professors delivered lectures to students at KNUST. This exchange of knowledge and expertise represents a significant step in advancing scientific collaboration and academic growth between the two institutions.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

**PARTNERS**

- University of Brescia (IT)
- Kwame Nkrumah University of Science and Technology (KNUST), Ghana
**EXPO 2030 ROMA FOR AFRICA**

**PHD PROGRAMME IN APPROPRIATE METHODOLOGIES AND TECHNIQUES IN INTERNATIONAL COOPERATION FOR DEVELOPMENT**

**Health and Technology Tracks**

<table>
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<th>Category</th>
<th>Geographical area</th>
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<tr>
<td>HIGHER EDUCATION</td>
<td>Africa</td>
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- Scholarships
- Transnational education
- Capacity building

<table>
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<tr>
<th>Donor(s)</th>
<th>Project duration</th>
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<tr>
<td>Fondo Archetti University of Brescia</td>
<td>2008-ongoing</td>
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The PhD Program in “Appropriate methodologies and techniques in international development cooperation” was founded in 2008 with the collaboration of Fondo Archetti. Today it is one of the 6 curricula included in DICACIM PhD Program and it promotes research activities for the development of appropriate solutions in resource-limited areas on environmental and medical-health issues. The course lasts 3 years, being divided into two tracks: Technological and Health. The proposal of the Curriculum includes training and research activities, both in Italy and Low income countries. Of particular importance is the field in collaboration with cooperation organizations and local universities. The Technological specialization deals with the access to drinking water, “sanitation”, waste management and energy. The Health track develops research on infectious endemics (HIV, malaria, tuberculosis, neglected diseases, etc.), and it contributes to the achievement of the health objectives for sustainable development (SDGs).

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<tr>
<th>Category</th>
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<tr>
<td>PARTNERS</td>
<td>Africa</td>
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- Many Partners all over the world in more than 30 Low Income Countries
- EU reasearch centers
- Universities in Low Income Countries
- Several Italian NGOs
- Local Stakeholders in Low Income Countries (hospitals, communities, water utilities, etc.)

**RESULTS**

- 43 students completed the course, 30 Italian and 13 foreigners from different countries: Brazil, Colombia, Jordan, Sri Lanka, Pakistan, Switzerland.
- 2 students are from Africa (Senegal e Ethiopia).
- 27 PhD students attended the Technological track and 16 the Health track.
- Most of the 43 research projects were developed in Africa (56%): Burkina Faso (8), Ghana (3), Senegal (3), Mozambique (3), Tanzania (2), Cameroon (1), Chad (1), Ethiopia (1) and Somalia (1).

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

**ACADEMIC COORDINATOR**
Paolo Secchi (PhD Programme)
Sabrina Sorlini (Tecknology track)
Alberto Matteelli (Health Track)

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From the AY 2021-22, a collaboration has been activated, renewed in the AY 22-23 and 23-24 with the Istituto Italiano Statale Ominicomprensivo “Galileo Galilei” of Addis Ababa for the selection of students who have obtained the high school diploma from that institution. This selection is carried out after orientation activities carried out online.

Three of them are awarded with a three-year scholarship so that they can continue their studies at the University of Brescia during the Bachelor Degree. This initiative, which concerns the first years of the university career, is accompanied by support with scholarships reserved for less developed countries, non-EU countries and with regional Right to Education scholarships.

The University of Brescia invested also on projects about the water-energy-food nexus with Ethiopian partners, as the Addis Ababa University, under the coordination of prof. Gianni Gilioli.

**RESULTS**

Overall, Ethiopian students enrolled in Master’s or Specialist degrees with scholarships have gained an average growth of 4.4% per year, currently exceeding ten units. Moreover, the support in higher education also continues at PhD level with a number of PhD students growing members, both in absolute terms and as a percentage of total members. Today, the six students enrolled in the doctorate of Ethiopian nationality represent approximately 2% of the total number of doctoral students.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Other African countries
The University of Cagliari (UNICA) is a multidisciplinary University, located in Sardinia, in the middle of the Mediterranean, which favours consolidated relationships and exchanges of students and staff with the southern Mediterranean countries. The relationship with African countries are supported by different funding sources, either regional (L.R. 19/96 on cooperation with developing countries), national (bilateral cooperation projects funded by the Ministry of Foreign Affairs) and mostly European. Among the latter UNICA is involved in projects within the programmes ENI CBCMED on topics related to environment, technology transfer, women empowerment, entrepreneurship, and PRIMA, related to innovative solutions in agro-food and water systems. In addition, within the Erasmus action KA171 UNICA has developed interesting cooperations with African countries, specifically Mozambique, Tunisia, South Africa, and others. Last to be mentioned is the Project “SARDEGNA FORMED” (Sardinia for the Mediterranean) co-funded by the Sardinia Foundation which since 2015/16 allowed to support more than 100 students from North African countries with scholarships to enroll into full Master Programmes at UNICA.
REPTES aims to develop a proof of concept of innovative RES-based multigeneration/storage systems for covering both heat/cool and electricity demands of isolated and rural communities in Africa and for producing other green commodities for agriculture such as ammonia as fertilizer, desalinated water, and refrigeration energy for food conservation. The core of the system is the coupling between RES-based generators, electrochemical batteries for the short-term storage and a pumped thermal electricity storage (PTES) system. The potentiality of the integrated system applied to African communities will be evaluated by developing experimentally validated models able to predict the expected performance of such system. Simultaneously the impacts of the use of such integrated system in African communities will be investigated both in terms of economic feasibility and life cycle assessment point of view. Furthermore, the scalability and the replicability of the system aimed at providing insights into the practical implementation of the off-grid energy generation system will be investigated.

RESULTS
Through its innovative solutions, the REPTES system will have a great impact on the quality of life of those who will use it. First, the system will lower the cost of energy supply for communities; second, it will have an impact on sanitary security because it will enable local communities to procure fresh desalinated water. REPTES will also enable improved home comfort by providing fresh and warm air as needed. Green ammonia production will also enable useful fertilizer for agricultural production, 100% renewable and carbon-free.

FUTURE PROSPECTS
- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries
Grape as a traditional crop in the Mediterranean area has a strong innovation potential, not yet exploited. People working in the grape cultivation sector are generally focused on improving the quality of grape and wine, but usually don’t consider how to make the most out of grape waste. Based on the R&D experience of the partners in the fields of grape valorisation, waste exploitation and development of nanotechnological antioxidant/anti-inflammatory/anti-neurodegenerative formulations, BESTMEDGRAPE aimed at supporting the creation of new startups by transferring scientific/technological knowledge on local grape cultivars and the exploitation of wine by-products as a source of bioactive compounds that can be transformed into innovative commercial health products. The project valorised the expansion of the grape value chain through the development of nanotechnological products, boosting the local economy, reducing environmental pollution and increasing employment opportunities.

RESULTS

- 20 living labs activated and 15 co-publications on native grape cultivars characterisation and extraction
- 1 online platform to support business networking on grape waste exploitation
- 136 potential entrepreneurs selected for the exploitation of promising grape-related products and services
- 21 newly established companies in the production and commercialisation of innovative products and services in the area of grape derivatives
- 39 prototypes of products developed for commercialisation in the field of grape derivatives

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: South Africa
The project SUPREME addresses local communities distributed over 4 different areas of the Mediterranean (Italy, Jordan, Cyprus and Algeria) that have been increasingly challenged by water scarcity and by low agricultural productivity due to the scarce bio-geochemical functions of soils. Different soils and crops (tomatoes, legumes such as faba beans and vetch, barley and sorghum) were considered in the test sites. The project’s scope was achieved through integration of state-of-the-art biotechnologies and leading edge characterization, monitoring and modeling tools, accessed through an innovative, interactive web-based observation system. Thus, the problem of selecting what inocula, when, where and how to use them was addressed in an integrated tiered approach. The assessment of soil characteristics, hydrological and climate conditions as well as type of crops will be the basis to measure the efficacy of the geo-biotechnology applied to improve crop production and to reduce negative effects of agricultural practices on the environment. With a thorough understanding of the underlying factors in microbe-plant interactions, a consistent application of this geo-biotechnology, exploiting indigenous microbes, was reached.

**RESULTS**

Microbial fertilizers on characterized soil were investigated also under extreme conditions in the project. Results of plant growth and fruit quality indicated that chemical fertilizers can be substituted by microbial fertilizers. We also found that in arid conditions microbial fertilizers can perform better than chemical fertilizers. Soil functions can then be boosted and supported by microbial fertilizers. We will test the geo-biotechnologies at a larger scale in future projects, also supporting creation of local production of microbial fertilizers.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: Tanzania, Uganda, Rwanda, Kenya and potentially other African countries
The project aims to develop innovative methodologies to increase the social-ecological Water Use Efficiency of managed ecosystems along the Mediterranean biome and climate types, in the face of drier and more extremes climates. It relies on 9 study sites (3 in Italy, 1 in Algeria, 1 in Cyprus, 2 in Tunisia, 1 in France, and 1 in Egypt). SWATCH consist of seven interconnected work packages, including WP1 on management and WP7 on dissemination and communication. WP2 deals with the Monitoring of experimental fields and hydrological basins. WP3 focuses on Ecohydrological modelling. WP2 address innovative ecohydrologic models at several spatial scales. WP4 includes the acquisition of satellite images and the development of a data assimilation systems. WP5 includes the development of land cover change strategies under actual and future climate change scenarios. WP6 includes the development of water management and planning systems for the optimization of the water infrastructures and uses.

The results will improve the multipurpose and multi-user water resources management and planning systems for the optimization of the water infrastructure and uses and management and planning under current and future climate change scenarios while preserving natural ecosystems. The project will develop and implement innovative methodologies for EvapoTranspiration, improve the eco-hydrologic monitoring, and identify the impacts of contrasting vegetation and crop types on the soil water balance, surface runoff, and water use under current and past Mediterranean climates.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: All African Mediterranean countries
The expertises involved in the projects are:

- Sociology and Sociology of Climate Change
- Economy of Regional Development, Economy of Ecological Transition and Circular Economy
- Pedagogy of Special Needs
- Chemistry of Fodd and Nutrition
- Pharmaceutical Chemistry
- Plant Physiology
- Dietary sciences and techniques
- Internal Medicine
The No one left behind cooperation project aims to promote school inclusion and welfare of students with disabilities in the two administrative districts, urban and rural, of the Iringa Region. The activities carried out are based on a participatory approach of the actors of the educational community (school, day centers and families) and has developed on three main axes: community, associations of people with disabilities and local institutions to promote an inclusive culture and break down cultural barriers; training to increase and enhance knowledge and promote skills; school facilities to increase quality standards and make them accessible as meeting places for disabled and non-disabled students. The starting point was emancipatory research aimed at analyzing the dynamics of discrimination and barriers to the participation of people with disabilities. The research also aimed to develop an awareness campaign aimed at informing, educating the local population and the local institutions of the region about disability.

**RESULTS**

The main outcomes of the project: 1) school staff trained on disability and inclusive education issues and school environment more accessible to all students; 2) Community members more aware of the importance of social and school inclusion and increased number of students with disabilities enrolled in target schools; 3) Improved relationship and communication between teachers and parents of students with disabilities and positive effects on the relationships between students; 4) students without disabilities also recognise the richness of diversity Increased awareness of families and community about the rights of people with disabilities; 5) the network of stakeholders in the field of disability has strengthened.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries
Seed of Future cooperation project is an integrated initiative that aims to work with the most vulnerable segments of the population in 50 kebele (villages) of the rural woreda (districts) of Ameya, Goro, SedenSodo and Wolisso Zuria, Ethiopia, with a focus on children and women so that they adopt healthy and proper nutrition, efficient care and nurturing styles, and prevent and treat child malnutrition. The efforts of CEFA and project partners, involve: the Agricultural sector for productive improvement both at a more widespread level and with women’s groups (associations and cooperatives) to improve technical and management aspects, supporting market access and growth of women’s agricultural incomes; the Protection sector with actions of support, accompaniment and psycho-social assistance of women and children at risk of malnutrition, to participatively support vulnerable cases, organizing dialogues on children's rights and sharing knowledge on nutritional information; the Health sector, with widespread awareness-raising and improvement of the treatment, referral and rehabilitation system for cases of malnutrition and undernutrition.

RESULTS

The main outcomes of the project are:

- **R1** Communities produce and consume food in quantities and varieties appropriate for a balanced diet;
- **R2** At least 15 groups of women agro-entrepreneurs produce and process agri-food commodities that generate income and enrich the community food-system;
- **R3** Communities nourish and care for children and the most vulnerable with awareness and effectiveness;
- **R4** Health services for prevention, identification, treatment and follow-up of malnourished patients are adequate in quantity and quality.

FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

PARTNERS

- CEFA onlus (lead partner)
- EmCS (Etiopia)
- South West Shewa Zone Health Department (Etiopia)
- Fondazione di Religione "Opera San Francesco Saverio"
- University of Ferrara
- C.U.A.M.M.
- FAdV
- Ce.V.I
- Cittadinanza Onlus
- Climate and Development Foundation
- CSB Centro per la Salute del Bambino Onlus
PHARMACY PROJECT

Strengthening the food and nutritional security of the Sahrawi people through the enhancement of native plants of Western Sahara and the promotion of sustainable agriculture

<table>
<thead>
<tr>
<th>Category</th>
<th>RESEARCH FOR LOCAL DEVELOPMENT</th>
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<td>Malnutrition, Health, Sustainable agriculture, Local staff training, Women empowerment</td>
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</table>

| Geographical area | Africa – Campi profughi sahrawi (Algeria) |

| Donor(s) | 8xmille IRPEF Presidenza del Consiglio dei Ministri - Fame nel mondo |

| Project duration | 2022-2025 |

This project aims to improve the nutritional and health status of the Sahrawi refugee population particularly the children, women and the elderly.

The specific objectives to be achieved at the end of the 3-year intervention are:

1) to supplement the diet with some Western Saharan plants with adequate content of micro and macro-nutrients;
2) to reduce the rate of anemia among children under 5 years of age and among women of child bearing age (ages 15-49 years);
3) to produce some food supplements or herbal products, including for external use, from plants of Western Sahara in the “M. Embarek Fakalla” laboratory;
4) to promote the cultivation of some of the plants under study, through the establishment of a specific protocol.

<table>
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<tr>
<th>RESULTS</th>
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<tbody>
<tr>
<td>The main outcomes of the project are:</td>
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<tr>
<td>• Identification of at least 2 native plants with high nutritional value</td>
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<tr>
<td>• Production of at least 2 health products in the “M. Embarek Fakalla” laboratory</td>
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<tr>
<td>• Identification of cultivation systems that can be implemented locally site and cost-effective</td>
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<tr>
<td>• Identification of sources of seed or other material for on-site multiplication</td>
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<tr>
<td>• Improvement of the nutrition status of the population with selected native plants</td>
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<tr>
<td>• Capacity building of primary health care facilities</td>
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<td>• Training of local staff</td>
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<th>FUTURE PROSPECTS</th>
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<tbody>
<tr>
<td>• Potential replicability of the project: <strong>Yes</strong></td>
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<tr>
<td>• Other potential partner countries: <strong>All African Countries</strong></td>
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The University of Firenze (UNIFI) is a generalistic university where everything can be studied (but veterinary). It is a founding member of The European University Alliance EUniWell, an alliance of 11 universities, sharing a vision to shape the universities of the future and aiming at becoming the voice for wellbeing. Recognizing the importance of global perspectives for wellbeing, EUniWell has established cooperation with Global Partners, with a particular emphasis on Sub Saharan Africa countries. UNIFI is also a founding member of the Italian Higher Education with Africa Foundation (IHEAF) a partnership of six Italian Universities which is part of a broader strategy of higher education diplomacy or soft power, and aims at building cooperation and regional alliances. IHEAF has recently organized a Master for African University professors and a series of short blended courses to fill knowledge gaps and support the skill upgrading of young professionals.

UNIFI Strategic Plan highlights the importance of international cooperation, particularly with developing regions, involving universities and institutions in different countries. UNIFI cooperation is high not only in Sub Saharan Africa but also with countries in the Middle East North Africa countries (MENA), including an agreement with the Architectural School in Morocco (Fes) for the delivery of Masters.

On a strategic level, the teaching and training activities at UNIFI in the area of development – with a BA (sviluppo economico, cooperazione internazionale socio-sanitaria e gestione dei conflitti) two Master programmes (in English) on Economics and development and Geography, Spatial Management, Heritage for International Cooperation, and a PhD programme on development economics and local systems (DELOS), forming a fairly unique integration line – are aimed at strengthening both specific and transversal skills for the promotion of sustainable human development. The activities have a significant international dimension because they are aimed at students from all over the world, and because they focus on knowledge and skills relevant to international development cooperation. Students of this “strand” often do traineeships on the field and write their thesis after having completed field work.

The cooperation projects at UNIFI mainly revolve around international research, Capacity Building activities, also including several KA171 projects, and international mobility for teaching and learning. UNIFI has a proved research expertise in sustainable development and international cooperation, as evidenced by projects focusing on themes such as energy for sustainable development, environment, nanomaterials, governance of emergency medical services, and social sciences, amongst others. The university has developed Capacity Building projects aimed at modernizing, internationalizing, and expanding access to higher education and established new international mobility collaborations through Erasmus+ International Credit Mobility, with a specific focus on the Sub-Saharan Africa region.

As highlighted by the United Nations 2030 Agenda for Sustainable Development, achieving the Sustainable Development Goals requires strong global partnerships and cooperation based on shared principles and values that prioritize people and the planet. UNIFI promotes the SDGs and collaborates with national and international university networks, such as the RUS network (Universities Network for Sustainable Development), the CUCS network (University Coordination for Development Cooperation), UNICORE, as well as research centers and associations (such as IeMed, EMNES etc).
NEXUS-NESS

NEXUS Nature Ecosystem Society Solution for Fair and Sustainable Resource Allocation Demonstrator of the Multiple WEFE Nexus Economic, Social and Environmental Benefits for Mediterranean Regions

Category
RESEARCH FOR LOCAL DEVELOPMENT
Sustainable Energy, environment and natural resource management

Geographical area
Africa – Tunisia, Egypt

Donor(s)
PRIMA

Project duration
3 years (2021-2024)

PARTNERS

13 partners of 7 countries, among which:
- University for Foreigners of Perugia (Italy, prj coordinator).
- University of Florence (Italy).
- Alexandria University (Egypt).
- Institut Régions Arides de Médenine (Tunisia).
- Commissariat Régional au Développement Agricole Gabès (Tunisia).

NEXUS-NESS project aims at the co-production and co-demonstration of WEFE Nexus asset plans for a fair and sustainable allocation of natural resources. NEXUS-NESS transfers data and numerical models of natural resource management on a hydrological basis to the operational field to test a new service, called NEXUS-NESS Service, in real case studies. The project will adopt a bottom-up approach in four regions identified in Italy, Spain, Egypt and Tunisia where practical experimentation sites will be created, called Nexus Ecosystem Labs, following the principles of Living Labs and Responsible Research Innovation, to foster ecosystem innovation. A new digital platform will facilitate the involvement of stakeholders and citizens for the broadest sharing of the project’s actions, creating the basis for a process of change, both technical and cultural, lasting over time, strongly supported by the virtuous and continuous synergy between universities, industries, public administration and citizens.

RESULTS

NEXUS-NESS has 3 main objectives: 1) Initiating four Nexus Ecosystem Labs (NELs) in Italy, Spain, Tunisia and Egypt where WEFE Nexus strategies are needed for achieving Water, Energy, Food and Ecosystem security; 2) Develop WEFE Nexus scenarios to address NELs challenges identified with the regional stakeholders and co-produce WEFE Nexus management plans for fair and sustainable allocation of resources; 3) Applying the Responsible Research And Innovation principles in the 4 NELs to prepare and support stakeholders in a cultural and behavioural change to achieve the desired WEFE Nexus innovation.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: all African Mediterranean basin countries

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The overall objective of RE-FARM is to contribute to the transformation of the agricultural sector in Angola through research and innovation. To increase climate change resilience by encouraging the implementation of scientifically tested agroecological practices, the RE-FARM Project aims to test and identify the most suitable practices that can holistically improve smallholder farming systems, in a participatory manner, providing the basis for sustainable agricultural transformation. Specifically, the RE-FARM Project will include both the biophysical assessments of the most suitable practices and the testing of their socio-cultural viability using consolidated participatory methods with local stakeholders. In particular, project’s activities are taking place in Cuanza Sul and Benguela, two provinces of the Central Highlands Area (Planalto Central).

RESULTS

The following results were achieved in the first year of the project:
- The mapping of the different agroclimatic zones, through GIS and remote sensing
- The participatory involvement of ten selected rural communities
- The participatory selection of practices to be tested, namely push and pull and agroforestry combined with water harvesting technologies (planting pits, half-moons, and infiltration trenches)
- The planning of field experiments in Angola

FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: Angola (other areas), Namibia, and more in general arid areas in Sub-Saharan Africa
TRANS-SAFE project concept

Road traffic injury death rates are high in Africa. There is an urgent need to implement safety solutions. The TRANS-SAFE project will involve national, regional, and city-level demonstrations to test different types of innovative and integrated Safe System solutions, complemented by a comprehensive toolbox, capacity development, policy support and replication activities. To maximize impact, the project brings together a consortium of highly committed cities, road safety agencies and experts from both Europe and Africa. The consortium will deliver an ambitious project through highly effective and innovative approaches to sustainable road safety development, thereby ensuring that road safety systems and interventions from this project deliver on the recommendations of the Road Safety Cluster of the African-EU Transport Task Force, adopted in 2020. The project will help deliver on the Joint EU-Africa Strategy (JAES) and advance countries’ progress towards the 2030 Agenda for SDGs.

RESULTS

The project has entered in the second year of activities. Current results pertain to State-of-the-Art reviews of crash data, guidelines and policies implemented in the countries that will host the TRANS-SAFE demo activities. In parallel the content and the organizational aspects of the demo activities have been defined and almost finalized. The demos (start foreseen within 6 months) will bring in selected locations viable and economically sustainable solutions, to test their effectiveness. Upon a positive outcome, replications will be implemented at other sites.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African countries

PARTNERS

27 partners among which:
- University of Florence (It); Technische Universität Berlin (De); Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (Gh); Iliada Automotive Technology Sa (Es); The Institute for Transportation & Ke Development Policy (Ke); United Nations Environment Programme (Ke); Idler-local Governments for Sustainability-Africa (Za); United Nations Human Settlements Programme (Ke); Union Africaine Des Transporteurs Publics (Uatp); University of Rwanda (Rw); University of Cape Town (Za); African Cycling Foundation (Ng); Zambia Road Safety Trust (Zm); Gometro (Pty) Ltd (Za); Agence Nationale de la Securite Routiere (Ma); Healthy People Rwanda (Rw)

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TRANS-SAFE
Transforming Road Safety in Africa

Category
RESEARCH FOR LOCAL DEVELOPMENT
Entrepreneurial and industrial development for local prosperity

Geographical area
Africa – Ghana, Rwanda, South Africa, Zambia

Donor(s)
Europe

Project duration
4 (2022 - 2026)

27 partners among which:
- University of Florence (It); Technische Universität Berlin (De); Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (Gh); Iliada Automotive Technology Sa (Es); The Institute for Transportation & Ke Development Policy (Ke); United Nations Environment Programme (Ke); Idler-local Governments for Sustainability-Africa (Za); United Nations Human Settlements Programme (Ke); Union Africaine Des Transporteurs Publics (Uatp); University of Rwanda (Rw); University of Cape Town (Za); African Cycling Foundation (Ng); Zambia Road Safety Trust (Zm); Gometro (Pty) Ltd (Za); Agence Nationale de la Securite Routiere (Ma); Healthy People Rwanda (Rw)
The CONTAN project, funded by the EU Erasmus+ Capacity Building in Higher Education, aims to boost the capacities of three Universities in Tanzania to deliver in their teaching up-to-date knowledge on biodiversity assessment and conservation by building a strong collaboration between a network of four leading Universities and natural science museums in the EU and the Universities in Tanzania. Activities will (1) strengthen the academic scientific knowledge and improve the HE offer by delivering modern training approaches, through e-learning and the upgrading of formal curricula; (2) build the capacity of HEI’s lecturers and technicians on biodiversity approaches so to deliver effective training; (3) boost skills of students to implement standardized biodiversity monitoring.

### RESULTS

CONTAN supported the activation of revised courses to shape future competitive biodiversity experts in Tanzania. Main results include: (1) realization of an e-learning platform that consists of 3 courses integrated into the teaching of Tanzanian institutions; (2) official accreditation of revised B.Sc. and M.Sc. curricula; (3) 90 students trained in the field on state-of-the-art biodiversity methods; (4) equipping the Tanzanian Universities with laboratory and field research equipping; (5) organization of a scientific symposium near the project end to share results.

### FUTURE PROSPECTS

- Potential replicability of the project: **yes**
- Other potential partner countries: **All sub-Saharan African countries**
The scientific cooperation project was born of the initiative of Moroccan Minister Lahcen Daoudi who, at the meeting of University Ministers of the 5+5 group of the Union of the Mediterranean in April 2015, during a bilateral meeting, asked Italian Minister Sen. Stefania Giannini to support, also with dedicated teachers, the opening of a School of Architecture, with a particular focus on the conservation of cultural and architectural heritage. On 6 July 2015 in Rabat, Morocco, the Joint Declaration was signed between the Italian and Moroccan Ministries, aimed at promoting international cooperation actions in the field of higher education and scientific and technological research. Following the Joint Declaration between the two Ministries and the acceptance by the University of Florence of the MIUR’s contribution, on 26 January 2016 in Rome, in the presence of Ministers Daoudi and Giannini, the following was signed the Partnership Agreement between the University of Florence and the Euro-Mediterranean University of Fez, by which the parties undertake to jointly create and develop a Euro-Mediterranean School of Architecture, Design and Urban Planning (EMADU) within the Euro-Mediterranean University of Fez.

RESULTS

Through the support of the Department of Architecture and the first 8 teachers selected and hired by the University of Florence, the new EMADU was inaugurated on 11 October 2016. The Italian contribution has grown with the provision of selected teachers (15 in total) for accreditation and teaching based on disciplinary competences. From 2020 onwards, the mobility of students has also been introduced, around 10 per year, to spend one or two semesters in DiDA. In addition to their teaching activities, UNIFI-DiDA professors organise intensive seminars and workshops on specific subjects and supervise final-year projects.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African Countries

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Thanks to its crucial position in the heart of the Mediterranean Sea, the University of Messina has a long tradition of cooperation with African countries. UniMe has signed several MoUs and has implemented many mobility programs with African universities within the Erasmus+ KA107 Program. UniMe is member of national and international networks focused on cooperation, sustainable development and peace building such as CUCS, RUS and RUnipace. UniMe has participated in many development projects in the area, mainly Capacity Building and Transnational Education, acting as coordinator of 2 projects in the Biotechnology area, and European partner of 2 projects called RESUME and EuNIT, which focused on enhancing and reinforcing the role and potential of Higher Education Institutions (HEI) in the development of employability in the Mediterranean countries and increasing the international activity in HEIs in the Southern Mediterranean region. Finally, the Department of Law has recently received a national funding for a wide cooperation project called Di Sea Gual which promotes a new legal framework to tackle inequalities and infra/intergenerational disparities, by focusing on the access to new goods (environmental, cultural, bio-economic and digital), which will lead to the creation of an international cooperation model.
ERASMUS+ KA107-KA171
International Credit Mobility - Mobility of higher education students and staff supported by external policy funds

**Category**

HIGHER EDUCATION

Scholarships

**Geographical area**

Maghreb and Sub-Saharan Africa

**Donor(s)**

European Commission and Sicilia Region

**Project duration**

01/06/2015-31/07/2026

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Since the beginning of the Erasmus+ KA107 in 2015, which is focused on international mobility involving third countries non associated to the Erasmus+ Programme (Extra-EU countries), UniMe has received funds for the mobility of students and staff with Africa and, in particular, with South Mediterranean countries. For 6 consecutive years UniMe has received funding for mobility schemes with Morocco and Tunisia, which have financed the mobility of many students and staff. Lately, in line with the EU Programme for the period 2021-2027, new mobility projects have been launched with Sub-Saharan African countries, namely South Africa, Ethiopia, Mauritania and Tanzania. Given the importance of Africa, in addition to EU funds, the Sicilian Region has specific funds available each year for mobilities with African countries allocated to the Universities of the region.

**RESULTS**

In the 8 years of the Erasmus+ KA107/KA171 project, UniMe has received funds for a total of more than 400 mobilities with African countries. Most of the mobilities involved Morocco and Tunisia and, recently, the activities are also involving sub-Saharan countries. Many students and professors from the Partner Universities have taken advantage of this opportunity, which has also led to other results such as the enrollment of former Erasmus+ students to UniMe PhD Programs. Cooperation with African countries has been very satisfactory and every year new projects are and will be presented.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Kenya, Egypt, Ghana

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**ACADEMIC COORDINATOR**

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The DISEAGUAL project promotes a new legal framework to tackle inequalities and infra/intergenerational disparities, by focusing on the access to new goods: environmental, cultural, bio-economic and digital. It aims to promote difference, transform delays into opportunities, invest strategically in specific sectors and new technologies, and promote new specialization models. The project’s four areas — environment, culture, bioeconomy and digitalisation — constitute a new model of ‘active citizenship’ and facilitate ‘shared administration’, functional to the Mediterranean’s structural growth. The construction of a knowledge society based on human capital for its development and renewal can lead to the creation of an integrated, shared international cooperation model. The cultural integration and shared legal knowledge of young people from across the Mediterranean, and the consequent creation of a ruling class with a “Mediterranean” education, may help transform what is today often perceived as a problem, but should be seen as an opportunity for growth and development.

RESULTS

Two classrooms in the Department of Law have been completely renovated and refurbished and are now equipped with the latest technological support for teaching and research. A new master’s degree in Innovation and Sustainability Law has been established. As part of the PhD in Legal Studies, an entirely English curriculum has been introduced, named “Legal goods and social inequalities”. 5 visiting professors invited each year on 5 different themes related to the project.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Territorial partnerships
- Creation of a technical support platform (CasME 4.0) with a Transnational Cluster of Public Administration and Local Government for an EuroMed Training of Public Servant and a WikiMEDia-Lab -
- Other potential partner countries: Senegal, Mozambique, Cameroon
The overall objective of the project is to contribute to strengthening collaboration and the exchange of knowledge with Jordan, Morocco and Tunisia for the improvement of key competences of PhD students/researchers. ANIMALBIOMED intends to pursue the following specific objectives with expected results and impacts, consistent with those of the European Higher Education Agenda: strengthen knowledge development to counter skill imbalances; modernise the higher education system in non-EU partner countries; increase the experimentation and implementation of innovative practices using animal health friendly techniques; promote common values and understanding between cultures in order to increase social inclusion by enhancing linguistic and cultural competences also through the incoming mobility of participants selected from Jordan, Morocco and Tunisia and outgoing of UNIME teachers.

**RESULTS**

The main achievement of the project was to form a class of international researchers with differentiated expertise in the field of biomedical biotechnology. The training of the researchers in fact consisted of attending a six-month online course in biotechnology followed by international mobility at the research laboratories of the University of Messina where they learned innovative laboratory techniques. The creation of an international class with students from all over the Mediterranean area fostered the exchange of ideas and best practices that contributed substantially to the good project results obtained.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Territorial partnerships:
- Creation of an international network for the biomedical research in the Mediterranean area
- Other potential partner countries: Libya, Algeria and Egypt
**EXPO 2030 ROMA FOR AFRICA**

### BIOTECNO

**Internationalisation of educational pathways in Biomedicine: design of a training course in cellular and molecular biotechnology**

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<td>Africa – Mediterranean Area</td>
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<td>SCIENCE DIPLOMACY AND TERRITORIAL COOPERATION</td>
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<td>Sicily Region and INDIRE</td>
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![Project meeting](Image)

The project, coordinated by the University of Messina, involves the University of Yarmouk (Jordan), the University Mohammed V of Rabat (Morocco), the University of Sousse and University of Sfax (Tunisia) and Unimed (Union of Mediterranean Universities). The project aims to contribute to the internationalisation level of the systems of higher education in Sicily and in the partner countries (Jordan, Morocco and Tunisia), with a special regard to the joint design of a one-year training course in cellular and molecular biotechnology. The course will be based on the needs of the territories involved. It is now well known how innovation and technology transfer applied to training and biotechnology research play a fundamental role in strengthening the international dimension of the higher education system. In details, BIOTECNO intends to pursue the following targets: develop cooperation and networking between Mediterranean universities; modernise the higher education system in non-EU partner countries; promote the development of joint or integrated courses in order to achieve structured student mobility schemes and the mutual recognition of learning activities.

**RESULTS**

The main outcome of the project is the organisation of a vocational master’s course in cellular and molecular biotechnology. The course will be delivered online for the theoretical part and on-site for the laboratory practice and will provide a joint degree between the 4 participating universities. The master’s degree aims to train biotechnology researchers with multidisciplinary and transversal skills within the Mediterranean area.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Territorial partnerships:
- Creation of an International Vocational Master in Biotechnology for the Mediterranean Area
- Other potential partner countries: Libya, Algeria and Egypt

**ACADEMIC COORDINATOR**

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The RESUME project aimed at enhancing and reinforcing the role and potential of Higher Education Institutions (HEI) in the development of employability in the Mediterranean countries by adopting a transversal entrepreneurial mind-set at the HEIs and by opening and structuring the dialogue among the universities, the enterprises and the policy makers. Within the normative frameworks established at the time by the EC, the OECD and the ETFs, the project involved the active and direct participation of entrepreneurs, representatives of SMEs, large companies, decision-makers at national, regional and local levels. The project invited all stakeholders to collaborate and contribute to the creation of jobs for young people, which is, without a doubt, a common challenge for all participating subjects. The network that was created represents a credible model of partnerships in the South of the Mediterranean, thus attentive to the question of gender.

**RESULTS**

The RESUME project addressed solutions to the incapacity for employment of young graduates. The participating universities made their proven experience available in entrepreneurship and professional integration initiatives. The aim was to improve the internationalization of education, promote the establishment of transversal partnerships and strengthen the links between higher education, governance and the labor market. In this framework, the replicability of the project can be ensured through the development of a national strategy and an action plan for youth entrepreneurship which aims to strengthen entrepreneurship education overall, of the school system, vocational training and higher education and to promote a support network for the creation of new businesses.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Senegal, Mozambique, Cameroon

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As a large multidisciplinary academic institution, the University of Milan has a natural focus on that part of the planet which, though far from the spotlight of well-known international rankings, offers great opportunities for mutually beneficial exchanges in the field of teaching and research as well as knowledge transfer. The need to foster human capital growth through training lead to more student and faculty exchanges, and stronger relationships between universities also in the field of research. Our involvement in local development projects alongside non-governmental cooperation helped us develop operational approaches based on ad-hoc technologies and solutions that will look beyond the efficiency criteria of industrial countries to better adjust to local structural and environmental constraints. As for partnerships with government institutions, the University of Milan is working to identify any issues as well as to create strategic solutions in all areas of cooperation, from large healthcare facilities to the fight against endemic and neglected diseases, from agricultural development to the protection and enhancement of cultural resources, through to university and higher education.
The project aims to develop local agriculture and animal farming in the countries of the Mediterranean basin by expanding scientific-technological knowledge in order to improve the social, economic and sanitary situation in these areas. These objectives will be achieved through the research and development of plant varieties and the selection of local animal breeds that are resilient to climate change, as well as improving the farming sustainability. Furthermore, the project envisages the development of new food chains that can boost the economy of the countries involved. Specifically, goat and rabbit are the local livestock species that will be involved in this project, while barley varieties, linseed and algae will be the plant species object of this study. Finally, preserving and rehabilitating the pastoral ecosystem and the landscape management and improving the livelihood of the Mediterranean rural areas, it is another objective of the project.

**RESULTS**

The project is still ongoing, and at the moment there are only preliminary results. Although these results certainly need to be deepened and further developed, in accordance with the project plan, to date it can already be deduced that the use of plant and local products (flax and seaweed) in the production of feed has led to an improvement in productive and reproductive performances and the quality of rabbit meat. The consume of the meat can have beneficial effects in human health. Further result consists in providing new hypotheses for adopting better agricultural practices to minimize the effects of climate change in current and future Mediterranean environments.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential African partner countries involved: **All African Countries**
The Egyptian-Italian Mission at West Aswan (EIMAWA) was established for emergency archaeological excavations to counter potential clandestine activities around the Aga Khan’s Mausoleum (AGH). In 2018, a strict cooperation between the Egyptian Ministry of Tourism and Antiquities and the University of Milan started, supported by the Italian Ministry of Foreign Affairs. A systematic work on the 100,000 sq meters area began in 2019, with the mapping of the necropolis as seen from surface survey and satellite images. The excavation of tombs is also intended as a school camp, with training activities for young Italian and Egyptian archaeologists, upon a site now secured by guarding and lighting. In order to enhance the area and develop sustainable and cultural tourism, a site management masterplan is being prepared. The employment of local workers and the publication of a children’s booklet in Italian and Arabic aims at raising awareness among the population on the importance of the site.

**RESULTS**

EIMAWA has excavated and secured 35 tombs (6th Century BCE - 2nd Century CE), investigated with up-to-date systems including experimental approaches. The researches resulted in a geo-referenced map of a quadrant of the necropolis where nearly 400 tombs have been identified. The stratigraphical excavation of 5 of them has been followed by both archaeometric analysis and restoration of the artifacts, and by radiological and anthropological investigation of more than 100 adults and children discovered, leading to a comprehension of many aspects of the ancient population of the area. Site-management is ongoing.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries
It is more and more clear that the health of all species — human and animal — are inextricably linked to one another, as well as to human livelihoods and the state of the environment. Global environmental changes pose an huge challenge for Africa and interdisciplinary research is needed to disentangle the complex web of factors that interconnect climate and environmental factors with human nutrition and health, and to develop instruments and measures to address the risks of catastrophic shocks. The University of Milan contributes to this effort through several interdisciplinary projects combining research and capacity development in the following domains:

- Earth Observation for climate risk monitoring and financing (East and West Africa)
- Geographic studies on land use changes and their impact on food security of socio-ecological systems (Kenya)
- Food safety and waste management (West and North Africa)
- One Health approach to map epidemiological risk of emergent zoonotic diseases (Kenya)

**RESULTS**

Our work is ongoing. Expected results include:

- Improved satellite-based models to detect drought impacts on crops and pastures in African drylands
- Design of financial instruments for early response to shocks
- Better understanding of the drivers of land use change to inform future natural resource management policies
- Improved capacity to manage biological and chemical waste
- Innovative surveillance systems and diagnostic capacity for emergent diseases

**FUTURE PROSPECTS**

- Potential replicability of the projects: yes
  This is a growing scientific agenda that is replicable across the whole African continent. Our teams are committed to work with governments, public/private institutions & communities to promote better livelihood through sustainable natural resource management

**PARTNERS**

- International Livestock Research Institute (ILRI), Kenya
- Zoonotic Disease Unit GoK (ZDU), Kenya
- German Agency for International Cooperation (GIZ), Brussels office, Belgium
- CNR-SCITEC, Italy
- SAFE, Italy
- SMITHSONIAN’S Inst., US
- ITC-TWENTE University, the Netherlands
- Laikipia Permaculture Centre (LPC)

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Infectious diseases, including malaria, tuberculosis, viral or bacterial infections are still a major cause of mortality and morbidity in African countries. The collaborative projects in which UNIMI is involved include aspects of public health for prevention and control of diseases, and pharmacological research. The U-CHANGE: Urine for Cervical cancer screening and HPV testing in a rural setting project in Eswatini, financed by AICS and CUAMM, aims at implementing a novel, user-friendly urine test for screening HPV in a population in which cervical cancer is highly present; the It’s Good TB Free Project, financed by AICS, aimed to contribute to a TB Free Uganda by 2020; a paediatric cohort of children with severe pneumonia is part of a project controlling the correct adherence to WHO treatment guideline in Jinka (Ethiopia), financed by CUAMM; the Italy-South Africa Project MAECI-PGR05924 aimed to identify new classes of drugs to block the transmission of the deadliest malaria parasite P. falciparum from humans to mosquitoes.

**RESULTS**

The innovative, user-friendly urine tests for HPV infections was successfully implemented in Eswatini. The results allowed rapid diagnosis of early cervical lesions and led to the identifications of novel HPV oncogenic genotypes. Low socio-economical status is associated with the poor TB treatment outcomes seen in Karamoja Uganda region. These findings emphasize the need for universal health coverage, social protection and a multi-sectoral approach for TB.

In the Ethiopia project, the results indicated that the adherence to WHO guidelines for severe pneumonia in children was limited, and not associated with the outcome. Natural products and small molecules from the MMV-Malaria box and large libraries were tested for malaria transmission blocking activities; selected lead compounds will be subjected to further analysis. In total, more than 10 international publications in collaboration were reported.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries
UNIMI, as partner of the U7+ alliance, adheres to the principle of promotion of world equality and inclusiveness. To this end UNIMI is engaged in a social mission towards foreign students from groups with limited opportunities. The Erasmus KA171 projects with the Universidade Católica de Moçambique and the University of Cheikh Anta Diop de Dakar, Senegal supports the mobility and traineeship of students from low-income countries. The mobility involves the UNIMI Depts. of Medicine and UCM Fac. of Health Sciences, who will bilaterally exchange teachers to compare and discuss methodologies and organizational approaches. This project includes also the UNIMI Dept of Earth Sciences that will host and train students from Senegal to attend courses in the fields of hydrology, hydrogeology, geophysical prospecting. Moreover, the UNIMI Dept of Pharmacological Biomol. Sciences has been hosting students from the University of Dschang, Cameroon and the Université Abdou Moumouni de Niamey, financed by MAECI, aiming to pharmacologically characterize plant extracts used in traditional medicine for antimalarial, anti-inflammatory, or antioxidant activities and to improve technical skills.

RESULTS
- 1. improve knowledge and skills of the participating students and teachers
- 2. enrich the students’ and researchers’ experience with the study of different environmental situations
- 3. provide an extraordinary opportunity for the improvement of students’ soft skills, as they will be in contact with very different learning, scientific and living environments;
- 4. provide an opportunity for professors and researchers from both partners to improve their ability to cooperate with people with different cultural backgrounds.

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: all African countries interested in the fields

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University of Milano-Bicocca has been working on international development cooperation projects in Africa as leverage for mutual growth, focusing on health, food safety and sustainability. UNIMIB is committed to advancing health through projects in Africa, focusing on medical education, clinical care, biomedical research, and community engagement. The Department of Medicine & Surgery at UNIMIB has established BICOCCA GLOBAL HEALTH CENTER, with the vision to improve health for all through education, research and capacity building; to foster the learning of our students & resident doctors to become tomorrow’s global health leaders; and to collaborate with partners to develop and sustain locally-led health care programs and practices.

One of our notable projects in the field of sustainable development of food systems, Best4food, a multidisciplinary center dedicated to food research and innovation actions which aims to identify the most suitable strategy to develop sustainable food systems. With the joint cooperation between universities, research institutions and companies, the center addresses the analysis of consumption patterns, socio-cultural and territorial factors related to sustainable and inclusive food systems. Another key project, Global mental health attempts to understand psycho-social conditions of people who are rescued by UNHCR and other NGOs in Niger, their perspectives, perceptions and challenges affecting life satisfaction, subjective well-being and mental health.
KA171 project with Gulu University in the field of pediatric care aims to strengthen on-going collaboration, with special reference to advanced pediatric care between UNIMIB and University of Gulu along with its affiliated Lacor Hospital in terms of increasing knowhow, promoting dialogue, solidarity, developing cross cultural skills, and international scope in the field of pediatrics. Highly specialized training will be offered to the in-coming staff by UNIMIB faculty and Fondazione IRCCS San Gerardo hospital in the study and management of complex pediatric diseases. The training will focus on the development of skills and competencies to manage critically ill pediatric patients and the opportunity to create an academic core curriculum for the medical doctors and the registered nurses trained in pediatrics. The pedagogical approach is be based on theoretical teaching translating into practical experience and for this reason there is involvement of affiliated university hospitals as non-academic partners in the project.

**RESULTS**

UNIMIB thanks to this project will reinforce its position in a geographic area that still need a strong international support to improve health care; in addition it will provide the opportunity to the staff to work in different socio-cultural context, to create new research alliances and synergies for future international collaborations, thus reducing their isolation. Gulu University, will have the possibility to improve its educational offer providing highly specialized competencies in the field of critical pediatric patients, to enhance curricula for professionals, to promote research projects and to be involved in scientific network.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

**PARTNERS**

- Gulu University
- Lacor Hospital
- Fondazione IRCCS
- San Gerardo Hospital, Monza

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**ACADEMIC COORDINATOR**

Andrea Biondi

Pietro Invernizzi
Mental Health and Psychosocial support with people on the move is an asset in Subsaharan Africa. In fact, over the years, the number of migrants, asylum seekers and refugees trying to reach the Global North is dramatically increasing most of the time for cogent issues such as drawn, famine, war and persecution. Global mental health is trying to answer the most urgent challenges related to individuals and community psychological well-being of those vulnerable populations. The project aims at understanding antecedents, determinants and outcome of people on the move when they reach one of the largest hubs worldwide, Niger. Qualitative and quantitative research will allow to create a clear picture about the psycho-social conditions of people who are recovered in UNHCR and other INGos in Niger, their perspectives, perceptions and challenges affecting life satisfaction, subjective well-being and mental health. Push and Pull factors, myths and narratives of migration will be included in the survey. Moving from PAR (Participative action research perspective), qualitative and quantitative data produced will be used for training African practitioners operating in the most reputed NGOs and non-governmental bodies in Niamey, Niger. A decolonial lens will be then used to foster local knowledge on mental health and innovative intervention following libeartory and participative methodologies.

RESULTS

The project highlighted the collective aspect of mental health among migrants. Over 600 participated in quantitative surveys, with 100 interviewed. High stress levels due to trauma, family disruption, and community challenges affected well-being. Training for 100+ practitioners included family therapy and trauma intervention. The project also yielded a doctoral dissertation and an annual Summer school in Global Mental Health and HHR under the VIU (Venice International University).

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

PARTNERS

- Bien-etre Lab
- UNHCR Niger
- University of Milano-Bicocca

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RESULTS
The project will see impact at various levels – individuals, institutions (universities/hospitals) and policy makers through education, training and capacity building. Education – through teaching and training of faculty and medical professionals in increasing their skills and competencies in enhancing medical school curriculum and across varied fields of specializations. Capacity Building – to strengthen health care system in Rwanda through twinning approach, clinical training and mentoring.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: all African countries

The project is based on the memorandum of understanding signed between the University of Milano-Bicocca, School of Medicine & Surgery and the Rwanda Ministry of Health/Human Resource for Health Secretariat in June 2022. The overall objective of this partnership is to set up training programs for health professionals in all the health specialties available at the University of Milano-Bicocca in order to train the Rwandan health workforce. These specialties include various fields such as diagnostics, treatment, care and follow-ups of patients of all ages suffering from various types of medical and surgical conditions including but not limited to the creation of exchange programs for teaching and research personnel and students as well as the sharing of research, sustainable clinical services as well as teaching and training programs.

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PARTNERS
• Ministry of Health, Rwanda
• Fondazione IRCCS San Gerardo Hospital, Monza
KA171 project with Ruaha Catholic University in the field of Obstetrics and Gynecology aims to strengthen the skills and competencies of the faculty and hospital staff in providing midwifery/obstetrics care between UNIMIB and Ruaha Catholic University (RUCU) along with its local affiliated Tosamaganga Hospital. RUCU is developing a full course in nursing and midwifery and staff exchange will support curricula development of midwifery courses, the creation of innovative pedagogical tools, using the e-learning program and clinical mentoring.

The project endeavors to implement WHO recommendations in strengthening the capacity of health services to achieve the goal of reducing maternal and perinatal mortality (Global Safe Motherhood Initiative). The project will alongside focus on strengthening the nursing curriculum; to undertake collaborative research to generate evidence for improved access to midwifery care; to build partnerships and networks with community organizations; and to develop long term capacity-building program to improve maternal and child care in the area.

RESULTS

The project will support the cooperation in teaching and training between Italy and the Sub-Saharan region which is one of the poorest globally. Ruaha Catholic University will benefit from the presence of international team and reinforce its mission of supporting quality teaching and research, enhancing leadership, being a hub of education excellence in light of developing new course on midwifery and obstetrics; in a very low-resource area, with a high need of proper health care.

The KA171 project will increase knowhow, promoting dialogue, solidarity, cross cultural skills, and international scope, strongly supporting inclusion of staff.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

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The Erasmus Mobility KA107 with Tanzania project aimed to encourage the exchange of knowledge between teachers and students of the University of Milan Bicocca and the Nelson Mandela African Institute of Science and Technology University of Arusha (Tanzania). The project allowed students and teachers to learn in ever greater detail about the peculiarities of the African and Italian food systems. In fact, numerous researchers from the best4food center at the University of Milan Bicocca were involved in the project and analyzed the food system from all its points of view, production, distribution, consumption and food waste. In addition to the interest in the food system, the study activity was also centered on the themes of biodiversity and nature tourism. Highlighting the strengths of the latter in terms of economic sustainability, but also the weaknesses in terms of social and also environmental sustainability.

**RESULTS**

The project’s main result was to consolidate relations between the two countries. In fact, a program agreement between the two institutions has been renewed and new research activities are starting in Tanzania. These should concern the collection of data relating to areas with a particular biodiversity, which lend themselves to reasoning in the field of food security, in terms of nature tourism, but also with reference to the involvement/inclusion of local communities.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: **all African countries**
UNICORE 3.0, 4.0 and 5.0 editions
The general purpose of the University Corridors for Refugees- UNICORE project is to promote the right to higher education for refugees through study corridors towards Italy, coordinated by the non-profit organization UNHCR. UNIMORE since 2021, has already welcomed 3 Master’s Degree students from Etiopia, Congo and Burundi. financing a annual amount of 7.81,00 euro for each student.

South Africa-1
In 2018 Unimore obtained the approval of Erasmus+ KA107 Project with the University of Witwatersrand and the University of Fort Hare as partners, for the mobility of students and faculty members. 2) TOGETHER Training Opportunities for GautEng youTH in Emilia Romagna 2020-21. Funded by Emilia Romagna Region. Main Activities: 4 online Training sessions 10-days study visit to Reggio Emilia and Emilia-Romagna Region.

Mozambique

Students recruitments
Unimore has been recruited around 20 % of his abroad students (totally international students are about 1500 per year) from African countries. Specific politics have been applied.

UNIMED
Unimore is member of Mediterranean Universities Union (UNIMED) that involves may of north african countries.
University cooperation is one of the strategic priorities of the long-lasting relations between Reggio Emilia and Gauteng territory. In 2022 five South African newly graduates have been hosted in Reggio Emilia in the framework of a study visit in automotive sector to increase the professional skills of young people through exchanges with local companies (project TOGETHER-funded by Emilia Romagna Region). As a follow up, during a territorial mission to South Africa it was agreed to launch a stable multilateral platform of collaboration on university and research, engaging local authorities, universities and local development agencies of the two territories, with the aim of promoting new opportunities for the academic sectors (e.g. joint teaching, research and mobility activities), as well as defining joint projects and initiatives to address common territorial challenges in the education, business and social sectors. Dedicated working groups were set up for different topics, engaging Unimore and University of the Witwatersrand, University of Pretoria, Tshwane University of Technology and University of Johannesburg.

Results

A Memorandum of Understanding on University cooperation was signed by the parties engaged and dedicated working groups were set up to define academic, research and cooperation activities and promote and facilitate the international exchange of ideas and research. The main areas of collaboration identified by the parties are: food and food safety; automotive industry development, including engineering and design; oral history, historic papers, archives and memory; economy, marketing and management; early childhood development, education and sports; research and development in scientific areas of mutual interest, including physics; and sustainable agriculture and rural development.

Future Prospects

• Potential replicability of the project: yes
• Other potential partner countries: all African Countries
**EDUCATE IN A TEAM**
The Reggio Emilia Approach for Local Policies and Integrated Mechanisms of Quality, Equitable and Inclusive Education of Pemba

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**Category**
**HIGHER EDUCATION**
Scholarships, Transnational Education

**Geographical area**
Africa – Mozambique

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**Donor(s)**
Emilia Romagna region (Italy)

**Project duration**
2022 - 2026

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**PARTNERS**
- University of Modena and Reggio Emilia
- Municipality of Reggio Emilia
- E35 Foundation for International Projects of Reggio Emilia
- Reggio nCHildren srl
- Provincial Directorate of Education of Cabo Delgado
- Teacher Training Institute of Pemba City
- Catholic University of Mozambique-Pemba (UCM)

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**EDucaRE InEquiPE** is a project that aims to Support Quality, Equitable and Inclusive Education in the city of Pemba, province of Cabo Delgado, through the construction of a multi-actor public policy, the dissemination of the Reggio Emilia Approach (REA), the empowerment of women for education in emergency contexts and the strengthening of human capital in the educational sector. It is developed thanks to the partnership between the Municipality of Reggio Emilia - E35 Foundation, Reggio Children Srl, UNIMORE, the Provincial Directorate of Education of Cabo Delgado, the Teacher Training Institute of Pemba City, the Catholic University of Mozambique. It enhances the relationship of the territory of Emilia Romagna with the territory of Pemba and Cabo Delgado, stimulating knowledge of the history of cooperation and of the leading role played by Emilia Romagna in development aid in Mozambique and the complexity of the present with its common global challenges and local specificities.

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**RESULTS**
- Approval of an integrated local policy for quality, equitable and inclusive pre-school and primary education, inspired by the REA
- Dissemination of the essential elements of the Reggio Emilia Approach
- Improvement of female empowerment mechanisms to support pre-school learning in vulnerable contexts
- Reinforcement of the provision of academic courses on quality, equitable and inclusive education, through partnership with local universities, with particular attention to gender equality and women’s empowerment

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**FUTURE PROSPECTS**
- Potential replicability of the project: yes
- Other potential partner countries: all African Countries

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TOGETHER
Training Opportunities for GautEng youTH in Emilia Romagna

Main Activities:
- 4 online Training sessions:
- 10-days study visit to Reggio Emilia and Emilia-Romagna Region
- Final dissemination events in Italy and South Africa

Main Goals:
- To capitalise the experience of the Automotive Hub in Chamdor
- To create joint actions between the Chamdor Hub, Universities and SMEs
- To develop professional and transversal skills of South-African youth in the automotive sector
- To enhance partnerships in the automotive sector

RESULTS
- To get knowledge about the Chamdor Automotive Hub project
- To create connections with AIDC and other Universities in Gauteng
- To get knowledge about Reggio Emilia, Emilia-Romagna Region and Italy
- To get a deeper understanding of the automotive sector in Italy
- To get involved in an experience allowing connections with University and companies in Italy

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: all African Countries

PARTNERS
- University of Modena and Reggio Emilia
- Municipality of Reggio Emilia
- E35 Foundation for International Projects of Reggio Emilia
- Italian Embassy in Pretoria
- UNINDUSTRIA RE
- Gauteng Province
- Gauteng Universities
- AIDC

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The University of Naples Federico II has over 20 years of experience in cooperation for development in Africa with special concerning to Health, Food and Environment. Starting in 2002 until 2022 the University of Naples Federico II has supported the development of the Faculties of Medicine and of Agriculture at the Gulu University, Northern Uganda. The cooperation has consisted of development of infrastructures, classrooms research facilities and laboratories, exchange of academic staff in line with the teaching needs of the Faculties, exchange of students (graduate students, Msc. & PhD), professional re-qualification.

The University of Naples has established a large international network with northern African countries (MUNA agreement) for research and teaching collaborations, on themes related to One Health concept. There are several mobility programs active with African countries, among which Egypt, Kenya, Madagascar, Marocco, Nigeria, South Africa, regarding Health and Environment. Training programs have been organized in 2023 for a group of farmers from Niger, and cooperation agreements have started with Benin and Democr. Rep. of Congo. The University of Naples Federico II is co-founder of the Italian Foundation for Higher Education with Africa, which develops joint academic programs at MSc level in Ethiopia and Tunisia. The University of Naples Federico II has contributed to the project “Partners for Knowledge” allowing students from different African countries to earn their MSc and PhD degree.
Gulunap started in 2004 and active still today. As its first and largest initiative Gulunap set up a faculty of Medicine from scratch, in 2004, with classrooms and laboratories built by the project. Today it supports a five-year curriculum, covering first treatments; disease prevention; maternal and infant health; and tropical medicine, and includes a one-year internship; over 40 professors from Naples have taught at Gulu. First graduations arrived on 2010; today hundreds of medical doctors have graduated from the faculty with most now working in Uganda; the school has launched both a medical students association and a medical journal. First graduations arrived on 2010; today hundreds of medical doctors have graduated from the faculty with most now working in Uganda; the school has launched both a medical students association and a medical journal. In 2005, the Gulunap-Science project was started and Gulunap-Agriculture was launched in 2008, with the objectives of: reducing food insecurity and malnutrition; developing agro-forest research, focusing on the sustainable use of natural resources to minimise environmental impact; developing post-harvest technology; help the University of Gulu younger staff participate to Doctorate programmes at the University of Naples. Three doctorates has been completed from 2008 to 2017 and joint research activities have been carried out.

RESULTS
- Development of infrastructures at the Medicine Faculty (Napoli Block – in the photo)
- Development of research facilities and laboratories at Agricultural Engineering and Food Technology of Agricultural Faculty
- Enhancement and harmonisation of curricula at B.Sc. level in relation to the development and modernisation of the agricultural sector in the regions;
- Development of agricultural research capabilities at the University
- Over 50 professors from Naples have taught at Gulu, at Medicine, Sciences and Agricultural Faculties.
- Three Research Assistants from Gulu Agricultural University have earned their doctorates in Naples from 2008 to 2017 and joint research activities have been carried out.

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: Sub-saharan African Countries
Launched in January 2023, LoCEL-H2 is a Horizon Europe four years project run by the French Commissariat à l’Energy Atomique et aux Energies Alternatives. The key objective of LoCEL-H2 is to provide a sustainable and flexible renewable energy solution for remote communities that are unconnected to reliable grid infrastructure. The energy solution focuses on both electrical as well as clean fuel energy needs of the community. LoCEL-H2 partners will design, develop and deploy a new plug-and-play prosumer microgrid solution at TRL-8, starting with a small community of ~30 households and businesses (per pilot) that is easily expandable to any number of units based on community needs. The microgrid will be fully decentralised reducing upfront cost barrier. A key area of innovation for this project includes a novel low-cost battery-component-based battolyser for electrical energy storage and hydrogen generation. This communal hydrogen can be used for cooking or indeed as an alternative fuel for micro-industry. Ivory Coast and Zambia are the pilot countries, a pre-pilot will be deployed in Pakistan.

**RESULTS**

- LoCEL-H2 will drive the socio-economic uplift of vulnerable off-grid communities, in particular female members of these communities. The sustainable provision of electricity through prosumer-based microgrids, along with clean and viable cooking fuels generated on-site using renewable energy to alleviate the energy poverty issues and provide a pathway toward citizen empowerment. Energy provision can enhance women’s engagement in social, educational, and commercial activities in developing world. Social sciences and humanities and business-led approach will maximize engagement with communities, putting their requirements at the heart of product development.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Malawi, Benin

**PARTNERS**

- Commissariat à l’Energy Atomique et aux Energies Alternatives
- Consortium for Battery Innovation
- Loughborough University
- Università di Napoli Federico II
- Sunkofa Energy
- Lahore University of Management Sciences,
- SAS Réseaux Hydrogène Décarboné RHYDE
- University of Gabes
- HOPPECKE Batterien
- Hollingsworth & Vose Co Ltd

**ACADEMIC COORDINATOR**

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**ERASMUS+ KA107**

Partnership between DiSTAR and University of Fianarantsoa (Madagascar) aimed at establishing a degree course in Geology

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### PARTNERS
- University of Napoli Federico II
- University of Fianarantsoa

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**RESULTS**

The acquisition and internalization of a “geological-environmental” culture are fundamental for Madagascar in view of a correct territorial planning avoiding in the meanwhile, or at least significantly limit, the ecological disasters currently underway. This requires the training of people who, once acquired the fundamental of geology and its methodologies (to this purpose, mobility of Italian staff members giving seminars and lessons to Malagasy students already started in May 2023), basic knowledge for a correct approach to the conservation of the environment and its resources, can operate in the territory. In this sense, Madagascar represents an ideal terrain to apply and experimentally verify what science currently makes available regarding planning and use of the territory.

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**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

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**ACADEMIC COORDINATOR**

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Partners from across Africa and Europe have formed vital new Clusters of Research Excellence (CoRE), established by the African Research Universities Alliance (ARUA) and The Guild of European Research-Intensive Universities (The Guild). These sustained partnerships bring together distinguished researchers from universities and research institutes across both continents to address head-on the inequity that has characterised research in relation to Africa, to the detriment of global science. The Cluster of Research Excellence in Non-Communicable Diseases & Multimorbidity aims to address the growing burden of NCDs – such as cardiovascular diseases and inflammatory disorders – and their co-morbidities in African nations, where they are the leading cause of death. The Clusters are formed in the context of clear and unequivocal support in the R&I sector, in Europe and Africa, to develop science collaboration equitably and sustainably, and the urgent demand to funders like the European Union to develop a more integrated approach that focuses on excellence and capacity-building. To this end, the Clusters are aimed to open up new dialogues with policy-makers and funders in both continents and beyond, to identify ground-breaking solutions and create opportunities for investment in societal transformation.

RESULTS

Prof. Pasquale Maffia, working in dual affiliation between the University of Glasgow and the University of Naples Federico II, co-leads the Africa-Europe CoRE in Non-Communicable Diseases & Multimorbidity. Among the expected results: the improvement of health and well-being of populations in Africa by using a multidisciplinary approach, innovative and place-specific solutions for the study, prevention and management of a range of NCDs and their co-morbidities. The Cluster will help ensure that a common research agenda is at the heart of the African Union’s Africa 2063 strategy, which envisages Africa’s transformation to a knowledge society; and also strengthen the capacity of research and innovation to make a major contribution to each priority of the European Union’s Global Gateway.

FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: Cameroon, Burkina Faso, Ethiopia, Ivory Coast, Niger, ...
The Mediterranean University Network Agreement (MUNA) is one of the largest consortia in the Mediterranean area, with African partners from Morocco, Algeria, Tunisia, Libya, Egypt, Benin, and the Italian partner. MUNA pays special attention to the Mediterranean Sea, the Earth and mankind. It has specific sections called Mare nostrum, Orbis and Persona. It provides a cooperative forum where scientists can share knowledge, network, biotechnology transfer, circular bio-economy projects and exchange of students and professors working in all fields of sciences. MUNA aims to bring innovative research solutions to the most pressing issues (climate and ecological transition, biodiversity loss and recovery, food security, water) in an effort to reach one-health and develop new energy solutions through sustainable development goals (SDGs) of Agenda 2030.

Category
SCIENCE DIPLOMACY AND TERRITORIAL COOPERATION
International Networks

Geographical area
Africa – Italy

Donor(s)
EuropeAid

Project duration
2021 - 2025

RESULTS
The MUNA network organized, in the framework of its activities, the First MUNA Summer School in 2021, in order to educate and encourage young researchers from Italian and African research institutions to pursue inclusive and sustainable growth, starting with theoretical and practical online lectures (54 teachers). Future objectives will be to reinforce and spread the multilateral collaboration network in order to support innovative research on rational use and re-use of natural resources, implementing business, health and prosperity.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: Universities of other African cities
The University of Naples L’Orientale is a public university specialized in the teaching and in scientific research on languages, cultures and archaeology in Sudan, Ethiopia, Eritrea, Egypt, Nigeria, Tanzania, RD Congo, South Africa. It is involved in many cooperation agreements that involve exchange and cooperation at the level of field research and capacity building. It is a member of the joint project PfK (Partnership for Knowledge) which provides scholarships, support to local universities, transnational education and capacity building and funded by AICS. Students from Ethiopia, Egypt, Sudan, Nigeria, Cameroon will obtain their PhD and will be involved in the promotion of specific projects (with local institutions) for training in the field of archaeology, heritage management, codicology, literature. The ultimate aim is to provide MA and PhD students in archaeology and heritage management, the tools to be able to become trainers and therefore to contribute to the sustainability of these fields in their countries. The other aim is to engage in the development of the study of African languages and literatures with the partner Universities and with other Universities in Africa and to encourage and promote young scholars of African languages and literatures.
PROJECTS FOR A COMMON GROWTH

RECALIBRATING AFRIKANISTIK (RECAF)

**Category**
HIGHER EDUCATION
Scholarships - Support to local universities
- Transnational education

**Geographical area**
Africa – Nigeria, Kenya, South Africa

**Donor(s)**
VolksWagen Foundation

**Project duration**
2022 (start year) – 2027 (end year)

This project has a number of aims. The first is to foster academic exchange among the partner universities with a view to engaging in the development of the study of African languages and literatures. Another aim is to encourage and promote young scholars of African languages and literatures, not only from the partner universities, but also other universities in Africa. This is done through mentoring fellowships, a reading group, conferences and publications. There are two such Fellows currently working on their research at the University of Naples “L’Orientale”. One is from Obafemi Awolowo University in Nigeria and the other from the University of Maroua in Cameroon.

**RESULTS**
The project provides nine scholarships to young Fellows each year and each year finances one conference in Europe and one in Africa. Academics from L’Orientale took part in the conference in Wukari, Nigeria in 2023, another conference will be held in April 2024 at Stellenbosch and L’Orientale is organizing an autumn school for the project in October 2024. The project also reaches out to the wider community interested in African languages and literatures through the vodcast Afrikanists Assemble on YouTube: https://recaf.de/programme/video-podcasts-afrikanists-assemble.

**FUTURE PROSPECTS**
- Potential replicability of the project: yes
- Other potential partner countries: Djibouti, Somalia, Somaliland and Tanzania.

**ACADEMIC COORDINATOR**
Rose Marie Beck, University of Leipzig,
Unior coordinators: Flavia Aiello and Martin Orwin.

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The project **RAMNA** is active since 2014. The goal is studying and preserving the rich cultural heritage of Christian Eritrea and Ethiopia, particularly manuscripts and art objects. Every year, scholars from the Università di Napoli L’Orientale stay for periods at the «Research and Documentation Center» of Asmara (Eritrea) and at the Universities of Addis Abeba, Bahar Dar and Mekelle (Ethiopia), training students of the MA and PhD curriculums. The goal is creating local staffs of young people who will take care of the cultural heritage of their countries by digitalising and creating online archives. At the same time, descriptions and catalogues of objects kept in museums, libraries, private and public cultural institutions (particularly churches and monasteries) are created and constantly implemented. A special attention is given to the restoration of the objects in their original setting. The programme is connected to the Italian project **CaNaMEI** – Catalogo Nazionale dei Manoscritti Etiopici in Italia.

### Results

Every year, since 2014, several students in Eritrean and Ethiopian philology, codicology and art history can get MA and PHD degrees through the teaching assistance provided by scholars of the Università di Napoli L’Orientale. A significant part of the project RAMNA consists in activities of cultural heritage conservation. These results are highly appreciated by the academic authorities of the African Universities of Asmara, Addis Abeba, Bahar Dar and Mekelle, which are interested in creating autonomous paths for studying and preserving artifacts and manuscripts of their countries.

### Future Prospects

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

### Partners

- Research and Documentation Center, Asmara (Eritrea)
- University of Addis Abeba (Ethiopia)
- University of Bahar Dar (Amhara, Ethiopia)
- University of Mekelle (Tigray, Ethiopia)

### RESULTS

- **Category**: HIGHER EDUCATION
- **Geographical area**: Africa – Eritrea and Ethiopia
- **Donor(s)**: Università di Napoli L’Orientale – IPOCAN – ISMEO
- **Project duration**: From 2014 onwards

### RAMNA - REDISCOVERING ARTIFACTS AND MANUSCRIPTS OF NORTHEAST AFRICA

Cataloguing and preserving ancient books and art objects. Training new generations of African researchers as scholars in philology, codicology and art history.
ETHIOPIAN/ITALIAN COOPERATION PROGRAM IN THE FIELD OF ARCHAEOLOGY AND HERITAGE MANAGEMENT OF UNIOR AND AAU

Category
HIGHER EDUCATION
Subcategory from Taxonomy

Geographical area
Africa – Ethiopia

Donor(s)
AICS

Project duration
2019-2023

PARTNERS
• University of Naples Orientale
• Addis Ababa University

The Ethiopian/Italian Cooperation Program in the field of Archaeology and Heritage Management of the University of Naples Orientale and Addis Ababa University is aimed at enhancing the undergraduate and MA programs in archaeology and heritage management at Addis Ababa University by supporting the teaching activities in Ethiopia as well as with the organization of training in framework of a joint field school. A further goal was the launch of a PhD program in archaeology and heritage management at AAU, which was achieved in 2021-2022. This resulted in the possibility for Ethiopian students to achieve a complete formation, from undergraduate to PhD, in the field of archaeology and heritage management without going abroad and in the availability of skilled staff for the Ethiopian universities, national and regional administrations. Finally, programs of joint fieldwork and research were also started to enhance the capability of conducting research.

RESULTS

The program resulted in the formation of graduate, Ma and PhD students in archaeology and heritage management in Ethiopia and in the related improvement of the capacity building in the field of archaeology and heritage management. This ultimately made the country autonomous in the field of archaeology and heritage management, while the joint research enhanced the Ethiopian research in the field of archaeology, which fulfilled recognized international standards.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries:
All the African countries needing enhanced professional skills in the field of archaeology and heritage management

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**ITALIAN-SUDANESE ARCHAEOLOGICAL FIELDSCHOOL**

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<td><strong>HIGHER EDUCATION</strong></td>
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<td>Geographical area</td>
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<td>Donor(s)</td>
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**PARTNERS**
- University of Khartoum
- Regional State of Kassala

The Italian-Sudanese Archaeological Fieldschool is aimed at enhancing the archaeological training of the staff members of the Regional Government of the Kassala state and of the MA and prospecting PhD students of the University of Khartoum, of the undergraduate, MA and PhD students of the Orientale University. Theoretical classes on all the aspects of the archaeological excavations and survey, as well on the main classes of the collected materials are alternated with practical training in the field and in the laboratory. In the last field season, in 2023, the training was extended also to the field of consolidation and restoration of artifacts. Both Sudanese and Italian students and teachers are taking part into the fieldschool, with subsequent exchanges of good practices.

**RESULTS**

The project resulted in the enhancement of the professional skills of the MA students of University of Khartoum as well as of the staff of the Regional Government involved in archaeology. To the students a basic knowledge of the restoration and consolidation techniques and practices were also provided. This in turn originated an enhanced capability of facing the challenges that the management of the heritage in the Region, often endangered by development and modernization projects.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all the African countries needing theoretical and practical training in the field of archaeology

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The Sudanese and Italian students of the restoration team
The University of Padua (UNIPD) has been active in Africa for 10+ years, with various types of intervention and cooperation in different scientific-disciplinary fields and countries. Africa represents a strategic area, and UNIPD is investing in expanding and strengthening its partnerships. Many collaborations are institutionally framed by bilateral (8) and Erasmus+ KA171 agreements (10). The networking series ‘Africa meets UNIPD’ is meant to encourage mutual knowledge, and stimulate joint teaching and research activities. In 2017, UNIPD joined the UNIMED network and engaged in Erasmus+ KA2 projects targeting internationalisation of higher education in North Africa. In 2021, UNIPD joined the ‘Italian Higher Education with Africa’ Foundation, and contributed to the design and delivery of a 1st level Master’s degree in ‘Sustainable Management of Resources and Cultural Heritage for Local Development in Africa’.

Key collaborations cover the following areas:

- **Engineering**: a solid and growing partnership with ENSTP in Yaoundé results in the provision of Joint Bachelor’s and Master’s degrees in Civil and Environmental Engineering. A student association from UNIPD’s Dept. of Industrial Engineering is active in village electrification in Guinea Bissau. Non-formalised research collaborations are in place in the field of sustainable construction with MUST (Kenya), and teaching collaborations in ICT with SUPCOM in Tunis;
- **Medicine**: since a.y. 22/23, UNIPD coordinates a 2nd level Master’s degree course in ‘Neonatal and Paediatric Emergency and Intensive Care’, jointly delivered with Eduardo Mondlane University, Catholic University of Beira (Mozambique) and CUAMM NGO. Training and capacity building initiatives in the nursing sector are also active in Ethiopia and Kenya;
- **Veterinary Medicine**: collaborations focus on animal health surveillance and food production, processing and distribution with universities in South Africa and Ethiopia;
- **Sustainable territorial development**: the Erasmus Mundus Joint Master Degree ‘Climate Change and Diversity: Sustainable Territorial Development’ is coordinated by UNIPD and delivered with universities in Burkina Faso and South Africa. UNIPD is partner in the Erasmus Mundus ‘Techniques, Heritage, Territories of Industry’, which involves universities in Tunisia and Senegal.
The collaboration between the Dept. of Statistical Sciences of the University of Padua (UNIPD) and the Dept. of Statistical Methods and Actuarial Sciences of Makerere University (MAK) started in 2020. The first activities foresaw regular online meetings to discuss research projects by Master and PhD students and researchers from MAK (coordinated by prof. Saint Kizito Omala) in the field Methodological and Applied Statistics.

In September 2021, an institutional delegation from Makerere visited Padua to sign a Bilateral Agreement and give an institutional framework to the partnership. In the meantime, the research collaboration continued and led to the publication of some joint research papers. One key aspect of the partnerships is the mutual exchange of professors. In March and May 2023, Prof. Richard Tuyragize (MAK) visited UNIPD as part of the Excellence Project “Statistical methods and models for complex data”. In June 2022, Prof. Francesca Bassi (UNIPD) gave some seminars on Latent Class Analysis in Makerere. Further exchanges are foreseen.

The research collaboration led to the publication of some joint research papers, such as “Schistosomiasis in Uganda: What factors affect mainly the spread of the infection?” (Italian Journal of Applied Statistics), and “Assessment of household energy utilization patterns in Uganda: A Latent Class Analysis” (Journal of Tropical Futures). The research collaboration also led to the signature of a Bilateral Agreement, which gives an institutional framework to the collaboration and opens the possibility to expand to other subject areas and formats.

**FUTURE PROSPECTS**
- Potential replicability of the project: **yes**
- Other potential partner countries: **all African countries**

**ACADEMIC COORDINATOR**
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The Erasmus Mundus Joint Master “Climate Change and Diversity: Sustainable Territorial Development” (CCD-STeDe) is a world-leading international programme managed by a consortium of 2 European and 3 non-European universities together with 3 European and 1 non-European professional partner. It is led by the University of Padua, and funded under the Erasmus+ Programme by the European Commission.

CCD-STeDe aims to create experts in the area of sustainable territorial development in the context of global climate and environmental emergencies. More concretely, it intends to train researchers and professionals to support organizations acting at a local level (enterprises, local communities, civil society organizations) and to draft sustainable development and climate adaptation policies for economic, social, environmental, international and intercultural management. The four academic paths offer a variety of teachings and specialisations, in order to guarantee a complete, broad, multi-lingual and unique curriculum.

**RESULTS**

CCD-STeDe aims at training approximately 40 students for each batch. 20 most talented students are supported with the Erasmus Mundus scholarships. A double degree is issued to all students. Among other results, those are also foreseen: the creation of a permanent table of consultation among Partners, students, labour market, civil society; the publication of best theses; the creation of an Alumni network.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

**ACADEMIC COORDINATOR**

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The University of Padua coordinates the Joint International Second Level Master “Pediatric and Neonatal Emergencies”, delivered on site and online in collaboration with the Eduardo Mondlane University – Maputo and the Catholic University of Mozambique - Beira.

Emergency medicine is an essential part of universal health care. More than half of deaths occurring in low-income or middle-income countries worldwide could be addressed through improved emergency care, especially in low-resource settings. The project aims to train a group of doctors and specialized nurses on the management of the most frequent pediatric emergencies.

The program structure includes lectures, workshops, practical courses on the most frequent neonatal and pediatric emergencies. Practice in the emergency pediatric areas at the Maputo Central Hospital is also foreseen, with the supervision of local and international tutors. The goal is to increase the academic competences of the students, who shall become trainers in their respective teaching hospitals.

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### RESULTS

15 students (6 doctors and 9 specialized nurses) have completed the first year. In person and online lessons and training activities were delivered by local and international teachers. The weekly assessment of the Master students and their feedback are very positive. In October 2023, the second part of the Master (developments of the theses) has started.

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### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: all African countries
Since 2010, the Dept. of Civil, Environmental and Architectural Engineering of the University of Padua (UNIPD) has been active in Cameroon in the field of university education. Directly engaged by the National Advanced School of Public Works (ENSTP) of Yaoundé, UNIPD currently collaborates in the provision of 2 Bachelor’s and Master’s Degree courses in Civil and Environmental Engineering, and 1 single-cycle Master’s Degree course in Building Engineering-Architecture. The cooperation leverages on the mobility of teachers (approx. 50 per year) who teach the same Degree programs in force at UNIPD entirely on site in Cameroon. Elected as a model of university cooperation by the Conference of Rectors of Italian Universities (CRUI), this cooperation agreement brings high-level training to the hundreds of young people in the sub-Saharan region who cannot afford travelling to Europe for study purposes, despite their ambition, and it allows Cameroon to attract its best minds to promote the country’s development.

RESULTS
From a.y. 2017-2018, UNIPD and ENSTP issue the Double Master’s Degree for the programs in Civil and Environmental Engineering. Since then, almost 1000 students are trained every year, and nearly 50 receive the double title. Recently, the cooperation has intensified also in terms of doctoral education: 9 Cameroonian students have already benefited from scholarships to continue their education in Padua at the Master’s Degree or PhD level. Three agreements of technical assistance to the Government of Cameroon have also been signed by UNIPD’s former Rector Rosario Rizzuto.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: all African countries

EXPO 2030 ROMA FOR AFRICA

COOPERATION AGREEMENT BETWEEN THE UNIVERSITY OF PADUA AND THE NATIONAL ADVANCED SCHOOL OF PUBLIC WORKS IN THE TRAINING OF CIVIL AND ENVIRONMENTAL ENGINEERS IN CAMEROON

Category
HIGHER EDUCATION
Transnational Education

Geographical area
Africa – Cameroon

Donor(s)
Cameroonian Ministry of Public Works

Project duration
2010 - ongoing

PARTNERS
• University of Padua
• National Advanced School of Public Works (ENSTP) of Yaoundé
• Cameroonian Ministry of Public Works
• Cameroonian Ministry of Higher Education
• Cameroonian Ministry of External Relations

The President of the Italian Republic, Sergio Mattarella, handles a diploma to a Cameroonian student

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SDGs
LEDS for Africa is a technical-humanitarian university project that promotes sustainable access to renewable energy in developing countries, specifically in Guinea Bissau. The project aims at creating an educational laboratory where students can apply and deepen the skills and knowledge acquired in their studies, and improving their soft skills. Involved students are mainly from the School of Engineering, but the project is not exclusively addressed to them.

The first intervention is being developed in Ponta Cabral, a rural village of about 700 inhabitants that currently has no access to electricity. The project intends to develop and install 100 stand-alone home systems, a solar pumping system, and an AC system for the village school. 30 of the 100 home systems have already been installed in March 2023 during the first operational mission.

The local population is also involved in the implementation of the systems to stimulate mutual learning and train-the-trainers practices.

**RESULTS**

The first operational mission on site was carried out in March 2023. At this time, the first 30 domestic systems were installed in cooperation with the local population. Data needed for the implementation of future installations were also collected. The installation of all the 100 systems is foreseen to be completed in the next 2 to 3 years. A longer-term goal is extending the project to other villages, in Guinea Bissau and elsewhere.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: **all African countries**

**ACADEMIC COORDINATOR**

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The International Relations Office of the University of Palermo mainly manage relations with African Countries through mobilities of students and staff (professors and administrative staff) funded by the Erasmus+ KA171 and a set of Agreements, some of them born after mobility programmes both as Memorandum of Understanding and Double degrees / Integrated Study Programs.

Most relevant Countries in this framework are:

- Tunisia. Main partner University of Tunis el Manar. Mobilities started in 2017 and in 5 years covered more than 300 exchanges: 150 Tunisian students spent from 3-12 months in Palermo, 80 Italian students benefited of a grant to stay in Tunis through Erasmus programme. Together with that UNIPA counts 4 Double degrees and 3 Integrated Study Programs.

- Algeria, Mauritania, Ivory Coast, Mauritius recently were funded through Erasmus mobility programme (about 60-70 mobilities in the current plus the next two academic years).

Other Countries have Framework Agreements and mobility programs recently activated. We hereby mention: Algeria, Ethiopia, Somalia, South Africa, Morocco, Tanzania, Egypt, Kenya, Madagascar, Senegal. In addition, a number of projects have been carried out or are underway at the University of Palermo under the PRIMA, ENI ITALY-TUNISIA and ENI CBC MED programmes involving partnerships with countries mainly in the Mediterranean African area.
PROJECTS FOR A COMMON GROWTH

ECOBOOST
Boosting functional biodiversity to maximize ecosystem services for Mediterranean crop production

Category
RESEARCH FOR LOCAL DEVELOPMENT
Rural Development and Land Management

Geographical area
Algeria, Tunisia, Morocco and Italy, Greece, Turkey

Donor(s)
Prima foundation

Project duration
2022-2025

PARTNERS
- University of Palermo
- Mediterranean University of Reggio Calabria
- University of Göttingen
- Democritus University of Thrace
- Benaki Phytopathological Institute
- Mohammed V University of Rabat
- National Agronomic Research Institute Morocco
- Université de Sousse
- Isparta University of Applied Sciences
- Frères Mentouri Constantine 1

The project “ECOBOOST” aims to develop and validate novel agroecological practices that boost functional biodiversity and maximize ecosystem services in solanaceous crops, while minimizing negative environmental impacts of agriculture. This goal will be achieved following a holistic approach that will provide Mediterranean farmers the knowledge and tools needed to implement agroecological practices and promote biodiversity at different levels: a) “aboveground, with the use of wild flowering plants in non-managed habitats to promote beneficial insects; b) belowground, with the use of biostimulants for seed coating and soil inoculation with selected key microbes to promote soil and crop health; c) at crop biodiversity level with the exploitation of germplasm of solanaceous crops, by screening local varieties/breeds which are adapted to biotic and abiotic stresses that occur under Mediterranean conditions.

RESULTS

ECOBOOST is the name of the project which is coordinated by the University of Palermo. It sees the involvement of 10 partners across different areas of the Mediterranean basin, including North African countries (Morocco, Tunisia and Algeria). The project, launched on September 1st 2022 has a three-year duration and aims to strengthen collaborations between European and North African countries. In the coming years, various actions will be launched aimed at promoting sustainable agriculture in smallholder farms by boosting functional biodiversity.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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The research project «Geopolitics and economics of cross-border space in the Horn of Africa» aims to provide a better understanding of the politics of borders and borderlands in the Horn of Africa. The project will be composed of two phases: one, devoted to the research part of the project, will be implemented in Ethiopia, Djibouti and Somalia with the collaboration of local researchers and university institutions. The second part, devoted to the divulgation of the research results, will take place in Palermo in the form of a workshop involving different scholars from Europe and Africa as well.

Recent political developments in the Horn of Africa have promoted the fragmentation of the monopoly of force and the emergence of non-state actors straddling across the formal boundaries of sovereign states. Mapping the identity of these non-state actors, their material interests and ideological projects, as well as their own understanding of center-periphery relations in the Horn of Africa will be of crucial importance to promote trade integration and regional security in line with the spirit of the Mattei Plan for Africa.

**RESULTS**

The project is funded by the Italian Ministry of Foreign Affairs and managed by the Department of Political Science and International Relations of the University of Palermo. The project’s purpose is to provide a better understanding of the multiple power poles that operate across the international borders of the Horn of Africa. The final goal is reducing border conflicts, promoting peace building and strengthening regional integration.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Kenya, Eritrea, Sudan, Djibouti
The main objective of the current proposal on BLUE-ERA is the establishment of a novel master’s degree program for sustainable blue economy in the south Mediterranean region (Region 3 countries: Tunisia, Egypt and Jordan). Our ultimate objective is to use ocean resources on sustainable manner for local economic growth needs, improved livelihoods, entrepreneurship to local needs and generating employment (empowerment of young) while preserving the health of ocean ecosystems. Participating countries in this proposal are two universities from each country in the south (Egypt, Tunisia and Jordan) in addition to three universities from the EU (France, Italy, and Greece). During the project period (3 years), there will be many activities; including gap analysis, lab installation and field trips for the practical work, capacity building for the staff and students, summer and winter schools, and training in European universities.

**RESULTS**

Thanks to the BLUE-ERA consortium for their significant contribution in the development of exchanges of knowledge, expertise and good practice tools for professional and entrepreneurial integration, employability and professionalization of students will be promoted. The sustainability of the proposed plan will guarantee the continuation of the master’s program far beyond the end of the project. In addition, the interconnection between laboratories and future research collaborations will strengthen the research capacity in the field of blue economy.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries with growing fisheries and aquaculture sector

**ACADEMIC COORDINATOR**
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MIGRANTS project intends to reinforce the institution capacity of Tunisia Higher Education System. Given its geopolitical situation, Tunisia can play, in this specific context, an important role for itself and for the surrounding countries, including the EU member states. As stated by the Intergovernmental Conference to Adopt the Global Compact for Safe, Orderly and Regular Migration (Marrakech, Morocco, 10 and 11 December 2018): Migration is a multidimensional reality that cannot be addressed by one government policy sector alone. To develop and implement effective migration policies and practices, a whole-of-government approach is needed to ensure horizontal and vertical policy coherence across all sectors and levels of government.

RESULTS

MIGRANTS Project’s specific objectives are: to develop a new study program: an International Joint Master Degree in “Migration Studies: Governance, Policies and Cultures” between the three Partner Universities: Tunis El Manar, Tunis, and La Manouba; to improve Partner Universities teaching staff’s capabilities by a comprehensive program of training and support in scientific qualification in Migration Studies; to disseminate and exploit the results of the project, in order to guarantee its impact and sustainability in itinere and in the future.

FUTURE PROSPECTS

• Potential replicability of the project: Yes
• Other potential partner countries: all African countries

ACADEMIC COORDINATOR
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The SOUTH-SOUTH UNIVERSITIES ALLIANCE (SO-UNI Alliance) project has the overall goal of strengthening the internationalization of research and training activities at UNIPA with the four target countries, through the promotion of cooperation activities, knowledge exchange, and best practices. Building on UNIPA’s experience in internationalization programs with the Mediterranean region, within the Erasmus+ KA 107 and KA2 programs, and within the network of European Universities, the specific objective of the project is to create a digital platform that connects UNIPA with the Universities of the four target countries using innovative digital tools for sharing research and training activities, in close collaboration with civil society and the productive sector, with a focus on students’ needs and their professional opportunities.

RESULTS

The project has facilitated the development of numerous agreements between partner universities, two workshops on development and international cooperation themes have been conducted, and the project’s results have strengthened cooperation with partner countries. Additionally, a KA171 action with Algeria has been funded thanks to the activities carried out by the project. The relations between the University of Palermo and the project partners have been significantly reinforced to promote greater exchange of experiences, students, and participation in joint projects among Mediterranean countries.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: all African countries

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The University of Pavia has a long lasting cooperation with African countries and thanks to ongoing projects continues to strengthen these ties. Flagship are the activities in the healthcare sector, carried on through the signing of MoU with partner universities and CSOs in the field. The Pavia-African Hospitals Project, began in 2007, aims to contribute to strengthening medical training in the partner countries. Always in the health sector, UNIPV manages many cooperation projects, financed by AICS or the EU. Among them, the project “Institutional and academic strengthening of the Somali National University - UNS5”, continuation of previous projects with Somalia, and the Erasmus+ Capacity Building SAHA project, which has the aim of supporting the modernization, accessibility and internationalization of Libyan higher education institutions in the field of health economics and health management. Pride of the University of Pavia are the studies and research in the field of Food Security and agricultural development, carried on trough two Erasmus+ Capacity building programs, AgriENGAGE and AgriSCALE, and an Erasmus mobility initiative. Finally, thanks to the CICOPS scholarships, established in 1996, UNIPV hosted so far 102 academicians from 21 African Countries.
The Pavia-African Hospitals Project, which began in 2007 and is still ongoing, aims to contribute to strengthening medical training in partner countries so as to contribute to reducing the still dramatic shortages in the medical field, in particular as regards specialist disciplines (paediatrics, radiology, pediatric surgery, oncology).

The main objective is to help the partner institutions to improve the professional preparation of the staff through internships of African doctors in Italy and sending Italian specialists and trainees to the hospitals involved, in a logic of mutual learning in which Italian staff transmit the latest acquisitions to their local colleagues in the specialty and learn from them how to best practice the profession even in the absence of super-specialist equipment. From an interdisciplinary perspective, interactions with African partners also included consultancy in the fields of agronomy, economics and computer engineering.

**RESULTS**

- Improvement of the quality of teaching imparted by African teachers (> 15 colleagues hosted in Italy for refresher courses)
- Involvement of > 100 Italian medical trainees in three-month internships at partner hospitals
- Update of the training curriculum available to students and doctors of partner institutions
- Support for the activities of the Faculty of Medicine through courses taught by Italian teachers online and in person on site
- > 10 scientific papers jointly studied and published
- Sending IT and technical material to improve treatment and research facilities

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Guinea Bissau, Malawi, Mozambique

**PARTNERS**

- Bukavu Catholic University
- Medical Doctors Federation
- Comitato Pavia-Asti-Senegal
- Agenzia n. 1 per Ayamé

**ACADEMIC COORDINATOR**
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### Results

The master boasts more than 600 graduates from more than 30 countries, and provides a 15-month program open to students from different cultural and academic backgrounds, in particular students from developing countries who are supported every year by scholarships throughout the study period and their internship. Thanks to the training offered by the Master, our students today work in prestigious positions in NGOs, international organizations, foundations, research centers, government bodies all over the world in the development cooperation and humanitarian aid sectors.

### Future Prospects

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

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**EXPO 2030 ROMA FOR AFRICA**

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Capacity building in Agricultural Higher Education in Africa has undergone significant developments through three distinct channels. Two Erasmus+ KA2 programs, AgriENGAGE and AgriSCALE, and an Erasmus mobility initiative. AgriSCALE is a novel entrepreneurship learning ecosystem within Sub-Saharan Africa, through the implementation of problem-based learning methodologies in food and agribusiness programs offered by higher education institutions across the region. AgriENGAGE strengthens higher education institutions to deliver training programs in agri-entrepreneurship and community Engagement. The aim of AgriENGAGE is to catalyze agricultural transformation and bolster the competitiveness of the agricultural sector within Africa. Universities in these projects and the Dire Dawa University, will participate in an Erasmus+ mobility program to enhance research capacity of PhD students and researchers, contributing to the overall growth and sustainability of agricultural education.

**RESULTS**

AgriEngage: updated agrientrepreneurial and community engagement training programs; improved academic staff competencies in business development services and community engagement; strong collaboration between HEIs and the industry. AgriScale: modernization of the agro-sector education in Sub-Saharan Africa; transformation of partner institutions’ curricula through a paradigm shift using Problem-Based Learning methods and the creation or modernization of courses; enhancement of teachers’ and staff educational and pedagogical competencies.

**FUTURE PROSPECTS**

• Potential replicability of the project: yes
• Other potential partner countries: East, West and North African countries
EXPO 2030 ROMA FOR AFRICA

CICOPS SCHOLARSHIPS AND FELLOWSHIPS PROJECT
Scholarships and Fellowships addressed to researchers from Developing Countries

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<th>Category</th>
<th>Geographical area</th>
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<td>HIGHER EDUCATION</td>
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<td>University of Pavia</td>
<td>1996 - ongoing</td>
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CICOPS scholarships, established in 1996 and funded by the University of Pavia, are intended for young academicians from Developing Countries with the aim of encouraging collaboration between their Universities and UNIPV. About ten scholarships are offered every year for a period of 1 to 3 months, and cover travel expenses, meals, accommodation, health insurance, visa expenses, and a pocket money of 150 €/week. Projects can be developed in all our Departments (see figure), and involve research activities under tutorship, jointly publishing, holding seminars and conferences, actively participating in university life and eventually returning at their Universities enriched with the new skills thus acquired. At the end of the stage in Pavia they are invited to become “CICOPS Fellows”, thereby assuming the function of “ambassadors” of UNIPV at their institution of origin, exchanging news, continuing with the research activities here initiated and fostering new interactions among our Universities.

RESULTS
To date 270 academicians from 65 Countries have been awarded the scholarship; 102 of them (37.7%) come from 21 African Countries (see map). The professional growth of these young researchers fostered by the stage in Pavia will positively impact on their academic performances and teaching effectiveness, as well as those of sending Institutions. The “diplomatic network” representing UNIPV in the world can now rely on 193 Fellows spread on all 65 Countries, in this way strengthening the collaboration between our Universities (e.g., 3 joint CBHE Erasmus+ projects developed by CICOPS Fellows).

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African countries

PARTNERS
- EDISU – Ente per il Diritto allo Studio dell’Università di Pavia

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The SAHA Project – raise Libyan Higher education health sector for the benefit of local society – aims at contributing to the modernization of the Health and healthcare systems in Libya, by addressing both these major areas of concern that draw intense citizen and government attention throughout Libya. Health, academic research and institutional stabilization: on which the SAHA Project’s planning action is based on. Intended to contribute to the stabilization process of the country, as ongoing conflict is causing an increased health needs for the population. The SAHA project has upgraded the quality of existing courses and introduced new courses on Economic, Healthcare and centers for health data management in the Libyan HEIs, setting up and managing academic centers for collecting medical data, and by creating an advisory multi stakeholder committee for defining policy recommendations at for local, regional, national and international stakeholders and decision-makers.

First result of the SAHA Project was: updating or the establishment of a Master’s Degree in Healthcare Management in all Libyan partner universities and the accreditation process at the Libyan Ministry of Education and Scientific Research. During the three years of the Project, training activities were held in Pavia and Granada to train future teachers of the six courses implemented through the project in the new MSc in HCM. The second result in the area of Policy Dialogue; the Libyan university partners are organizing training for stakeholders in municipalities, hospitals or NGOs.

* Potential replicability of the project: yes
* Other potential partner countries: all African countries

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The Università degli Studi di Perugia has been collaborating for years with many African countries in the areas of research and teaching. The Departments of Agricultural, Food and Environmental Sciences, Veterinary Medicine, and Physics and Geology are currently involved in scientific collaborations with African institutions in the following areas: rural development, land management, agrifood and food supply chains, health, water and hygiene, cultural heritage and sustainable tourism, safe water and production of food of animal origin, sheep breeding.

As part of the University’s internationalization activities, the Department of Agricultural, Food and Environmental Sciences recently hosted Visiting Researchers from South African institutions who held seminars for students of the PhD Program in Agricultural, Food and Environmental Sciences and Biotechnology and students of the International Master’s Degree Program in Agricultural and Environmental Biotechnology. In the past, the Università degli Studi di Perugia has participated in the following international cooperation projects, which can be consulted on the institutional website: https://www.unipg.it/internazionale/cooperazione-internazionale: BOOMERANG Project - Mediterranean Area; Tanzania Project: School of Paleoanthropology; Ethiopia Project; Sidi Bouzid Barberina Project; Tunisia Development Project.
ALL IN ONE
Integrated actions in the health, sanitation and livestock sector to respond to epidemic-prone diseases with a One Health approach

Category
RESEARCH FOR LOCAL DEVELOPMENT
Health, water and hygiene, One Health

Geographical area
Uganda

Donor(s)
Agenzia Italiana Cooperazione e Sviluppo (AICS)

Project duration
2023-2026

RESULTS
ALL IN ONE aims to build more resilient social and health systems, strengthening their preparedness and capacity to respond to diseases with epidemic potential in the districts of Napak and Moroto.

ALL IN ONE acts on three levels with the aim of creating an integrated system of prevention, monitoring and control of diseases with epidemic potential:

- the prevention of infections through the improvement of hygiene conditions and practices at community level;
- the improvement of control and infection practices and epidemiological surveillance at a healthcare level;
- improving the surveillance of animal infectious diseases and animal welfare.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: all African countries

The aim of this project is to intervene Karamoja (region of Uganda - Africa), a territory at high endemic risk of both human and animal communicable diseases. The project intends to reduce the incidence of a number of pathologies, adopting a healthcare model based on the integration of different disciplines, as suggested by the One Health perspective.

PARTNERS

- Istituto per la Cooperazione e lo Sviluppo Internazionali Africa Mission - Cooperazione e Sviluppo onlus - Italia (C&S)
- Collegio Universitario Aspiranti Medici Missionari - Italia (CUAMM)
- Università degli Studi di Perugia - Italia (Unipg)
- Università degli Studi di Firenze - Italia (Unifi)
- Università di Makerere - Uganda St. Kizito-Hospital Matany - Uganda Insieme si può - Italia
THOR is a multidisciplinary project aimed at the study and promotion of paleoanthropological sites in Tanzania, particularly in the Ngorongoro Conservation Area. The rocks cropping out in the study areas of Laetoli and Olduvai Gorge offer outstanding geological, paleontological and archeological evidence for the understanding of the last 4 million years of human evolution in the context of East African environmental change. Three components are intertwined in the project: research, training and dissemination. In all field activities, Italian and Tanzanian undergraduates and postgraduates are involved, and training courses for students, local staff and members of the Maasai Community are regularly organized. Science should not stagnate in academia, but must be open to the world through forms of dissemination ranging from museums to multimedia tools. THOR is partially funded by the Italian Ministry of Foreign Affairs and Cooperation (Italian Archeological, Anthropological and Ethnological Missions Abroad; director: Giorgio Manzi, Sapienza University of Rome).

RESULTS

Since its foundation, THOR has trained dozens of Italian and Tanzanian students and has seen the collaboration of many researchers from all over the world. Cooperation and capacity building activities were designed in collaboration with the Ngorongoro Conservation Area Authority, University of Dar es Salaam, and the local Maasai Community. Dissemination projects included the making of posters, public meetings and a documentary. The project achieved outstanding scientific results, including the study of the earliest bipedal footprints in the world in Laetoli (3.7 million years).

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: Ethiopia, Kenya, Mozambique, Uganda
Water is scarce in South Africa and potable water is even scarcer. It is important to start actively researching how the livestock industry impacts on safe water as well as safe food. The two are linked because potable water is also critical to safe food. The projected research aims to quantify water quality in terms of potential zoonotic diseases and antimicrobial resistance, to identify and characterise hazards to human, animal and environmental health and to devise risk mitigation and risk communication strategies to limit or eliminate these hazards. The detailed assessment of the environmental impacts of the livestock sector, which include global warming, becomes essential to planning and policy-making in agriculture. Veterinarians have a sufficiently broad background and holistic, diagnostic approach, needed to conduct this research.

**RESULTS**

- Two projects financed by the Italian Ministry of Foreign Affairs
- Two projects financed by NFR (National Research Foundation) South Africa

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries
Preservation of genetic variability plays a crucial role in animal science because its decline may reduce populations’ ability to adapt to environmental changes. Moreover, autochthonous breeds might be an important resource for future breeding programmes. Both in Italy and in the South African regions are reared indigenous sheep breeds, that have been declared insecure because of indiscriminate breeding. Genetic studies are imperative to establish the genetic structures of the populations. It has been recommended by the FAO that indigenous breeds should be phenotypically and genetically characterized for the purpose of planning a sustainable conservation program. Although phenotypic characterization is being done along side as well, the objectives of this research was to do a genetic characterization of the indigenous sheep breeds both in Italy and in South Africa using molecular markers. The results from this work will be used to design conservation schemes for these breeds.

RESULTS

The results showed that there is considerable genetic diversity among the Zulu sheep populations (expected heterozygosity ranging from 0.57 to 0.69) and the level of inbreeding was not remarkable. The structure analysis results revealed that Makhathini Research Station and UNIZULU research station share common genetic structure, while three populations (Nongoma, Ulundi and Nquthu) had some admixture with the exotic Dorper breed. Thus, there is a need for sustainable breeding and conservation programmes to control the gene flow, in order to stop possible genetic dilution of the Zulu sheep.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: all African countries
The University of Rome Tor Vergata is a relatively young University, founded in 1982, however, despite its young age, it has already reached high-quality academic standards in Italy and Europe. The University follows an “English-styed” campus; where it extends over 600 hectares and it is fully engaged in promoting an international dimension of studies and hence participates even more actively in international research activities. Its key objectives include promoting joint degrees, developing international mobility for students, as well as enrolling and training foreign students. As far as international relations are concerned, the University of Rome Tor Vergata counts more than 500 bilateral and cultural/scientific cooperation agreements with partner Universities worldwide to promote joint research programs and academic exchanges. The University Hospital, the flagship of the university, is equipped with the latest diagnostic and therapeutic structures and has become a reference model at national and international levels.

Tor Vergata is extremely active in promoting international projects of research, as well inclusion, integration, reduction of inequalities, sustainability, development of new strategies for teaching and research. This approach has inevitably opened the way to new interactions with different contexts and realities, such as the African one, a cultural and scientific integration for a mutual growth in several fields. In this regards, the following research projects have been carried out for local development in different contexts as hospital, higher education, sustainable tourism.
The focus of this initiative, an integral part of the Plan de Développement Sanitaire 2018-2021 of the Ministry of Health and National Solidarity of Chad (MIN SANTE), regards the improvement of the health system in Chad through: a) medical and specialist training and the establishment of specialist hospital services based on modern technology platforms; b) infrastructure interventions for the creation of new specialist hospital services.

The initiative aims at the same time to limit the “brain drain” of Chadian doctors and include in the Local health system (and Central Africa) organizational arrangements to develop partnerships.

**RESULTS**

Outcomes of the Initiative:
- 1 Strengthening training through: a) Activation International Programme One Health and RRI (relative risk increase) in the Medical degree program, b) institution of the Inter-University Diploma of Cardiology, c) strengthening and institution of graduate schools (Surgery, and Gastroenterology and Hepatology). All diplomas should be legally conferred by the two universities of N’Djamena, and carried out in co-tutelage with the University of Tor Vergata, the University of Parma, University de la Picardie (Amiens, Fr), Yaoundé University, representing a model of partnership university North-North-South-South.
- 2: Technology transfer in hospitals based on the strengthening of different technology platforms (set of instrumentation, protocols, reagents and materials, specific software, medical expertise, engineering techniques), some of them innovative for Chad, which will be organized at the National University Hospital of Reference (CHU RN) and at the University Hospital Complex of Bon Samaritain (CHU-BS).
- 3: Creation of hospital services: upgrading both infrastructure and skills will allow the improvement of hospital services to which the Chadian population will have access. They will be activated and/or enhanced: a) Laparoscopic Surgery, b) Gastro-hepatological Service c) The Cardiological Service (ECG and echocardiography).
- 4: Research on medicinal plants and Creation of Start up support: the aim is to enhancing medicinal plant research, and ensuring future quality and sustainability through development of 1 specific start-up in the field of traditional pharmacopeia and nutraceuticals, integrated in the Nutrition Center recently activated in CHU-BS by AICS.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Central Africa
The overall goal of the initiative “CHAO study (Comorbidities in HIV/AIDS Outpatients): an epidemiological research to reduce mortality of HIV patients in Kenya” is to improve the health of the population in Kenya. 4.5% of the adult population in Kenya is living with HIV. In the country, HIV is the leading cause of death among people 15-49 years old. Among the gaps highlighted by national documents emerges the need to improve the quality of life and survival of patients with HIV (Kenya AIDS Strategic Framework 2). In particular it is emphasized the need to integrate HIV services with other health services to counteract any co-morbidity. In addition, it is highlighted the scarcity of reliable epidemiological data on these diseases in patients with HIV, data needed to plan appropriate health interventions (Kenya HIV & AIDS Research Agenda). The country’s request to the Global Fund (Funding Request Application Form, 2016) also emphasized the need for greater integration of HIV services with other health services for the diagnosis and management of co-morbidities. For these reasons, the specific objective chosen is to improve the capacity of the Kenya Ministry of Health in promoting quality health services that integrate HIV services with services for various co-morbidities.

RESULTS
This goal will be sought to be achieved through the realization of a single outcome: making active screening services available for key co-morbidities of HIV patients in all primary level facilities in Meru County in the context of an operational research.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: Central Africa
A.S.S.I.S.T. — Access to an Integrated Health System for TB/HIV Services in Guinea is a two-year initiative promoted by ACAP in partnership with the University of Rome Tor Vergata (TVG) and the local health center Dispensaire Maternité Saint Gabriel (DSG). The objective is to reduce mortality and the incidence of HIV through universal access to HIV/TB prevention and treatment in Guinea, increasing the access of the population in Conakry, Coyah, and Dubréka to free and quality HIV/TB healthcare services. A needs analysis, conducted by a team of experts, has highlighted the need to intervene in strengthening the healthcare system regarding three problems:

- Geographical and economic inaccessibility of diagnostic and treatment sites for HIV/TB, especially in peripheral contexts, often leading to late diagnosis in patients and, therefore, contributing to high mortality among HIV/TB patients.
- Scarcity of adequate facilities, drugs, and laboratory reagents for HIV/TB, which hinders the equitable distribution of HIV/TB healthcare services across the territory, significantly impacting access to care.
- High patient loss within the diagnosis and treatment circuit, as even many of the most equipped centers at the national level often fail to ensure continuity of service, interrupting the treatment cascade.

**RESULTS**

Increase access to diagnostic and treatment sites for HIV/TB in peripheral areas: To address the needs of patients who face high transportation costs to reach the center in Conakry, a package of free care and analyses will be provided. Additionally, the services offered in peripheral areas of Conakry (Matoto) and rural areas of Dubréka and Coyah will be strengthened to achieve greater decentralization while maintaining high treatment quality. This will be achieved through the establishment of a coordinated inter-hospital system known as the “Hub & Spoke” (H&S) model for integrated management of HIV/TB services. Reduce mortality among people with HIV/TB: This need will be addressed by promoting greater integration of HIV/TB services. In addition to the Dixinn Center hub, active TB case finding and molecular diagnosis will be extended to the peripheral spokes of Dubréka, Coyah, and Matoto.

Improve the performance of the Prevention of Mother-to-Child Transmission (PMTCT): ACAP will enhance PMTCT by providing counseling to pregnant women through training community agents, which will also be open to operators from other facilities. Early diagnosis in children will be increased by utilizing the laboratory at the Dixinn Center and installing a dedicated GeneXpert machine at DSG. Increase HIV/TB testing and patient adherence: New counselors will be trained, and front-desk services will be established in the three peripheral centers to increase testing at different entry points. Furthermore, retention will be strengthened through improved communication and referral strategies, as well as enhanced psychosocial support and therapeutic education. Lastly, a specific research study will be conducted to identify the reasons for insufficient retention and the main barriers to accessing testing, PMTCT, and HIV/TB care services in peripheral contexts, both urban and rural.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Central Africa

**ACADEMIC COORDINATOR**

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The aim of the project is to improve the quality of care and access to services in the neonatal intensive care units of three hospitals: St. Paul Teaching Hospital, St. Luke Wolisso Zonal Hospital and Tulu Bolo District Hospital.

The role of ISF is to carry out technical assistance activities aimed at collecting data on the newborn; develop an information system for the pathological newborn; supervise data collection.

<table>
<thead>
<tr>
<th>RESULTS</th>
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<tbody>
<tr>
<td>• Reduction of neonatal mortality in 3 Neonatal Intensive Care Unit (NICU);</td>
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<tr>
<td>• More than 14,500 sick infants were admitted to the NICU of the 3 hospitals;</td>
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<td>• Production of 3 neonatal intensive care manuals and a manual of biomedical equipment for neonatal intensive care;</td>
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<tr>
<td>• Training of 53 nurses and 56 biomedical engineers;</td>
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<tr>
<td>• Training of 26 health workers and 575 women development army (WDA);</td>
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<tr>
<td>• Development of a digitised information system for childhood pathology;</td>
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<tr>
<td>• Construction of the NICU building in St. Luke and rehabilitation of that of Tulu Bolo;</td>
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<tr>
<td>• 158 community meetings and 51,652 women sensitised to the care of infants</td>
</tr>
<tr>
<td>• Continuous supply of NICU equipment and drugs in 3 hospitals.</td>
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<th>FUTURE PROSPECTS</th>
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<td>• Potential replicability of the project: yes</td>
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<td>• Other potential partner countries: Central Africa</td>
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### Mactaris

**From the Numidic Age to the Islamic Age**

<table>
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<th>Category</th>
<th>Geographical area</th>
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<tr>
<td>RESEARCH FOR LOCAL DEVELOPMENT</td>
<td>Africa – Tunisia</td>
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**Donor[s]**  
**Project duration**  
2023-2027

**PARTNERS**
- University of Rome Tor Vergata
- INP – Institute National du Patrimoine de Tunis
- Under the patronage of
- MAECI (Ministero degli Affari Esteri e della Cooperazione Internazionale)
- Ambasciata d’Italia a Tunisi

The Mactaris project aims to restore a historical identity to ancient Mactaris, center of the Tunisian hinterland, whose great cultural potential, for long underestimated due to its peripheral location, is highlighted by the extraordinary archaeological evidences, mirror of a prosperous and dynamic reality. Throughout the reconstruction of the urban form of the city and its evolution over the centuries, facilitated by the resumption of archaeological field investigations planned for this year, the purpose is to outline the city’s social and cultural development patterns in its different phases of life, and to understand the relevance of the local economy in the area, crucial junction in the trades between the coastal cities and the inland populations, upgrading the site in the context of the Tunisian cultural heritage.

The broader objective of the project is to give voice to African identity traits that are bearers of ideas, products and creativity in the European identity building process. Throughout history, common evolutionary processes and the network of relationships created across the Mediterranean have contributed to creating common but not always firmly inclusive paths. Another objective is to increase the tourist use and valorisation of the site, which is currently not included in Italian tourist routes.

### RESULTS

The cooperation project between the University of Rome Tor Vergata and the Tunisia’s Institut National du Patrimoine (INP) was launched in 2022, involving the chairs of Classical Archaeology and Medieval Archaeology and the Laboratory of Roman African Urbanism and Architecture. The purpose is to reconstruct the city’s historical-archaeological and socio-economic framework, through a multidisciplinary approach and the use of modern methodologies and technologies, to redevelop the site within Tunisia’s historical-artistic heritage circuit.

### FUTURE PROSPECTS

- **Potential replicability of the project:** yes
- **Other potential partner countries:** Egypt. Mactaris is part of a larger project (Sicily-Egypt-Tunisia) to study the changes that occur in the models of breeding, consumption, trade and exploitation of resources from the classical and Byzantine to the Islamic periods.
Over the last few years, the University of Sassari has launched several initiatives to reinforce the collaboration with universities and organizations based in Africa, to promote learning, the sharing of good practices and the development of research and knowledge. Capacity-building projects have played a vital role in the consolidation of skills and knowledge among partners, promoting not only academic cooperation but also the strengthening of local communities.

Several scientific initiatives have been developed by UNISS departments and research units, but also cross-sectoral initiatives have been implemented, such as the adoption of humanitarian corridors to help refugees and asylum-seekers start or recover their university studies and acquire the skills needed to find a job in the EU labour market.

Projects have been funded by a range of different funding schemes, such as Horizon, Prima and Erasmus+, but a substantial investment of human and technical resources have been made available by the University of Sassari to make them possible.

Knowledge transfer, sustainability, the protection of the environment, the prevention of soil degradation, the connection between innovation and traditional farming systems have been the basic pillars of a number of initiatives.
EWA-BELT

“Linking East and West African farming systems experience into a BELT of sustainable intensification”

EWA-BELT project aims at promoting the Sustainable Intensification (SI) of productions in agricultural systems representative of different areas of East and West Africa through integrated participatory research and innovative tools and the exchange of good practices and experiences between different contexts.

EWA BELT will increase crop productivity by rediscovering and improving traditional crops (Neglected and Underutilized species) and agricultural practices, including soil and water conservation and integrated agri-livestock management; It will research and promote traditional and innovative technologies for Integrated pest management during pre (biological pest disease strategies) and post-harvest phases (safe storage) improve plant health and food quality. It will develop ICT technologies for the remote diagnostic of crops pests and pathogens (Planthead).

Finally, SI indicators in different domains (productivity, social, economic, environmental, human) at different scales will be used to assess the impact of implemented technological and management interventions.

RESULTS

Coordinated by the Desertification Research Center of the University of Sassari, EWA BELT Project is a Research and Innovation Action financed by Horizon 2020. Research activities on SI technologies are based on a multi stakeholder approach that foresees the direct involvement of farmers and other relevant actors at different levels along the value chain through Farmer Field Research Units (FFRUs). So far more than 30 FFRUs were set up in each African case study and experiments and field tests for each group of SI technologies were designed and are currently ongoing. The most promising technologies will be scaled up in the coming years.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

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PARTNERS

- NRD-UNISS, OCCAM, ST-MICROELECTRONICS (Italy);
- IRD & CIRAD (France);
- ACRA, UNB, INERA (Burkina Faso);
- CSIR-SARI, KDC (Ghana);
- UNIMAK (Sierra Leone);
- KALRO, UoN (Kenya);
- TARI, NM-AIST, ICRAF (Tanzania);
- JIMMA AND HAWASSA UNIVERSITY (Ethiopia)
Mediterranean countries are still torn between old and new water policies, and water shortage is not related only to increasing demand, but also to poor infrastructure and management practices. The joint challenges of MENAWARA project consisted of providing additional resources by recycling drainage and wastewater (WW), rationalizing water use practices in agriculture and setting operational governance models in line with national and international plans. MENAWARA played an important role in reducing water insecurity by realizing the most suitable post-treatment or Managed Aquifer Recharge (MAR) systems for each intervention area, thus improving the quality of non conventional water in agriculture and promoting a sustainable agriculture. Innovative techniques adopting the “fit-to-purpose” approach in water reuse to meet the needs of the intended end-users and stakeholders’ engagement (living labs) have been at the core of the project.

**RESULTS**

- Improvement of Non-Conventional Water (NCW) quality for agricultural purposes through low cost pre and post treatment systems and 1 managed aquifer recharge system;
- 46.5 ha. of land irrigated with reclaimed water and equipped with innovative water supply solutions;
- Enhancement of the innovation capacity of farmers and technicians to foster the dialogue and encourage the adoption of the innovations to make national planning more responsive to the community needs;
- Raising of social acceptance and awareness on the use of NCW through an enhanced cooperation among Mediterranean Institutions

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Algeria

**ACADEMIC COORDINATOR**
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SALAM-MED is designed to identify, test and validate tailored nature-based solutions to enhance the resilience of endangered MED dryland socio-ecological systems or to restore degraded ecosystems in arid and hyper-arid land. New practical solutions will be co-developed with stakeholders through the Living Labs across hotspots located in Egypt, Greece, Italy, Morocco, Spain and Tunisia, encapsulating a wide range of societal, agricultural, forestry and climatological conditions. The analytical framework of SALAM-MED is based on four pillars: 1) actively engaging all relevant stakeholders (particularly women and youth) in the Living Lab processes for the co-creation of knowledge and testing of solutions; 2) co-researching technologies and practical solutions for sustainable land and water management; 3) exploring business opportunities associated with land restoration and socio-ecosystem resilience; 4) disseminating and scaling out SALAM-MED’s practical solutions to similar socio-ecological systems.

RESULTS

SALAM-MED aims to achieve results across multiple dimensions:
- identifying and scaling out practical solutions to restore degraded ecosystems and enhance ecosystem resilience
- designing long-lasting learning spaces to enhance local adaptive capacity in identifying practical solutions for sustainable land and water management
- promoting active stakeholders’ engagement and participatory governance of natural resources
- identifying economic opportunities associated with socio-ecosystem resilience
- promoting women and youth empowerment

FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: all African Countries
In the Mediterranean region (MR) there is urgent need to enhance availability and use of soil data and information (SDI) and harmonize methods towards standardized soil information systems (SIS) to enable soil health enhancement and achieve soil-related SDGs such as food security, climate resilience, and land degradation neutrality (LDN).

SOILS4MED objectives are: 1) engage stakeholders in line with the Living Lab approach and raise awareness on benefits of investment in SDI; 2) develop integrated indicator sets and monitoring protocols adapted to the environment specificities and needs of the MR; 3) validate protocols in study areas representing major agro-ecological regions and soil types; 4) demonstrate capacity of the produced SDI, integrated by legacy soil data, to feed state-of-the-art decision support tools and generate indicator maps at multiple scales; and 5) implement standardized country-based SIS for effective management and use of SDI. SOILS4MED works in synergy with major international actors engaged on soil health and SDI, particularly FAO-GSP, JRC, ISRIC, and Conscious Planet-Save the Soil.

RESULTS

SOILS4MED is a 4.1 M€ project linked to the European Soil Mission that contributes to generate the following impacts: i) Enable improved predictions of soil C-seq. potential; ii) Enable improved monitoring of soil and land degradation; iii) Contribute to mitigate land degradation and desertification through improved soil information systems able to alert on risks for soil degradation; iv) Enable assessment of sustainable land management effects on agro-ecosystem water, C, and nutrient cycles; and v) Contribute to forthcoming JRC&FAO’s Soil Atlas of the Med Region.

FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: Libya (forms of association to the project are under evaluation with Libyan GSP focal point); Algeria
The objective of the University Corridors for Refugees (stemming from the 2020 UNHCR-led UNICORE project), is to promote the right to high education for refugees through study corridors from Mozambique, Mali, Angola, Cameroon.

It is inspired by the “Manifesto per l’Università Inclusiva” promoted by United Nations High Commissioner for Refugees UNHCR and approved by UNISS.

The project is funded by the University of Sassari and is supported by ERSU Sassari, Caritas Diocesana di Sassari, Fondazione Accademia, and the Municipality of Sassari.

RESULTS
Eligible candidates receive full support during all the steps of application, including foundation courses, financial coverage of all the expenses prior to the arrival, full coverage of the expenses to be faced before the arrival in Italy, full tuition fee exemption, a scholarship per year supported by local partnership, including Housing, a mentoring service, access to a buddy programme, psychological counselling, and much more.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: all African countries

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The University of Turin (UniTo) cooperates with a large number of academic institutions (around 33 cooperation agreement with African HEIs) and other key actors in order to promote initiatives, projects and relations aimed at sustainable development and to fight against inequalities in the African continent, as well as through welcome and inclusion initiatives. Today it is no longer possible to promote such projects in Africa outside of equal partnership relations with African actors. In this sense, educational collaboration projects that can increase common skills and interests are extremely significant. The university of Turin is engaged in projects such as: UNI.COO, with the aim of promoting outgoing mobility paths within development cooperation projects; University Corridors for Refugees UNICORE, promoted by Italian universities with the support of UNHCR, Italian Ministry of Foreign Affairs and International Cooperation, to increase opportunities for refugees currently residing in several African countries to continue their higher education in Italy. Furthermore, UniTo actively participates in the following networks: RUniPace, RUS and CUCS. Lastly, two UNESCO Chairs have been established in 2010 and 2022, to promote an integrated system of research, education and engagement.
The “A.P.P.A.*” international health cooperation project aims to establish laboratories for the preparation of galenic medicines and ready-to-use therapeutic foods in healthcare centers located in developing countries. These laboratories are designed to meet specific therapeutic needs identified by local medical doctors and governments, in accordance with WHO guidelines regarding essential medicines and the treatment of malnutrition. For each laboratory, a specific list of medications is developed in order to significantly respond to the real needs of the population served by a healthcare center. This activity is important because it is well known that medicines of industrial origin are often unavailable, falsified and rarely suitable for the paediatric population in developing countries.

**RESULTS**

In accordance with data provided by the WHO, our studies revealed that approximately 50% of industrial medicines available on the market in developing countries, where the project is underway, are falsified. On the other hand, the quality of galenic medicines prepared in our laboratories has been demonstrated. In the period 2015–19, around 500 batches of galenic medicines were checked, and the tests were satisfied in 98% of cases. The Project was launched in 2005, and to date, seven Projects are operational: two in Madagascar, two in Angola, one in Chad and two in Haiti.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Developing countries where a high rate of falsification of industrial medicines can be detected
Set up in 2004 and committed to research and international cooperation, CISAO brings together in a single Centre the various technical and scientific skills present in a number of departments at the University of Turin, specifically those of: Chemistry, Cultures, Politics and Society, Economics and Statistics, Territorial Policy, Agricultural, Forestry and Food Sciences, Earth Sciences, Veterinary Sciences, Medical Sciences, Humanities.

With a view to plural participation and circularity of expertise and knowledge between the North and South of the world, CISAO co-constructs with its partners methodologies and practices oriented towards the achievement of the Sustainable Development Goals indicated by the United Nations, mobilizing different competencies in different geographical areas of the African continent. Innovation, training and applied research are the cornerstones of the Centre, through which it also promotes spaces for reflection and joint action on the major themes touched upon by the 17 SDGs of the 2030 Agenda.

RESULTS

The results achieved and to which CISAO is constantly striving are: the building of common goals that motivate collective action; the effective involvement of stakeholders, fostered by research-action approaches and participatory tools; the co-construction of hybrid methods and knowledge through collaboration with Universities and local research centres; support for processes of social change through a critical posture. In this perspective, CISAO believes in the importance of generating spaces for reflection and dialogue on the major axes of sustainable development, where the plurality of actors and competences can confront each other, and building shared strategies.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: Guinea Bissau, Guinea Conakry
UNITO AND AFRICA ON FIRSTLIFE
The dynamic mapping of the University's international cooperation projects

<table>
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<tr>
<th>Category</th>
<th>Geographical area</th>
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<tr>
<td>HIGHER EDUCATION</td>
<td>Africa</td>
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Donor(s)
University of Turin

Project duration
2022 - ongoing

UNITO and Africa on FirstLife is the mapping of international cooperation projects in which the University of Turin plays a leading or partner role. FirstLife is a georeferenced, open source, civic social network developed by the Department of Computer Science. The collection of projects started in 2018 considering the initiatives in, for and with African actors and territories that involve the University of Turin in various ways, with its structures and staff, including research, teaching, third mission and development cooperation.
The mapping was brought to FirstLife in 2023 by integrating it with the experiences of some Uni.Coo students, who carried out an internship in the territories of the mapped projects in 2023.

RESULTS
The mapping allows you to have an overview of the cooperation projects in which the University is involved, with the possibility of highlighting all the initiatives in a specific country or relating to a particular objective of the 2030 Agenda. Furthermore, the mapping is dynamic and allows you to follow the evolution of projects as well as the launch of new ones.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries:
  All African countries to extend the mapping to local institutional and third sector entities

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The rapid, unchecked progress of science and technology can widen inequalities, exacerbate the fragmentation of social and natural environments and accelerate resource depletion, for both human and animals. The purpose of current and future Research & Development projects should, therefore, be to ensure the achievement of “well-being”, intended as the equitable access to a good quality of life. Within this context, the PhD program in ‘Sustainable Development and Cooperation’ will establish an international training and research network focused on ‘frontier sciences of sustainability.’ Our proposal is designed to align with the vision of an interconnected academic community and foster an innovative framework for cooperation. We will employ a hands-on, transdisciplinary approach that promotes innovation, cooperation, and interdisciplinarity. This approach equips students with the necessary tools to tackle some of the 17 developmental goals that have been identified as a World priority in the Agenda 2030.

The international PhD team in Antananarivo - Madagascar

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TOAfrica is a project incorporating multiple interdisciplinary education tracks that offer students and professionals an insight of the African continent, focusing on sub-Saharan regions. The project consists of three main paths: an international Summer School (TOAfrica Summer School) held annually, focusing on interdisciplinary themes; in-depth seminars (TOAfrica Seminars) that take place throughout the year; an annual roundtable (TOAfrica Forum) involving professionals from the field of development cooperation. The project involves strong collaboration with international partners, particularly in Uganda (Makerere University). There is a considerable exchange of faculty and students between Turin and Makerere to participate in joint educational events. Moreover, the Ugandan-Italian research project “Mobility, Migrations and Refugees in East Africa: the Case of Uganda” is ongoing. Multiple activities of the TOAfrica project fit within this investigation strand.

RESULTS

The TOAfrica Summer School came to its fourth edition in 2023; the faculty includes lecturers from different countries and international cooperation workers. Over time, Summer School participants and international students’ enrollments have increased significantly. More than 40 students and professionals attended the December 2022 TOAfrica Forum. TOAfrica seminars see the constant and engaged participation of the University of Torino students. Moreover, all the projects have seen consistent and thorough involvement of students and faculty members of Makerere University, with whom a collaboration is ongoing.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: Ethiopia

ACADEMIC COORDINATOR
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The University of Trento (UniTrento) is a medium-size university with a strong international vision. This is reflected in its international research achievements, in the high proportion of English-taught MSc programmes (25 out of 43) and Ph.D programmes (13 out of 17), and in the continued scholarships programmes for international students, including a large proportion of African countries.

UniTrento coordinates the national Italian Network of Universities for Development Cooperation (CUCS) in the 2020 – 2025 period and hosts a UNESCO Chair focused on engineering for development.

UniTrento has a long tradition of research and knowsharing collaborations with African universities and institutions for local development. They started in the 1990s with partners in Senegal and Mozambique, and are now continuing with partners all around the African continent.

The main scientific expertise areas from the 15 Departments/Centers refer to: engineering (environmental, civil, architectural, materials and mechatronics); agrifood, ecology, biodiversity, and water resources management; basic sciences (maths, physics), information and communication technologies, social sciences, economics, law and political sciences, international and development studies, geography.
The program aims to address the needs of strengthening the material and human components of public institutions in order to improve the quality and availability of services for citizens. The program sees UniTrento engaged in technical and scientific support to CAM (Consorzio Associazioni con il Mozambico), alongside the Department of Urban Management and the Office of Planning, Monitoring and Supervision of the Municipality of Beira in the all-round implementation of sector activities:

• Regulation
• Organization development
• Collection
• Transport and deposit of Municipal Solid Waste (MSW)
• MSW evaluation and financial sustainability.

RESULTS

• R1. Improvement of MSW Management by public bodies, in the programmatic, managerial and financial components in EMUSANA (Municipal Services Company of Nampula) and VGUEMA (Urban Management Department of the Municipality of Beira).
• R2. Strengthening the system for the separation, collection, disposal, recycling of RS in the urban postos administrativos of Beira and Nampula.
• R3. Increased involvement of the private sector in Beira and Nampula.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: Kenya, Tanzania, Angola, EU countries

PARTNERS

• Progettomondo (coordinator)
• CAM - Consorzio Associazioni con il Mozambico (partner)
• FEM/CTT - Technology Transfer Center of the Edmund Mach Foundation (partner)
• MLAL Trentino - Movimento Laici America Latina Trentino (partner).
The project “MUDAR – Mozambique Integrated Urban Development by Actions and Relationships: Empowering Local Governance” is a decentralized cooperation project aiming to promote integrated urban development and empowered local governance in order to improve the living conditions of the population of Beira, Mozambique. MUDAR will foster the delivery of efficient services for citizens in a greener, more resilient Beira, thanks to improved capacities of the Municipality of Beira to apply urban governance methods and principles (outcome 1), adequate urban planning in most unserved neighborhoods such as Macuti (outcome 2), and support to the digital transition of the Municipality, which will foster job creation (outcome 3).

RESULTS
The first year of the project was geared towards the collection of useful information to gain an understanding of the intervention area in the Macuti neighborhood. In addition to conducting a large social survey (800 questionnaires and 200 interviews), some topographical surveys were carried out to better capture the morphology of the land. Meanwhile, local committees were established to carry out participatory planning for urban regeneration on a local scale, with structural interventions, and on a neighborhood scale by outlining some measures to be undertaken by the municipality in the coming years.

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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The project aims to analyze the role of scientists in environmental policy-making from the growing tension between the desire to protect the environment and the need to promote national economic growth. This tension is known as the “environment-development nexus.” The project aims to investigate the way in which scientists and the hard sciences have historically influenced decision-making on development projects with a high environmental impact in the Global South. In particular, the Trento research unit will focus on the environmental consequences of the construction of dams in Africa, while also analyzing the perception that local communities and NGOs have of the scientists involved in development projects and the relationship between local governments and the international and local scientific communities.

As part of the PRIN 2017 Inventing the Global Environment, the research unit of the University of Trento convened the panel “Between Science and Politics: Environmental Knowledge Production in the Construction of Contemporary Dams” at the First Conference of the Italian Society of Environmental History (SiSAM), which took place at the University of Catania between 22 and 24 September 2022. It also hosted an international workshop on the topic “Dam Scientists: exploring the role of hard sciences in framing e environmental impact of dams” that took place in Trento on 17-18 April 2023.

Future Prospects:
- Potential replicability of the projects: yes
- Other potential partner countries: Zimbabwe, Ghana
The project “SEED - IMWASA” aims to provide scientific support for the sustainable management of water and sediment resources to support local rural development. It consists of a seed activity that has its first case study in the Southern Province of Zambia, Namwala District. It represents a typical example of the cooperation between universities and Civil Society / Non Governmental Organizations, specifically World Vision Zambia (WVZ), the University of Trento (Italy), through its Center for Agriculture Food Environment (C3A) and its UNESCO Chair in Engineering for Human and Sustainable Development, the University of Zambia and Rusangu University. It is being carried out by joint teams of researchers, students and staff of the WVZ NGO with representatives of the involved local communities. Activities integrate social surveys within the communities with water resources and environmental monitoring and modelling, statistical data analysis and the development of water and sediment management scenarios. The project ultimately seeks to guide strategic planning of the present and future interactions between the local communities and the available water and sediment resources in a sustainability perspective.

**RESULTS**

The first year of the project (2022) allowed to assess the present and projected water use for irrigation of a sample of ~25 small farmers, to assess the variety of irrigation water use technologies and to design future, locally sustainable water use scenarios. The second project year allowed to assess the water budget and the overall sustainability of a small water harvesting dam for community livestock use and to quantify the sediment budget associated with community-based sand mining in the Munyeke River.
TALETE, designed by the University of Trento and Centro per la Cooperazione Internazionale (Center for International cooperation) along the lines of the honours programmes of British and American universities, is an advanced training programme that students can take in addition to their studies to give them an international dimension and explore the world of cooperation.

The main objectives are:
- Make the participants’ profiles more international-oriented
- Provide the participants with intercultural and cross-sector skills
- Ensure that the participants’ profiles are more attractive for the areas of international cooperation, intercultural programmes, community development, local activities and, in particular, for the world of work and companies that operate at international level.

RESULTS
Dissertation work and participation in an internship programme in an international setting are a vital part of the learning experience offered by TALETE. Work and study experiences abroad give students first-hand knowledge of international dynamics in fields such as that of sustainable development, the opportunity to put into practice and to strengthen the cross-sector skills learned in the classroom, and the chance to use sector-specific and technical expertise. For many students the internship is the first work experience. Through the dissertation work and the internship, students establish new relationships at the national and international level that are useful to future employment.

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African countries

ACADEMIC COORDINATOR
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The University of Trieste is member of two important joint projects which imply specific investments in terms of scholarships, support to local universities, transnational education and capacity building, namely the PfK (Partnership for Knowledge) initiative funded by AICS and the program devoted to the support of the Somali National University.
Concerning the former, the University of Trieste is part of the platform focused on Water, Sanitation and Good Hygiene (WASH) with its Department of Mathematics and Geoscience in the frontline.
As for the latter, the Department which is most involved is that of Economics, Statistics and Mathematics.
In addition, the University of Trieste is also member of a number of national and international networks focused on cooperation and science diplomacy, namely CUCS (Comitato Universitario per la Cooperazione allo Sviluppo), SAR (Scholars at Risk); RUS (Rete delle Università per lo sviluppo sostenibile) and RUNIPACE (Rete delle Università per la pace).
Finally, the University of Trieste is member of the T4EU (Transform for Europe) University Alliance, which has transnational education as one of its main objectives, also in terms of North-South cooperation (Transform4Europe (units.it))
The project aims to fill the gaps in literacy and basic numeracy within the educational space of sub-Saharan Africa, by creating a supportive learning environment in primary schools, designing brighter classrooms with more resources for teaching and learning, and training teachers to deliver stimulating classes. The goal is to improve students’ skills, particularly in schools that must face challenges as poor infrastructure, lack of quality educational materials, well trained teachers, and effective teaching methods, which have led to low levels of literacy and numeracy among students. Implementation of a curriculum based on skills is demanding in Kenya, in particular in schools with largely limited resources and capacity. Materials are constantly developed, and technology is used to support teaching and learning while the curriculum is gradually introduced in junior high schools. The Happy Classrooms are accompanied by a tailor-made app that teachers use to propose lessons that involve the resources available on the walls.

RESULTS

More than 40 school rooms in Western Kenya are today Happy Classrooms. Classrooms are painted with educational resources mainly of geometry, algebra, references to everyday life and the passing of time.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African emerging countries
One of the most demanding challenges in developing countries is mental health. In Africa, where psychiatric services are structurally lacking and social cohesion dramatically decreasing, it is of utmost importance that due attention be paid to the issue. This project aimed at supporting and implementing the activities of the Centre Notre Dame de l’Espérance in Bobo Dioulasso, pointing at the social reintegration of people with mental disorder in the catchment area. In the framework of the project, the University of Trieste was in charge of two applied research: 1) an ethnolinguistic and anthropological investigation on the local taxonomy and epistemology regarding mental disorder, ) the conduction of a survey on defense mechanisms, using different tools commonly used in Western countries and still to be tested in Africa (DSQ40; WHODAS; WHQOL). Aim of these research was to provide local stakeholders with a comprehensive analysis of the social context in which the Centre is based in order to let them envisage proper solutions.

### Results

The project lead to the implementation of good practices and better services for people with mental disorders in Bobo Dioulasso and, in general, in the vast catchment area of the Centre Notre Dame de l’Espérance. In particular, the ethnolinguistic and anthropological research, along with the conduction of the survey in Djula, a local language, that required an attentive translation process, and which reached more than 1000 people enabled the local stakeholders to better understand the social context and design appropriate intervention plans for the future.

### Future Prospects

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

### Partners

- CVCS Gorizia
- Centre Notre Dame de L’Espérance
  (Bobo Dioulasso)
In Africa the teaching of Mathematics and its recent applications are particularly problematic and far from the standards required. In Kenya, university classes are composed of 500-1200 students assigned to a single teacher. Lessons, exercises and examination, feedback to students, must be adapted to each situation at the expense of the quality of education. The workload keeps faculty staff away from research and increases the gap with developed countries. The Project uses the STACK technology within Moodle environment for enhancing interactive learning that fits well in large classes. Exercises are randomized by the software and students receive targeted feedback throughout the semester so they can better focus on their studies. New contents are co-developed by a team composed by the University of Trieste, a Kenyan developers’ enterprise (InnoDEMS) and an external team (IDEMS international): materials are tested and improved by a selected team of teachers from the University of Trieste.

**RESULTS**

The first African STACK Conference for Undergraduate Mathematics took place at Masinde Muliro University of Science and Technology (MMUST), Kenya, from 19 to 23 June 2023 with workshops for African teaching staff for the transformation of African Undergraduate Mathematics education through STACK. A total of 66 individuals from 16 institutions participated in the conference. To date dozens of thousands students enjoy education through STACK in different African countries.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All emerging african countries
Maths Camps to Promote Community and Accessible Education at the Highschool Level

Category: HIGHER EDUCATION
- Support to local universities
- Transnational education - Capacity building

Geographical area: Africa – Kenya, Ethiopia, Ghana, Togo, Benin, Tanzania, Rwanda, Uganda, Cameroon

Donor[s]:
Swiss National Science Foundation; IDEMS International; SAMI

Project duration: 2021-2023

There is a great gap in terms of quality and access to education between many African Countries and the global North. In Africa, Mathematics in particular is a problem both for teachers and for students; it is often considered one of the most difficult and frustrating subjects at school, while in the African world an increasing number of professional careers require mathematical skills and knowledge. Maths camp aim to demonstrate students how maths concerns essentially critical and analytical thinking, problem solving and deep understanding, as opposed to pure calculating and memorizing formulas. It also points to show, in a funny way how everyone could be good at maths and how the mathematical way of thinking can be useful in many areas of science and in everyday life. The principles that guide the camps are maths, education, empowerment, research and development of new educational resources, the use of technology, community, sustainability, and scalability.

RESULTS

During the summer residential two-week maths camps which were organized in collaboration with partners of 9 African Countries, about 40-70 high school students were involved in activities aimed at changing the negative approach of students towards mathematics.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All emerging countries

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Since 2009, the Department of Agricultural, Food, Environmental and Animal Sciences at University of Udine has been active in disseminating the biochar/pyrolysis systems in African countries. It coordinated two EU ACP S&T projects on the topic: 1) “Biochar Plus – Energy, health, agricultural and environmental benefits from biochar use: building capacities in ACP countries” (2014-2017) and 2) BEBI “Agricultural and Environmental Benefits from biochar use in ACP countries” (2009-2012). The department has been also very active in Cameroon where it implemented a cooperation program in higher education (Program Edulink I-ACP) and a project on Biochar with a local NGO in the district of Buea (donor Regione Friuli Venezia Giulia Italy). It has also worked in Burundi for the World Bank in the same field. Now, it is active in the agrifood sector in Tunisia, Morocco and Algeria with two PRISMA funded projects. More recently, an Horizon proposal on the food-energy-sector has been submitted to EU (involved African countries: Kenya and Burundi).
The Im-Pack project analyses the impact on the economical profitability of farmers and the reducing of environmental impact resulting from the use of biodegradable active packaging in fresh food products. Active packaging refers to materials produced by the addition of active substances that can minimize the oxidation and microbiological degradation processes of fresh foods during storage.

The main objective of the project is to study the acceptance of consumers and to assess the economic impact, in small and medium agro-food companies, of the use of active packaging obtained by the supercritical impregnation of natural extracts in biodegradable plastics. The Im-Pack project also incorporates a study of the social impact of using the developed packaging that facilitates the access to new fresh food by a greater number of consumers at fair price.

The proposed project is aimed at solving a problem that is currently occurring especially in the exportation of Mediterranean fresh food by developing a new biodegradable material that actively promotes food preservation. The including of natural extracts in the package, via supercritical impregnation, is proposed as a green alternative to the use of synthetic additives for reducing/avoiding food spoilage. The biodegradable active packaging, once patented, could even generate the creation of new companies (like spin-offs) that could commercialize this technology.

- Potential replicability of the project: yes
- Other potential partner countries: all African countries interested to promote plant-based circular economies

**RESULTS**

**FUTURE PROSPECTS**

**ACADEMIC COORDINATOR**
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VALOstones is framed in the context of sustainable innovation strategies for new value creation from Mediterranean bio-wastes. The overall objective of VALOstones is the exploitation of new opportunities for the management of olive stone (OS) biomass in the Mediterranean Basin to generate innovative products with high added-value in food, pharmaceutical and cosmeceutical sectors, enabling the transition to healthy and sustainable behaviour in the Mediterranean region. Environmental, economic and social challenges of innovative management opportunities will be addressed. The project targets the development and validation of a sustainable, economically-feasible and environmentally-friendly new value chain based on the conversion of the OS by-product generated in huge quantities during olive oil production into valuable and marketable ingredients and biomaterials for possible food, cosmeceutical and pharmaceutical applications.

RESULTS

We expect that VALOstones will allow enhancing the environmental and social sustainability and economic circularity of this key sector in the Mediterranean region, thus efficiently addressing challenges related to the development of healthier food ingredients and health care systems as well as the improvement of the sustainability of the olive oil production system. Novel technologies for the efficient extraction, purification and transformation into valuable ingredients of the OS by-product developed in this project will allow the optimum recovery of compounds of interest and thus to ensure a smooth and profitable path to their large-scale commercialization.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: all African countries producing extra virgin olive oil
The University of Urbino Carlo Bo is a public institution, which recognizes the international vocation as a fundamental component of its teaching and scientific profile, promotes its inclusion in international teaching and research networks, also through specific study courses such as Africa and the Mediterranean (SPS/13) and African-Asian Governments and Nations (SPS/13).

Research on Africa led to the Prix Ibn Khaldoun prize award 2023 to a professor of the University of Urbino in human and social sciences in the Mediterranean.

For this reason, it is involved in international projects, including the Archaeological Mission in Cyrene and Tripoli and the creation of sustainable Star-Up in Tunisia.

The first one has been founded since 1957 and collaborates and cooperates with the local Department of Antiquities. In the coming years, this project plans to launch various actions aimed at encouraging the growth of studies and restorations of the archaeological sites, which are the object of the Mission, with the involvement of local communities, such as schools of all levels.

The second one is a project that aims to create new employment opportunities as drivers of social and economic development in the Governorates of Jendouba, Beja and Bizerte. The object is to increase the number of sustainable SMEs managed by women and young people in agri-food systems. The project financed the creation of several Start-up and activated training courses to reduce illiteracy and improve the skills of young people and women.
The Archaeological Mission of the University of Urbino at Cyrene was founded by Sandro Stucchi in 1957. In close collaboration and cooperation with the local Department of Antiquities the mission carries out excavations, restorations and trainings inside the ancient city (Agora Quarter and Eastern Quarter, in particular in the Hellenistic Gymnasium-Caesareum and in the Sanctuary of the Dioscuri) and in the extra-urban area (Sanctuary of Demeter, with a Doric hexastyle temple, altar, propylaeum and a greek rock-cut theater, and Sanctuary of Apollo Apotropaeos). The Mission also investigates the indigenous rock sanctuary of Slonta, located about 50 km from Cyrene and, since 2010, has been involved in the restoration project of the Arch of Marcus Aurelius and Lucius Verus of Tripoli, symbol of Roman archeology of ancient Oea. In the coming years various actions will be launched aimed at promoting the growth of studies and restorations of the site together with cultural integration activities involving local communities as much as possible, in particular schools of all levels, starting from primary school.

**RESULTS**

The Mission works since 1957 in close collaboration and cooperation with the local Department of Antiquities carrying out excavations, restorations and trainings. In all these years many interventions of scientific investigation and restoration of monuments have been carried out and numerous volumes and articles have been published. At the same time, the Mission has strengthened its role as a point of reference in cultural cooperation between Italian and Libyan institutions and in the training of local technicians and new generations.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: **All African countries**

**PARTNERS**

- Department of Antiquities of Libya
- Ministry of Foreign Affairs, Italy
- University «Omar Mukhtar» Al Bayda
- University «Garyounis» Benghazi

**SDGs**

- Cultural Heritage

**Donor(s)**

- Ministry of Foreign Affairs
- University of Urbino

**Category**

- RESEARCH FOR LOCAL DEVELOPMENT

**Geographical area**

- Africa – Libya

**Project duration**

- 1957 - ongoing
MEIMM project aims at offering a bridge between anthropologists and scholars of history and culture of different countries bordering the Indian Ocean - starting from Mozambique and the countries adjacent to it - through the interaction between researchers and teachers working on or in those countries involved. The projects has been focusing on the history of dependence in the northern region of the country, memories of forced labour and slavery, the role of dances and music in the communication of historical events. Most recently the project has also focused on labour exploitation and domestic work. The project aims at exchanging scholars between the two countries and facilitate cooperation in field research activities.

**RESULTS**

The project aims at exchanging scholars between the two countries and facilitate training and cooperation in research activities. It is expected that research activities are implemented in collaboration with local scholars and researchers and that research outputs are shared between the institutions involved through seminars, workshops and webinars.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Kenya, Ethiopia
The Project aims to create new employment opportunities as drivers of social and economic development in the Governorates of Jendouba, Beja, Bizerte. Specifically, the objective is to increase the number of sustainable SMEs managed by women and young people in the agri-food systems, both through indigenous growth and through joint ventures with companies from the Marche and or made up of Tunisian migrants in Italy. The Project’s first step is mapping companies in the Region, analysing their size profile, the type of production activated, and their relations with markets. Subsequently, several companies were selected to benefit from pilot interventions to improve production and economic efficiency. The project financed the creation of several start-ups and activated training courses to reduce illiteracy and improve the skills of young people and women, who could be placed as employees and collaborators of the selected enterprises.

RESULTS

The partnership created with the project has led to the achievement of multiple results, consistent with the promotion of sustainable agro-alimentary systems, based on the spread of organic agri-culture. Among the most significant are: mapping of SMEs operating in the local agri-food system; training of SME operators to develop business expansion projects and to strengthen skills and competitiveness; financing and creation of 30 start-ups in food supply chain; entrepreneurial training cycles for young people and women for job placement in SMEs; funding of scholarships for internships.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
The University of Verona (UNIVR) has supported academic relations, research, and development projects with/in Africa for many years, specifically in the fields of Medicine and Social-Health. Since 2019 UNIVR has pursued actions aimed at consolidating already started relations or developing new ones in the framework of its Strategic Plan. Existing cooperation agreements signed with African universities have been renewed (e.g. in Senegal and Burundi) and new ones have been signed with universities (e.g. in Ethiopia) and with associations working in African countries (e.g. Ass. Sviluppo Guinea Bissau, Cuamm Onlus, Vispe Onlus). Altogether, this is aimed at implementing training and project actions that mobilise both technical-scientific and human-social knowledge. UNIVR also strongly supports the mobility of students and academic staff from/to African countries through specific Calls for funding projects for scientific/educational cooperation. It is also developing welcoming services to support hospitality and inclusion of African students. Within the wider context of academic internationalization initiatives, UNIVR is also a member of CUCS, MUI, RuniPace and SAR networks aiming to be an active part of contemporary relations with Africa.
GYNECOLOGY AND OBSTETRICS IN MOZAMBIQUE
Cultural exchange for Obstetrics and Gynecology resident doctors: Verona and Maputo together

Category
RESEARCH FOR LOCAL DEVELOPMENT
Health, water and hygiene, One Health

Geographical area
Africa – Mozambique

Donor(s)
Università di Verona

Project duration
2023-2033

The project consists in a period of exchange for the resident doctors of Gynaecology and Obstetrics of the University of Verona. The residents have the opportunity to work for 3/4 months in the Maternity department of José Macamo General Hospital of Maputo, the second major hospital of the capital. It’s a public hospital, where none of the patients need to pay for the sanitary cares. Every year are born about 10.500 babies in JMGH, the maternal mortality is 163 on 100.000 born alive babies (Ministry of health of Mozambique). The Italian Gynecology residents have the chance to work in the delivery room and in the operating room, collaborating with the local stuff having the opportunity to explore a new culture and learning a new language, Portuguese. The value of this experience is an exchange of skills, the Italian residents offers their knowledge in fetal and gynecology ultrasound, while they gain surgical practice and experiences in assisting delivery.

RESULTS
Under the supervision of Professor S. Uccella, PhD, Professor of University of Verona, and Professor M. P. Franchi, head of the department of Gynecology and obstetrician of Verona, the project is growing. They coordinate the program and provide helps and support for the residents before the departure, assuring a safe accommodation, because they strongly believe in this project, actively working to make the experience valid and safe under any point.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: all African countries

PARTNERS
• Universidade Eduardo Mondlane (Maputo)
The project is part of a broader and long-term agreement between the University of Verona and the University of Ngozi signed in 2001 which led to the construction, with a contribution from the Cariverona Foundation, of the IUSS (Institut Universitaire Science Santé) Nursery department and to the joint management of the training course with UNIVR and AOUI VR lecturers on site. The overall objective of the project is to improve the quality of the professional training of medical staff by organising advanced training courses in the field of:
- General internal medicine and infectious and tropical diseases;
- Perinatal and reproductive medicine.

**RESULTS**

Organization of 2 postgraduate courses in the field of general medicine and infectious diseases, general surgery and maternal, neonatal and reproductive medicine. The project includes on-site and online mixed-integrated forms, Team-based-learning, clinical-case audits and video lectures. The course includes practical training with hospital attendance in Burundi and the possibility of mobility periods to be spent abroad.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Burkina Faso, Togo, Benin

**PARTNERS**

- University of Ngozi
- AOUI VR - Azienda Ospedaliera Universitaria Integrata Verona

**ACADEMIC COORDINATOR**

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Developing countries benefit from the development of competences in computer science and information technology more than from other fields for three main reasons: 1) IT is a highly sustainable, low environmental impact sector with an impressive growth, 2) IT is the main leverage for the development of a large part of modern industry, in particular with respect to the fields of interest in countries whose economy is mainly agricultural, 3) the collaboration with western countries could be performed without building a specific local expensive infrastructure, excluding good connectivity and knowledge of technological means by the collaborators. The project aims at involving bodies in Ethiopia with specific peer agreements. General vision is to develop a large scale collaboration in research, education and knowledge transfer. The concept of the collaboration is to have exchanges of students and staff, and common collaboration with the local bodies potentially involving industries.

**RESULTS**

We aim at a systematic exchange of Master and PhD students in the fields of IT, Economics and Agronomy. We completed two visits to Addis Ababa, one of which has also involved v-research, a start-up company in information security. Currently we have a few Ethiopian PhD students, more than 30 freshmen enrolled in Master courses, and a plan for visiting staff to come in the next academic year. We aim at developing collaboration programs in which local bodies in Ethiopia are sub-contracted by hi-tech companies in Italy for common industrial projects as a base for experimental leverage activities.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Eritrea

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**PARTNERS**

- Italy: V-research
- Ethiopia: University of Addis Ababa; Information Network Security Agency; Agriculture Transformation Institute; Ethiopian Space Science and Technology Institute; Addis Ababa Science and Technology University.

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**ACADEMIC COORDINATOR**

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The project was structured along 5 Work-Packages with 13 partners and it was funded with 3 million €. The aims were to improve the readiness of African health systems to effectively deliver new medical products and to monitor their post-market safety through:

1. Strengthening governance and financial capacity of Pharmacovigilance (PV) systems in enforcing PV activities; 2. Improving the efficiency and effectiveness of national surveillance systems in capturing and processing PV reports; 3. Building PV capacity and skills in exercising safety-monitoring activities throughout the countries; 4. Creating an enabling environment for implementing and sustaining PV activities.

PAVIA is funded through a “Coordination and Support Mechanism”, aimed not at research but at improving responsible uptake of new drugs and vaccines by strengthening local capacity for PV. The University of Verona has been in charge of developing a blended – learning programme integrated with a Train of Trainers approach.

**RESULTS**

The Staff from the University of Verona trained the staff face-to-face in Tanzania and remotely to Eswatini, Nigeria and Ethiopia due to the COVID-19 pandemic. Two courses on the basis of PV and anti-tuberculosis drug safety were made available on a proprietary e-learning platform, Schoolroom. The first training was attended by 121 participant and 827 learners enrolled in the step-down training. The learners’ scores on the post-tests were higher than on the pre-tests for both courses (p<0.00001). The participants’ satisfaction was very positive. An increase of reports has been observed.

**FUTURE PROSPECTS**

• Potential replicability of the project: **yes**
• Other potential partner countries: **All african countries and specifically University of Benin (Nigeria)**
FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: Senegal

RESULTS

A total number of no. 22 students have concluded a mobility stay at the host institutions located in the above mentioned African Countries. Their activities had been mainly fulfilled in the local hospitals were they performed:
• outpatient, ward and delivery room and operating room activities in collaboration with resident physicians;
• clinical rotations;
• data collection through customer satisfaction surveys distributed in the outpatient department;
• reorganisation of pharmaceutical material in the hospital pharmacy and stock count activities;
• visits to orphanages, families, convents.

PARTNERS

• Diocesan Missionary Centre
• CUAMM Doctors with Africa
• Diocese of Maralal
• Vispe non-profit organisation

With the aim of encouraging cooperation with developing countries, this Call supports students of the University of Verona who spend a mobility period (1 to 4 months) in Africa and other Countries with limited resources. Covering topics related to the participants' studies, the mobility projects are organized and carried out in agreement with non-profit organizations:
• Diocesan Missionary Centre
• CUAMM Doctors with Africa
• Diocese of Maralal
• Vispe non-profit organisation

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Internationalisation has always been a pillar of the Università degli Studi Internazionali di Roma (UNINT). That is why, over the years, it has created a network of more than 100 partner universities, enabling UNINT students to spend part of their undergraduate years abroad at prestigious academic institutions. At the same time, students can take advantage of the highly multicultural climate that animates the University due to the presence of students and teaching staff from all over the world. In light of this ever-increasing, close-knit network of agreements, 37.2% of master’s degree graduates have had an experience of study abroad, recognised by their course of study, both at bachelor’s and master’s levels (XXIV AlmaLaurea Survey 2022 - Graduates’ Profile). Internationalisation is also recognised as a value of human and professional growth for teaching and technical-administrative staff, whose mobility is guaranteed and made use of by the University.

UNINT strongly supports the internationalisation of the university experience for students as well as for teaching and technical-administrative staff. In compliance with the Erasmus+ Programme Guide 2021 - 2027 and in line with the principles of the Erasmus Charter for Higher Education, it ensures equal treatment in access and opportunities for current and potential participants from all backgrounds. It also establishes internal selection procedures that take into account the values of fairness, equal opportunity and inclusion. Also in line with the principles of the ECHE, UNINT is committed to promoting environmentally friendly practices in all activities related to the Erasmus+ Programme, promoting the use of sustainable means of transportation for mobility, taking concrete and environmentally sustainable measures in the delivery of events, conferences and meetings related to Erasmus+ mobility, and replacing administrative procedures that employ paper documentation with digital processes. Equal opportunities, sustainability, and inclusion serve as the foundational pillars upon which the CUDIMHA project, in cooperation with African Universities, has been built.
Tunisia is among the world’s richest countries in the Mediterranean both from a historical and archaeological point of view. CUDIMHA intends to address the challenges faced by Tunisia in its path towards modernization by bringing innovation in higher education system and institutions, new teaching methodologies and multidisciplinary contents, thus providing students and staff with new competences in the humanities field. The Master’s Programme has been designed by a consortium lead by Università degli Studi del Molise. Università degli Studi Internazionali di Roma (UNINT) contributed specifically to course development, activities coordination, project dissemination and the monitoring of the activities, assessing students’ satisfaction during the last phase of the Programme. Innovative teaching and learning approaches and methodologies were planned and have been implemented also due to the pandemic, delivering some of the classes in hybrid modality.

**RESULTS**

A two-year Master’s Programme (four semesters), focused on the valorization of history and archaeology, has been designed among the consortium partners, with special interest and important contributions coming from the Tunisian Higher Education Institutions (HEIs) involved. A documentary “Inside Tunisia” was also produced as one of the results of the co-creation process involving the CUDIMHA consortium and the students enrolled to the first edition of the Master’s Programme.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

**ACADEMIC COORDINATOR**

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The cooperation between Magna Graecia University of Catanzaro and the Ugandan University of Makerere has been screwed since 2014 following the signing of the Memorandum of Understanding for educational and scientific collaboration, for cultural enrichment, implementation of clinical skills, exchange for training in the medical field, with the involvement of medical and nursing students, medical residents, faculty and researchers, in the field of infectious and tropical diseases.

Since 2020, following the admission to EU funding of the Partnership Projects with the aforementioned Ugandan University of Makerere, proposed by the University of Catanzaro under the Erasmus+ KA107/KA171 “Beyond Europe” Program (for three consecutive “Calls”: Call 2020, Call 2022 and Call 2023), it has been possible to continue and consolidate the previous exchange projects between the two partner universities and to carry out several mobility exchanges.

The aforementioned Projects intend to address concrete problems and needs that characterize the individual, professional, social and cultural dimensions of the beneficiaries in the field of Infectious and Tropical Diseases, and aim to offer the beneficiaries, a concrete opportunity for human and professional growth in order to increase their full and immediate employability in specific areas of work locally and internationally.
<table>
<thead>
<tr>
<th>PARTNERSHIP WITH MAKERERE UNIVERSITY IN UGANDA</th>
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<tr>
<td><em>Erasmus+ Programme KA107/171</em></td>
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<td>Higher education student and staff mobility between Programme and Partner Countries</td>
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<tr>
<th>Category</th>
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<tr>
<td><strong>HIGHERING EDUCATION</strong></td>
<td>Africa - Uganda</td>
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<th>Donor(s)</th>
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The Project is aimed at implementing mobility activities, for study and teaching purposes, of students and teachers of the partner universities involved, with particular reference to the field of infectious and tropical diseases.

Specifically, the participants selected by the Magna Graecia University of Catanzaro (UMG) have the opportunity to improve their knowledge, through observation or actual training and research activities in the field of tropical and neglected diseases, which in Uganda are found epidemiologically represented in greater numbers than in the Italian case history. On the other hand, the participants selected by the University of Makerere (UM) can implement their skills and knowledge of Hospital Antimicrobial Stewardship programs and use of antibiotic therapy in multidrug-resistant germ infections in a reality different from their own. The Project is therefore a concrete opportunity for the beneficiaries to grow not only professionally but also humanely.

**RESULTS**

- In the Project, 4 Ugandan students (2° cycle) carried out practical activities in the departments of the medical and surgical areas of the University Hospital of UMG;
- 3 infectious diseases specialists (3° cycle) from the UMG were able to attend the infectious diseases departments, the sexually transmitted diseases clinic, the Infectious Diseases Institute and the emergency medicine department, at Mulago and Kiruddu Hospitals in Kampala;
- 2 medical professors from UMG and 1 Ugandan professor from UM mutually carried out a period of mobility during which they held lessons and seminars for pre and post-graduate students on various topics of particular interest and they were able to participate in department activities in the hospitals of two universities.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: all African countries

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Roma Tre University is consistently engaged in implementing significant initiatives funded by the Italian Agency for Development Cooperation (AICS) in Africa, Latin America, and Asia, within areas of substantial social and cultural impact. The transfer of knowledge and expertise, along with collaborative efforts undertaken with developing countries, fully align with the activities that the University aims to dedicate to the benefit of the “territory”, interpreted not in a local but global perspective.

Given the dramatic challenges posed to global citizenship by climate change and migration processes, the University considers it a priority to strengthen its presence in the less developed areas of the world with the highest growth potential.

The sectors in which Roma Tre University is engaged in Africa include:

- Food security
- Socio-economic challenges
- Conservation and restoration of tangible cultural heritage
- Capacity building of governmental institutions and universities in beneficiary countries
- Promotion and dissemination of human rights culture
- Peace education
- Support for technological development and innovation processes.
Agrinovia is an academic and professional training program whose goal is to build new skills in support of farmers’ innovation systems in Burkina Faso and in the Sahel, triggering poverty reduction and sustainable and participatory rural development dynamics in rural areas. Supported by the Italian Agency of Development Cooperation and coordinated by the University of Ouaga 1 with a network of African and European partners (universities, research institutes, NGOs), Agrinovia trains a new generation of development agents capable of identify, co-validate and disseminate farmers’ innovations (be they technical, social or political) and facilitate a creative exchange between knowledge systems (“formal” and “informal”), starting from the innovative potential of rural communities.

The program builds on the overcoming of the mechanistic model of development based on top down transfer of knowledge and technologies and on the idea that rural innovation is a complex and multi-faceted process that goes beyond the simple increase in agricultural production.

**RESULTS**

From the initial pilot phase in 2009 through the 2018-19 academic year, over 140 students from countries including Burkina Faso, Benin, Togo, the Democratic Republic of Congo, Niger, Chad, RCA, Cameroon, Madagascar, Italy, Belgium, and Switzerland have been trained. Many of these students now work successfully for government agencies, international organizations, and NGOs. Others have pursued PhD programs to deepen their understanding of theories, concepts, and methods, positioning themselves to become the next generation of trainers. More recently, Agrinovia has expanded its training offerings courses that cover topics such as gender and development, project evaluation, food security analysis, and social agriculture.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African countries
The project titled “Red Castle and Museums of Tripolitania: Historical Archives, Museums, and Education” aims to enhance the understanding of the archaeology of Tripolitania. This is achieved through the development of a digital archive that collects and interconnects archaeological objects, historical documents, scientific publications and geographical information.

This initiative is a collaborative effort between Roma Tre University and the Department of Antiquities of Libya, and is funded by the Italian Agency for Development Cooperation (AICS). It encompasses nine museums, namely Tripoli, Zanzur, Sabratha, Leptis Magna, Zliten, Misurata, Medinah-Sultan, and Beni Walid.

A standout feature of the program is its training aspect. Designed as a collaborative framework, it lays the foundation for the continuation of activities even beyond the planned fourteen months, making sustainability a hallmark of this project.

**RESULTS**

The goal of the project is to transform the archaeological artifact from being merely a “valuable object” to becoming a part of an intricate information network consisting of multiple nodes, such as typology, function, origin, context, production environment, exchange, and circulation, as well as cultural circumstances and motives behind its discovery. Undertaking this transformation will facilitate a substantial rewriting and deepening of not just the artistic history, but also the socio-economic narrative. It aims to reconstruct the cultural and production landscape of Tripolitania spanning from the 3rd century BC to the Islamic era.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: all African countries

**PARTNERS**

- Roma Tre University
- Department of Antiquities of Libya

**ACADEMIC COORDINATOR**

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The project entails the development of a comprehensive training program that will help in acquiring new skills in the fields of conservation, restoration, prevention, and risk management related to Jordanian archaeological sites and museums. In the first year of the initiative, specialized restoration courses will be provided on archaeological artifacts preserved in museums and originating from Jordanian sites. These courses will cover a wide range of constituent materials: ancient ceramics, metals, glass and organic materials, stone materials, mosaics, mural paintings, and plaster. In the second year, a special “training of trainers” pathway will be initiated. This will be achieved both through activities conducted at the RICR in Jerash and in significant archaeological areas of the beneficiary country. The aim is to further stimulate the growth of skills and spread the results across a broad regional area.

**RESULTS**

The project aims to enhance the capacity of Jordanian institutions to safeguard, manage, and promote their cultural heritage, focusing on archaeological sites, historical monuments, and museums. Training sessions will take place at the RICR in Jerash, with support from the Italian Agency for Development Cooperation. The refurbishment of the institute’s premises is another significant component. This initiative underscores specialized training and professional growth, equipping the Department of Antiquities staff with skills in conservation, restoration, and risk management vital for Jordan’s historical sites and museums.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
EXPO 2030 ROMA FOR AFRICA

UNS 2 - HIGHER EDUCATION FOR THE TEACHING STAFF OF THE NATIONAL SOMALI UNIVERSITY WORKING IN SOMALIA

**Category**

**HIGHER EDUCATION**

Scholarships - Support to local universities
- Capacity building

**Geographical area**

Africa – Somalia

**Donors**

**Italian Agency for Development Cooperation (AICS)**

**Project duration**

2017-2018

**Visit to Roma Tre by Somali Prime Minister Mohamed Abdullahi Mohamed**

The Interdepartmental Center for Somalian Studies, in recent decades, has carried out research mainly in the linguistic and cultural fields. Among other works, notable products include the Somali-Italian Dictionary (1985), Italian-Somali Dictionary (1998), Qaamuuska Af Soomaaliga (2012), and 17 volumes in the Somalian Studies series, Barashada Naxwaha Af Soomaaliga (1999). Italian support for higher education in Somalia has a long tradition. In 1973, with the collaboration of various Italian universities, the Somali National University (UNS) was established, and faculties of Medicine, Agriculture, Veterinary, Engineering, Chemistry, Geology, and Languages were activated. The project carried out by Roma Tre University, in partnership with the Universities of Bari, Florence, Trieste, and Pavia, aimed to promote methodological and managerial development in the various faculties that make up the Somali National University and involved six new UNS faculties: Medicine, Agriculture, Veterinary, Engineering, Economics, and Law.

**RESULTS**

The project carried out by Roma Tre University facilitated the visit to Italy of IT technicians for advanced training on the use of electronic platforms for e-learning and of six Deans from various faculties of the Somali National University. In addition to educational and scientific updating activities, they benefited from training experiences related to their administrative structures (study plans, electronic exam registration, organization of various academic functions) as well as topics related to teaching and research.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All african countries

**PARTNERS**

- Roma Tre University (Law and Engineering)
- Interdepartmental Center for Somali Studies National Somali University
- University of Bari (Veterinary Medicine)
- University of Florence (Agriculture)
- University of Pavia (Medicine)
- University of Trieste (Economics)

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Development Cooperation is pursued by UPO to improve global system conditions, not only concentrating on economic growth but considering all possible development factors, including education.

UPO promotes:
- the creation of partnerships for training and research in low/medium economies;
- interdisciplinary process of integration in Italy and the fight against radicalisation in the trans-Mediterranean area;
- Education/training of students and political refugees from countries that are war-torn or suffering from a humanitarian crisis.

UPO opens its borders developing projects involving countries worldwide and Africa represents a valuable starting point. In fact, UPO promotes initiatives involving African countries such as:
- UNICORE - University Corridors for Refugees;
- International Master in Religion, Politics and Global Society;
- PRIMED – Prevention in trans-Mediterranean space;
- Health emergency training in Sierra Leone and in Ethiopia.

To promote inclusiveness and cosmopolitanism UPO had joined the “Manifesto of Inclusive Universities” promoted by the United Nations High Commissioner for Refugees (UNHCR) always encouraging integration. UPO is focused on becoming a global university, an experimental and innovative location, with an authentic cosmopolitan atmosphere.
This Development Co-operation project consists of supporting the World Health Organization’s Emergency Medical Teams (EMT) initiative to set up an EMT and mass casualty management training course for Ethiopia’s disaster medical team and to design a regional training centre for EMTs. Since 2020, CRIMEDIM (Centre for Research and Training in Disaster Medicine, Humanitarian Aid, and Global Health) has been actively involved in supporting the establishment of a Training Centre to train Ethiopian EMTs to work in emergencies throughout the country. Given the importance of this project, the Ministry of Health was also involved, as well as facilities in neighbouring areas.

**RESULTS**

The project is ongoing and at present has involved medical teams in Ethiopia supporting them during the entire training process. CRIMEDIM will continue its activity of cooperation with the World Health Organization and the Ethiopian Ministry of Health thanks to the success of the project.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African Countries

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Since 2018, CRIMEDIM (Center for Research and Training in Disaster Medicine, Humanitarian Aid, and Global Health) has run a training/research project in Emergency Health Treatment. The first cycle took place in 14 areas of the country and recruited and trained: 439 paramedics, 433 ambulance drivers, 8 local and 31 expat trainers. Update training has focused attention on patient evaluation and procedures introduced with the activation of a single national helpline. An advanced course was introduced in 2020. Regarding research, the aim was to assess the impact of the newly developed National Emergency Medical Service (NEMS) on the health care system of Sierra Leone. NEMS overcome the barriers of geographic accessibility and service availability, especially for the vulnerable population (pregnant women and children) living in rural areas. Data retrieved from the hospital were used to analyse prehospital operational times for obstetric emergencies about access to timely surgery.

RESULTS

As of 2018, NEMS - National Emergency Medical Service, which was created thanks to a partnership between CRIMEDIM, Doctors with Africa CUAMM and the Veneto Region, has fostered greater access to care in Sierra Leone, one of the countries with the highest maternal and child mortality in the world, and is currently run independently by the country’s health authorities, to which it is being progressively handed over as of 1 October 2020.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African countries

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UNICORE
University Corridors for Refugees

About 35 Italian Universities will allow refugees to pursue their academic path in Italy during two-year Master’s degree programme and foster their integration into university life; students will be selected based on merit and motivation, through a public call for applications launched every year. The Project will allow refugees to arrive in Italy regularly and securely to pursue their studies, in line with the UNHCR’s (UN Refugee Agency) goal of strengthening regular entry channels for refugees and achieving a 15 % enrolment rate in tertiary education programmes in countries of first asylum and third countries by 2030.

The University Corridors for Refugees (UNICORE) project, started in 2019 with an initial pilot phase during which six students were hosted by two Universities and then expanded to involve a growing number of Universities and students. Today, the project is in its fifth year and targets refugees living in Kenya, Niger, Nigeria, South Africa, Uganda, Zambia and Zimbabwe.

RESULTS

UPO participated in the last 3 editions of the project, joining since UNICORE 3.0. The results have been valuable for both University and participants. At present 2 students have got their Master Degree in Medical Biotechnology and other 4 students are now enrolled pursuing their objective. The success of UNICORE projects highlights the ability of Universities in developing positive partnerships that will be beneficial for people who would like to continue their education. No matter how the path may be full of obstacles, students have been capable of reaching the best possible outcomes.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African Countries
The International Master in Religion, Politics and Global Society - IMRPGS is open to all students with a bachelor’s or licentiate degree, from all disciplines and all countries, including African countries, who are interested in the programme.

To achieve these objectives, IMRPGS brings together a teaching staff made up of eminent professors from the Universities of Eastern Piedmont, Padua and the International University of Rabat (Morocco), as well as professors from other African universities (Algeria, Tunisia, Egypt).

This didactic programme aims to equip students with the methodological tools needed to access knowledge of philosophy and the social, human and political sciences with a view to understanding and analysing the complex relationship between religion and politics in the context of globalised societies and its correlations with citizenship, freedoms, pluralism, development and social peace.

### RESULTS

The IMRPGS project has enhanced the experience of the 3 editions (2017–2020) of the “Master Religions, Politics and Citizenship” carried out with the collaboration of the Instituto de Investigaciones y Estudios Superiores de Granada. Its new didactic proposal, carries a higher degree of internationalisation with the International University of Rabat, involving:

- 21 full professors from 8 African universities and 4 research centres.
- 25 international visiting professors.

The Master’s programme has trained: 150 researchers from Africa (Morocco, Tunisia, Algeria, Sudan) and the Arab world.

### FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: All African countries
PRIMED, Prevention and Interaction in the Trans-Mediterranean Space, stands for the consolidated experience of research and institutional international cooperation of the universities involved, addressing, in an interdisciplinary way, the cognitive and operational needs related to the processes of integration and the fight against radicalisation, 3 axes:

- Scientific cooperation between 9 African and 12 Italian universities on issues of integration and radicalisation, through the creation of an inter-university network of students, researchers and teachers;
- Training those involved in integration policies and the fight against radicalisation in: prefectures, prison administration, police, schools, social, health and economic structures;
- Training religious leaders, imams and murshidats, heads of religious communities and immigrant associations to successfully integrate their functions.

### RESULTS
Creation of PriMED Network with 10 OIC universities and 12 Italian universities.

- Consolidation of the FIDR, Interuniversity Research Center (International Forum for Democracy & Religions), which brings together 12 Italian universities, [http://irc-fidr.it](http://irc-fidr.it)
- Creation of the REDESM Centre, Religions, Rights and Economies in the Mediterranean Area (Uninsubria), on legal and economic cooperation with OIC countries.
- Participation of lecturers from partner universities in the Council Presidency Commission on Radicalisation and in the Ministry of the Interior’s Council for Italian Islam.

### PARTNERS
- **10 OIC Universities:** Université du Caire (Egypt); Université Mohammed V de Rabat (Morocco); Université de Tunis-Carthage (Tunisia); Université Internationale de Rabat (Morocco); Université Hassan II de Casablanca (Morocco); Université Sultan M. Slimane-B. Mellal (Morocco); Université d’Abi éché (Chad); Université Ziane Achour de Djelfa (Algeria); Université Abdou Mommouni de Niamey (Niger).
- **12 Italian Universities:** Piemonte Orientale, Statale of Milan, Cattolica Sacro Cuore of Milan, Bicocca, Insurbia, Padua, Turin, Ferrara, Bari, LUM, Rome3 and Sapienza.

### FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African countries
The University of Salento, through its international cooperation projects in Africa, is committed to encouraging the transfer of research and the dissemination of teaching through specific international cooperation projects. Among the various cooperation activities with Africa, it should be noted that the University of Salento is associated with UNIMED (Mediterranean Universities Union) and has collaborated with various initiatives promoted in Libya, Morocco, and with other countries on the southern shore of the Mediterranean. In addition to the cooperation activities detailed in the sheets presented, the University of Salento has participated in the Soknopaiou Nesos Project since 2003. This is an annual archaeological excavation project in the Fayyum, Egypt, in a city from the Hellenistic and Roman era (3rd BC-3rd AD) in the desert, north of Lake Qarun. The Department of Humanities won an Erasmus KA 171 mobility project with the University of Zambia in the fields of ISCED 226 (Philosophy edn Ethics), 224 (History, Philosophy and related subjects) 2221 (Modern EC Languages).
AGRI-DRY

Dryland agriculture and Land use; past, present and future resilience

Category
RESEARCH FOR LOCAL DEVELOPMENT
Rural development, land management, agrifood and food supply chains

Geographical area
Africa – Botswana – South Africa

Donor(s)
EU - HORIZON

Project duration
2024 - 2028

PARTNERS
- UNIVERSIDAD POMPEU FABRA (Coordinator)
- AARHUS UNIVERSITET
- UNIVERSITY OF BOTSWANA
- UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

The network AGRI-DRY aims to develop an interdisciplinary approach to traditional crop cultivation through the recognition of the complementary value of cultural heritage and sustainable living. Human cultural development is inextricably linked with the development of agriculture. This bond resulted in the “domestication” of the biological and physical environments around us, and historically shaped and engendered present-day landscapes. Agricultural landscapes are a testimony to humanity’s long interaction with the land. They demonstrate a rich cultural and landscape diversity, sustainable land-use systems and, in some cases, people’s daily struggle for survival under extreme climatic and environmental conditions. It is now recognized the key role of traditional knowledge of indigenous people and local communities for ecosystem management and sustainable use of resources in the light of climate change.

RESULTS
AGRI-DRY aims to bring about a significant reorientation of European and African doctoral training in traditional agriculture. The change will involve both substance and approach. The substance is the strong focus on rigorous techniques for interdisciplinary research. The approach is the emphasis on both research and applicative work, through the participation of both academic and advocacy and policy-making institutions.

FUTURE PROSPECTS
- Potential replicability of the project: yes
- Other potential partner countries: All African countries

ACADEMIC COORDINATOR
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The “Don Bosco” Institute trains young Egyptian students who obtain a high school diploma very similar to traditional Italian paths characterized by a technical-industrial orientation. Graduates speak and understand Italian perfectly. The project consists of the training, starting from the academic year 2023-2024, of 25 young Egyptian graduates from the “Don Bosco” Institute in Cairo who have expressed interest in enrolling in the three-year degree course in Computer Engineering at the University of Salento. These students, to date, cannot travel from Egypt. The professors of the Computer Engineering degree course will normally deliver their lesson in the classroom using conventional devices, and, simultaneously, the lesson will be followed remotely by the “Don Bosco” students who will be supervised locally by an appropriately trained classroom tutor. At the end of each semester a delegation from the University of Salento will go to the “Don Bosco” Institute - Cairo to check the preparation of the students. University fees are covered by the project sponsors (I-Store and VIS Foundation of Intesa San Paolo).

**RESULTS**

This Project aims:
- 1. To strengthen institutional and cooperation relations with Egypt which is one of the 17 non-EU countries considered strategic by the Italian Ministry of Foreign Affairs;
- 2. To satisfy a specific need of the Egyptian and Italian labor market, which requires graduates with a background in computer engineering;
- 3. To strengthen the diffusion of Italian culture in the countries bordering the Mediterranean.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: African countries where the schools of the Don Bosco Institute are based

**ACADEMIC COORDINATOR**
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The expertise of the University of Calabria (UniCal) on joint projects and relationships with Africa is mainly represented by the “ENROL” project, the Scholarship Program with MEK Foundation and the UNICAL4INCLUSION initiative. Moreover, UniCal is part of the UNIMED Network on Food&Water, that supports the economic and social cohesion in the Euro-Mediterranean region, in order to promote cross-border, transnational and interregional cooperation as well as local sustainable development. Its main goals are to cooperate with international initiatives, in order to contribute to research and innovation activities in the Euro-Mediterranean region; carrying out studies, analysis and research on water management, rural development, sustainable agriculture, and all topics related to Food&Water; encouraging the dialogue and the mutual exchange between academia and other actors (companies, associations from the civil society, policy makers) in order to create new partnerships and joint projects; organizing international events to improve the flow of knowledge between researchers, scholars and professionals; promoting mobility opportunities for students and faculty, as well as the creation of curricula and courses, to advance education in the field of Food&Water at all levels.
UNIMED has launched a SubNetwork on Food & Water with the purpose of bringing together research centres, university departments, faculties, academics, scholars and independent researchers that work in the selected fields, in order to favour scientific cooperation, the exchange of experience and information, the strengthening of existing partnerships and the establishment of new collaborations. The SubNetwork activities will be primarily related to the following disciplines: Agricultural and Forestry Sciences, Environmental Sciences and Natural Sciences, Soil Sciences, Hydrology, Geology, Bio-technology, Economics, Geography, Demography, Sociology and Anthropology, Spatial Analysis and Remote Sensing, Spatial Planning. The aim of the SubNetwork is to support the economic and social cohesion in the Euro-Mediterranean region, in order to promote on the one side cross-border, transnational and interregional cooperation and, on the other side, local sustainable development.

Results
Cooperating with international initiatives, in order to contribute to R&I activities in the region; carrying out studies on water management, rural development, sustainable agriculture, and all topics related to Food&Water; encouraging the mutual exchange between academia and other actors (companies, associations, policy makers) in order to create new partnerships; organizing international events to improve the flow of knowledge between academia and professionals; promoting mobility opportunities for students and faculty, as well as the creation of curricula in the field of Food&Water at all levels.

Future Prospects
• Potential replicability of the project: yes
• Other potential partner countries: All African countries
The European project (Capacity Building – Erasmus+) “ENROL” – Empowering and Networking the International Relations Offices of the Libyan Universities”, which was coordinated by Unical, in partnership with UNIMED, the University of Granada and the University of Evora, focused on the growth of the international relations offices of the universities of Libya involved (Tripoli, Zawia, Misurata). Its main aims were to strengthen the cooperation between Libyan universities and the European ones to share experience about the internationalization process; enhancing the internationalization abilities of the international relations offices of the involved Libyan universities; strengthening the Quality Assurance and the financial management to provide better results of operations. ENROL received a special mention by the European Commission for the administrative management of the project, which presented many issues due to the civil war which afflicted the country as the actions took place.

The ENROL project increased the performances of the International Relationships Offices (IRO), thanks to the extensive training which was delivered to the staff; the IROs were networked and therefore they took advantage of the synergies coming from knowledge sharing; the Administrative and quality assurance systems of the target Libyan Universities were put in place. Hence, the result was an enhanced presence and connection of the Libyan Universities on the European scenario.

• Potential replicability of the project: yes
• Other potential partner countries: All African countries
SCHOLARSHIP PROGRAMME WITH MEK
Mısır El-Kheir Foundation

Category: HIGHER EDUCATION
Scholarships
Transnational education

Geographical area: Africa – Egypt

Donors:
Mısır El-Kheir Foundation
University of Calabria

Project duration:
...

PARTNERS
• Mısır El-Kheir Foundation

Mısır El-Kheir Foundation is a civil non-profit organization declared in 2007. It aims to serve, develop, and empower the Egyptian society to restore dignified living all over Egypt by focusing on the areas of health, education, scientific research, social solidarity, and many aspects of life. The foundation pursues working through creating genuine partnerships with institutions and associations working in the fields above mentioned. This Foundation established a Protocol of Cooperation with the University of Calabria in 2015, aimed at financing scholarships for Egyptian students who were enrolled to study STEM Bachelor degrees at the University of Calabria.

RESULTS
This project provided several scholarships to Egyptian students for four academic years, starting from 2015. Thanks to this programme, it became possible for all granted students to receive high-quality training and education and to successfully graduate at the University of Calabria, thus getting the chance to spend the knowledge acquired for the growth of their home country.

FUTURE PROSPECTS
• Potential replicability of the project: yes
• Other potential partner countries: All African countries

ACADEMIC COORDINATOR
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The main objective of this project is to give a positive and concrete signal to young Africans, starting with offering them the opportunity for an educational and training course on Legal Professions (Law) in the Italian university system, through a selection of students made directly by the Government bodies of origin and on the basis of the emerging needs in the places of origin of specific professional skills for the new ruling classes, which are fundamental for a social-economic growth of the African context of origin. Subsequently, the governments of those countries will be able to properly employ the new graduated in Italy to legal roles, crucial for a harmonious development of their territories. The project also aims at selecting and evaluating all the cognitive elements which can contribute to mutual respect and enhancement of collective identities and dialogue between Europe and Africa, in a shared path of growth and progress.

**RESULTS**

Unical4Inclusion had been submitted to the United Nations (UN) in 2020, but it was interrupted because of the Covid-19 pandemic. It is going to be submitted again as soon as possible.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
The University of Genoa includes 22 departments, over 1200 professors and almost 34,000 students. Over 400 of these students are of African origin. The University of Genoa has always had dense relationships with the African countries. Relations with African universities have been realized thanks to cooperation agreements and projects.

The University of Genoa has signed cooperation agreements with Universities of the following Countries: Algeria, Angola, Egypt, Madagascar, Morocco, Mozambique, South Africa.

Moreover, the University of Genoa realized or is realizing several Capacity Building in Higher Education EU projects, for example:

- WHEEL aims at improving management and operation of the Libyan Higher Education system;
- MEDACCR aims at improving Online Quality Assurance and EURACE Accreditation of Engineering Programmes in Mediterranean Area;
- PROEMED is implemented in Algeria, Morocco and Tunisia, as a curriculum development joint project and purses the objective to design, establish and implement new Master study programmes on “Environmental Protection and Energy Efficient Buildings” in the Partner Countries;
- SATELIT aims at Cooperation reinforcement between the North and South shores of the Mediterranean, between European and Maghreb countries.
In the framework of the Programme Erasmus+, Key Action: Learning Mobility of Individuals; Action: Mobility of learners and staff; Action Type: Higher education student and staff mobility between Programme and Partner Countries, the grant 2020-1-IT02-KA107-078097 has involved Albania, Angola, and Moldova. The choice of Angola derives from the agreement recently signed between UniGe and the Instituto Superior Politecnico Católico de Benguela (ISPOCAB) which provides for educational and technical-administrative exchange projects, and is based on previous joint activities between the institutes in the context of Third Mission and International Development Cooperation. Angola, compared to other African countries, has a high literacy rate, is developing important projects in the educational and training field and sees a growing university offering as well as good industrial and institutional development.

RESULTS

After a preliminary phase, interest was focused on technologies and diagnostic imaging, and the students who attended the second semester of the 2022/23 academic year in Genoa studied in the Electronics and "Radiological Techniques" courses. The Project also envisaged the deepening of contacts in the economic and industrial fields, in favor of an Italian role in the development of the country with which the Ministry of Foreign Affairs and Cooperation (MAECI) has recently strengthened diplomatic relations.

FUTURE PROSPECTS

• Potential replicability of the project: Yes
• Other potential partner countries: All African Countries
The project is intended as Capacity Building contribution from University of Genoa and RINA Consulting SpA, Genoa, Italy, to the Eduardo Mondlane University (EMU), Maputo, Mozambique. The project will foster (i) the participation of UEM in the definition, implementation and monitoring of the country’s development plans (conducting research aimed at the socio-economic context of Mozambique and completed for local development and the formation of a critical mass), (ii) promote the inclusion of UEM in international academic and research networks, (iii) promote forms of permanent coordination between the Faculties and public institutions on sectoral policies and on the themes of training provision and scientific research, (iv) increase the relevance of the technical and specialty training of UEM graduates for the socio-economic development of Mozambique, especially in solving the problems of local and territorial development, (v) promote the economic development of Mozambique in sectors with high technological content (innovative and sustainable technologies in the environmental, socioeconomic and financial spheres).

**RESULTS**

- **Result 1**: Internal efficiency and coordination, direction, control and evaluation capacities of the central bodies of UEM increased, in accordance with the quality standards defined by the reform of Higher Education.
- **Result 2**: The quality of the training offer in the disciplinary and specific areas involved in the program increased.
- **Result 3**: Increased international research capacity applied to the socio-economic and territorial development of Mozambique.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: Southern Africa countries

**PARTNERS**

- University of Genoa, Italy
- RINA Consulting SpA, Italy
- Eduardo Mondlane University, Mozambique

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**ACADEMIC COORDINATOR**

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TO ESTABLISH A UNIVERSITY IN RUWKWA REGION
GEOGRAPHICAL AREA AFRICA TANZANIA
Italy-Tanzania partnership

Category
HIGHER EDUCATION
- Scholarships - Support to local universities
- Transnational education

Geographical area
Africa – Tanzania

Donor(s)
To be defined

Project duration
4 years (2023-2027)

PARTNERS
• University of Genoa
• Benedictine Monastic Confederation

The actual schools in Ruwka

The monastery of Mvimwa was asked by the local government to found a university after recognizing the contribution in the field of training in the already existing schools run by the Benedictines primary school secondary school technical school and a college of future teachers. Mvimwa is located in the Ruwka region confined between two regions Katawi and Kigoma: all these three regions have no universities and have a total population of 7 million inhabitants. All these regions are part of an area with few schools and educational facilities. The monastery owns land where the university headquarters could be built, the land is approximately 3000 hectares and in anticipation of the university project there are students doing their doctorates in India and in other regions of the Country. The project includes two training areas, one in Food and Nutrition and the other in Health Sciences. The Benedictine monks have asked the University of Genoa to become a partner to jointly establish the university in this region.

RESULTS
• 1. To make possible the access to an adequate high education level to the young people of a region of Tanzania highly populated and without University.
• 2. Cooperation opportunity for other Universities in Tanzania
• 3. Consolidation of Institutional relationships between Italy and Tanzania for transnational education.

FUTURE PROSPECTS
• Potential replicability of the project: Yes
• Other potential partner countries: All African Countries

ACADEMIC COORDINATOR
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For many years the University of Genoa has been organizing the training course in “International Development Cooperation” open to all students of any discipline. The students of the course must prepare a cooperation project in an African country, in collaboration with an NGO operating in Africa. A jury made up of teachers and students evaluates the 4 best projects. The winning students receive a scholarship to spend a month in the African country of their choice and carry out their development project, thanks to the collaboration and support of the University of Genoa, the NGO operating in the country and local partners. Upon their return to Italy, the students share their experience with all Unige students, to create a path of education for international cooperation.

**RESULTS**

- 1. Provide students with a concrete and direct experience of international cooperation in Africa
- 2. Create opportunities for cooperation and development between the University of Genoa, NGOs and local African communities.
- 3. Create direct testimonies from students to other students to develop sensitivity to cooperation with Africa.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries
At the Italian level, the associations that work for development cooperation in Africa are little described on the Internet, and this makes their contribution to humanitarian needs less effective than it could be. For more fruitful operations, collaborations between associations are very important, especially in the case of projects with limited or self-financed funding.

To this end, a web portal has been created for the promotion and dissemination of humanitarian projects. It is the result of the joint work of a multidisciplinary team including university researchers, technology specialists and volunteers from non-profit associations. It currently pays particular attention to small Italian associations operating in sub-Saharan Africa, with the aim of making their voices heard and promoting their activities.

**RESULTS**

According to the OECD DAC standard, the database is guided by the criteria of: Relevance, Effectiveness, Efficiency, Impact, Sustainability. To organize and demonstrate the real validity of the data, we deal with two different aspects: Recognition and access by the source of the information and data; Standardization of project data to facilitate consultation, verification and monitoring.

The registered associations are mainly voluntary associations and non-governmental organizations. Currently, 274 associations and 663 projects are registered on the portal.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African Countries

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**ACADEMIC COORDINATOR**  
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The University of Macerata (UNIMC), founded in 1290, is the only university in Italy entirely focused on humanities and socio-economic sciences. UNIMC enrolls about 13000 students and permanently employs about 300 academics and 300 administrative staff. It includes 5 Departments: 1) Law, 2) Political Science, Communication and International Relations, 3) Economics and Law, 4) Education, Cultural Heritage and Tourism, 5) Humanities.

Among the several research and educational projects in which UNIMC is involved, some of them, include African partners, with whom UNIMC have agreed to establish memoranda of understanding and partnerships. The main collaborations concern the field of equitable and inclusive education and humanist studies with reference to the study of multilingualism and archology. Funded projects among UNIMC and African partners developed inclusive education paths and implemented awareness-raising campaigns among the community and policy makers for the societal inclusion of students with disabilities. In addition, UNIMC benefited from the contribution of the Italian Ministry of Foreign Affairs and International Cooperation in favor of archaeological, anthropological and ethnological missions in Libya.
Since the end of the 1960s, the University of Macerata has been operating in Africa, mainly in Libya (Lepcis Magna and Sabratha), but also in Tunisia and Algeria. In recent years, due to the difficulty of bringing on field-works in Libya, the activity has focused on the final publication of previous researches: among them, the Curia by the Old Forum of Lepcis Magna (M. Livadiotti, G. Rocco), the Amphitheater (M. Ricciardi) and the Arch of Trajan (G. Mazzilli) at Lepcis itself, the Amphitheater of Sabratha (G. Montali) and the huge corpus of lamps from Lepcis (S. Forti). The digitizing project of the huge documentation archived by the Center for Documentation and Research on the Archeology of Northern Africa at the University of Macerata has continued as well. Field work and on-site research have been restarted in 2023, in agreement with the Libyan Department of Antiquities (DoA). Study, publication, and restoration works regarding landmark monuments at Lepcis and Sabratha as well as training courses for the personnel of the Libyan DoA are foreseen.

**RESULTS**
- Final publication of landmark monuments both at Lepcis Magna and Sabratha.
- Restoration works (e.g., frescoed tombs at Sabratha, including Sidret el-Balik).
- Construction of a digital repository of the hard, archival documentation (photos, excavation notes, etc.) regarding the archaeological activities in Libya under the Italian rule and stored at the University of Macerata.
- Construction of a front-end site, which aims at sharing for scientific purposes the archival, digitized documentation.
- Conferences and exhibitions.

**FUTURE PROSPECTS**
- Potential replicability of the project: yes
- Other potential partner countries: Tunisia

**PARTNERS**
- University of Macerata
- Libyan Department of Antiquities
- Italian Ministry for Foreign Affairs

**ACADEMIC COORDINATOR**
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The Memorandum of Understanding between Macerata and Dakar is an international cooperation project aiming at fostering academic exchange and cooperation for scientific research, sharing innovative, technological and socio-economic contents and objectives, exchanging experiences related to educational and didactic systems in areas of common interest and participating reciprocally in national and international academic events as seminars and meetings. The Universities promote the individual mobility of professors, researchers, learners, PhD students and administrative staff for the benefit of international teaching, study, and the exchanging of know how and best practices.

**RESULTS**

Various actions are being launched including training courses and a series of seminars exploring the use of French in Africa

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
**PARTNERS**

- Academy of Art in Szczecin (PL)
- University of Macerata (IT)
- University of Jan Evangelista Purkyne in Usti nad Labem (CZ)
- Polish University Abroad (UK)
- Association of Education, Nature and Culture (PL)
- University of the Witwatersrand Johannesburg (ZA)
- Pwani University (RK)

**RESULTS**

Visual technologies have a significant influence on a repertoire of competences most essential for people. In order to recognize and describe possibilities and limitations intrinsic in the contemporary iconosphere, TICASS project investigated different ways of reading, interpreting and producing images. The research was realized in the frame of a North-South cooperation, from Poland to Kenya and South Africa (via UK, Czech Republic and Italy). We studied different images that are tangible cultural phenomena in order to recognize their plural intangible value. The educational purpose was to increase the level of awareness, critical perception, and reciprocal understanding. The research group developed an Integrated Theory of Visual Education and published several reports with recommendations for Education in Art, Media and Design for higher education institutions. TICASS supported the transcontinental exchange of researchers and the project generated an improvement of awareness on human condition in the iconosphere, taking into consideration and enhancing the principles of Creative Europe and Creative Africa in a participatory way.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Mozambique

**TICASS**

Technologies of Imaging in Communication, Art, and Social Sciences

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<tr>
<th>Category</th>
<th>Geographical area</th>
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<td>Africa – Kenya &amp; South Africa</td>
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<th>Donor(s)</th>
<th>Project duration</th>
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<td>2017-2021</td>
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**ACADEMIC COORDINATOR**

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**RESULTS**

The main goal of TICASS project was to introduce visual literacy into educational programmes, and to contribute to economic/cultural development in Europe and in Africa. The most significant outcomes concern: the intercultural dialogue among the participants; the promotion of educational projects targeting educational institutions (from primary to higher education); the realization of interdisciplinary seminars in all partner countries (visual-art education and community involvement); the realization of art exhibitions as a space for qualitative research; the scientific publications (books-papers in open access).
The project «Educ-IN - Inclusive and Quality Early Childhood Education in Mozambique» aims to contribute to the improvement of a quality, equitable and inclusive educational offer in the country through an ecosystemic intervention targeting children between 3 and 8 years of age. There is little investment in early childhood in the country by the government, despite it should be provided as declared in the country strategies. Pre-school services are of low quality and there is no structured and widespread system of professional training for childcare educators. The learning level in primary schools is very low. The inclusivity of the education system is very limited and school staff do not have adequate preparation to allow the effective participation of children with disabilities despite the Estrategia de Educação Inclusiva e Desenvolvimento da Criança com Deficiencia 2020-2029, which foresees a transition from the system of Special Schools to inclusive schools.

**RESULTS**

The main outcome of the EDUC-IN project concerns the promotion of equitable education for all in Mozambique. The actions of the project aim to develop inclusive education in pre-primary and primary schools, capacity building addressed to key stakeholders (especially educators and teachers), the removal of architectural barriers in pilot schools and the implementation of awareness-raising campaigns among the community and policy makers for the inclusion of students with disabilities, supporting the ownership of inclusive local education policies.

**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: **Kenya**

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**ACADEMIC COORDINATOR**
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The University of Parma has developed considerable experience in the management of international cooperation projects thanks to the University Centre for International Cooperation (CUCI), which now has 65 members including teaching staff, administrative staff and external experts. The African countries with which it has the longest-standing relations are: Senegal, Niger, Rwanda, Tanzania, DRC, Ethiopia, Mozambique, Morocco, Cameroon, Ivory Coast. The cooperation projects, carried out in collaboration with local higher education institutions and African associations, concern the fields of health, food science and technology, human nutrition, renewable energy, and hydrogeological protection of the territory. In these fields, the University of Parma has internationally renowned research groups that are particularly committed to Africa.

The University of Parma is the leader of 2 Erasmus+ Capacity Building joint projects with 4 Rwandan institutions in the fields of Food Science and Technology (EnRHEd), Environmental Protection, Safety, and Management (EnRHEd), Renewable Energy (GREATER). An Erasmus+ project for the exchange of staff and students in the fields of Psychology, Paediatrics, and Pharmacy was also implemented with the University of Rwanda.
**BIOFORMOZ: SUPPORT FOR ENVIRONMENTAL RESEARCH**

**AID 12089**

**Category**

RESEARCH FOR LOCAL DEVELOPMENT  
Rural development, land management, agrifood and food supply chains

**Geographical area**

Africa – Mozambique

**Donor(s)**

AICS

**Project duration**

2021 - 2024

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**PARTNERS**

- University of Sassari  
- University La Sapienza  
- CNR  
- University of Parma  
- University of Torino  
- Istituto Zooprofilattico della Sardegna  
- Istituto Zooprofilattico Sperimentale Abruzzo e Molise  
- Accademia Nazionale Lincei  
- Museo di Storia Naturale  
- Centro di Biotecnologia Maputo  
- Universidade E. Mondlane (UEM)

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The Project is linked to the previous one that ended in October 2020 with the code “AID11096”. The main object of BioForMoz is to contribute to the training of researchers and professors of biomedical institutions of “Eduardo Mondlane” University, which develops a network of laboratory infrastructures capable of producing scientific research, innovation and services for the solution of environmental and health problems in the country. The main activities are:

1. Training of young UEM researchers in the areas of biosciences and conservation;
2. Development of research activities applied to biosciences;
3. Provision of analytical services in response to the needs of public institutions and the commercial and business market;
4. Infrastructure and equipment. Establishment and empowerment of an efficient laboratory network in appropriate environments.

Academic staff of the University participated in the exchange and training of researchers from the Museum of Natural History in Maputo to study the biodiversity of fish and the genomics of migration in different species living in the main waterways of southern Mozambique.

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**RESULTS**

In 2022 a total of 17 scholarships were approved:
No. 1 postdoctoral scholarship with the Rift Valley Fever theme;
No. 2 PhD scholarships with the subject of maize virosis and trypanosome vector fly control, respectively.
No. 7 research grants have been approved with the following themes: Environmental Vibrio cholerae genomics; Buffalo population genetics; Genetics of freshwater fish homing; Environmental pollution of pesticides in rivers; Hemoglobinopathies in children; Resistance to drugs in the bacterial flora of cattle; Genetic characterization of pollinating insects.

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**FUTURE PROSPECTS**

- Potential replicability of the project: **yes**
- Other potential partner countries: **South Africa**
The University Centre for International Cooperation of the University of Parma (CUCI) and the FASTEF (Faculty of Science and Technology of Education and Training of the UCAD) worked together to the creation of a national resource centre for the certification of knowledge (bachelor-master); to the creation of a two-year online university master’s degree programme on inclusive teaching and social practices for teachers and education officials in the Ministry at sub-regional level; the creation of a resource centre for inclusion.

**RESULTS**

Creation of an advanced course “Handicap - Psychologie - Pédagogie - Education inclusive” of 12 ECTSs, 4 of which are produced by UCAD and 8 by UNIPR. The course, also supported by the Ministère de l’Education Nationale”, is delivered online and aimed at teachers and educators from the Francophone area of Africa (start a.y. 2023/2024).

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Future: Realisation of the two-year online university master’s programme on inclusive teaching and social practices for teachers and education (planned for a.y. 2024/2025)
- Other potential partner countries: Niger-Rwanda
The EnRHEd Project is aimed at organizations to help improve curricula, governance, and the strengthening of relations between higher education systems. Rwandan higher education institutions are facing some urgent needs, such as professional and academic development, knowledge transfer, quality enhancement of learning and teaching methods. In order to train the future highly qualified teachers, professionals and experts, two main educational fields have been selected among the Sustainable Development Goals (Agenda 2030) and which are considered strategic for sustainable growth:

- Food Science and Technology (FST);
- Environmental Protection, Safety and Management (EPSM).

Higher education institutions involved in the project also support the improvement of the so-called “knowledge triangle”, since a plethora of actions aims to strengthen links between education, research and business.

**RESULTS**

- 1. Revision of 9 current curricula and improvement of the didactic approach through the training of teaching staff;
- 2. Set up of new curricula: 4 Undergraduate, 7 Master, and 2 PhD programs;
- 3. Introduction of e-learning and technological improvement through the implementation of virtual platforms in 4 digital labs;
- 4. Promotion of internationalization of educational paths, based on exchanges through the mobility of 70 Teaching Staff members, 10 Administrative Staff members and 20 Students to and from Rwanda.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Tanzania, Uganda, Burundi, RDC, Kenya
- Connected projects: Erasmus KA107 – Mobility of 13 staff + 12 students between Univ. of Parma and Univ. of Rwanda in the fields of Psychology, Pediatrics and Pharmacy.

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**PARTNERS**

- Università di Parma (Italy)
- Université de Liège (Belgium)
- Rheinische Fachhochschule Köln (Germany)
- University of Rwanda
- Institut d’Enseignement Superieur de Ruhengeri (Rwanda)
- Rwanda Polytechnic IPRC-Musanze (Rwanda)
- University of Technology and Arts of Byumba (Rwanda)

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EXPO 2030 ROMA FOR AFRICA

GREATER - GROWING RWANDA ENERGY AWARENESS THROUGH HIGHER EDUCATION
Erasmus Plus KA2 - Capacity Building in the Field of Higher Education - Strand 2 - Partnerships for transformation in higher education

**Category**
- HIGHER EDUCATION
- Capacity Building

**Geographical area**
- Africa – Rwanda

**Donor(s)**
- European Union

**Project duration**
- 2023 - 2025

**RESULTS**

- 1. Revision of 6 curricula (bachelor, master and PhD);
- 2. Design and implementation of 2 new bachelor curricula;
- 3. Improvement of the educational outcome through the training of teaching staff;
- 4. Improvement of institutional laboratories;
- 5. Design and deployment of “living labs”, aimed at connecting the academy and the local community;
- 6. Opportunities for bi-directional staff and student mobility between Rwanda and Europe for training and coaching purposes;
- 7. Increased awareness among the population on energy sustainability and climate change issues.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: Tanzania, Uganda, Burundi, RDC, Kenya
- Connected projects: Erasmus KA171 – Mobility of 33 staff and 19 students between University of Parma and University of Rwanda in the fields of Civil-Engineering and Psychology.

**PARTNERS**

- Università di Parma (Italy)
- CNR-IMEM (Parma – Italy)
- Hochschule Niederrhein (Krefeld - Germany)
- Hochschule Bonn-Rhein-Sieg (Bonn - Germany)
- University of Rwanda
- Institut d’Enseignement Superior de Ruhengeri (Rwanda)
- Rwanda Polytechnic (Rwanda)
- University of Technology and Arts of Byumba (Rwanda)

GREATER project aims at building capacities facilitating the capillary diffusion of smart and green technologies needed for sustainable social and economic growth of Rwandan country. Project goals are not limited to improving and coordinating the efforts of Rwandan higher education in such fields, but are also intended to have a positive impact on Rwandan society at large, in terms of:

- Increasing awareness of clean and sustainable energy issues;
- Increasing employability and self-entrepreneurship of higher education students;
- Improving connection between academic and business environments;
- fostering the increase of energy access and availability for all Rwandan population, with emphasis on poorer and rural population, mostly suffering from the “energy gap”.

The project will follow a user-oriented design strategy, by involving stakeholders and end-users in all design phases, to ensure project outcomes to match actual societal and economic needs.

**ACADEMIC COORDINATOR**
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The University of Pisa (UNIPI) has framework agreements with six universities in Egypt (Matrouh University), Ethiopia (Wollo University and Addis Ababa University), Kenya (Kenyatta University), Democratic Republic of the Congo (Catholic University of Goma) and South Africa (University of the Western Cape); over the years has concluded Erasmus+ mobility agreements for students and staff with several universities. In the healthcare UNIPI contributed to the African Biomedical Engineering Consortium for the development of quality Degree Programmes. It also participated in ABEM (African Biomedical Engineering Mobility) funded by EACEA on Intra-Africa Academic Mobility Scheme. In food safety, the university is partner/ coordinator in Horizon2020 projects (Salsa and HealthyFoodAfrica) or funded by the research and innovation program PRIMA (FIDDEN, FEDKITO, HaloFarMs, iGUESS-MED, SHARInG-MeD). As for energy transition, UNIPI participates in the “Long-Term Joint European Union - African Union Research and Innovation Partnership on Renewable Energy” (LEAP-RE) plus another H2020 project, and hosts an UNESCO chair. On environmental matters, new agreements are also under study for the improvement of technological tanning processes to reduce metals in wastewater in Kenya.
HealthyFoodAfrica is a research & innovation project aiming at more sustainable, equitable and resilient food systems. The project is localized in 10 cities in six African countries. They cover a wide spectrum of food systems and contexts in East, West and Southern Africa. Using an interactive, multi-actor approach, HealthyFoodAfrica brings together social entrepreneurs, farmers, activists, businesses and policy makers to tackle specific challenges in the local food system. The initiatives fostered in the Food System Labs are supported by researchers and practitioners from Europe and Africa, who will also take part in enhancing and facilitating the learning processes within each lab and across them. Our work is organised in five thematic Work Packages; healthy nutrition, sustainable food production, food packaging and safety, food chain governance, and innovative food products, which are all aspects of food systems and localized in the Food System Labs.

**RESULTS**

10 context-specific Food System Labs for experimentation and innovation in regions with different production systems and challenges; 10 innovations in crop production, fishing and aquaculture, livestock, and integrated farming systems; 7 pilot actions on equitable food supply chain governance; 3 innovative food products for local consumption and export; 30 experts trained on an adaptive systems approach to food system transformation; Training kit for advisors and facilitators; Education kit on healthy nutrition; 10 Policy Briefs and 20 Practice Briefs on pathways to sustainable food system transformation.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: All African countries
The project Horizon 2020 Grean Deal Africa REFFECT is dedicated to advancing renewable energy for on-grid and off-grid communities, integrating it into existing infrastructure. The initiative covers the renewable energy lifecycle: generation, transmission, storage, aiming to establish a water-energy-food nexus. The project extracts biochar from gasifiers, benefitting local farmers. Strategic demo plants in rural and urban areas provide tailored electricity, heat, and extra services like biochar-based fertilizer and water testing. REFFECT AFRICA’s main goal is efficient biomass utilization for energy and biochar in three African sites:

- Rural Ghana, Sawla-Tuna-Kalba District Assembly - on-grid with off-grid capability for reliability.
- Morocco, Dar Azzaytoure olive oil mill - off-grid.
- Urban South Africa, Clairewood Bulk Market - on-grid.

RESULTS

In the initial stages of the REFFECT AFRICA project, data was collected on local biomass, energy, water, and soil requirements in the installation areas for the demonstrators. This information was crucial for designing the three demonstrators. Following data collection, preliminary designs were created for each locality, factoring in biomass availability, space, and local needs. Detailed designs and cost estimates were developed. Presently, construction of the three demonstrators is underway, with the procurement and transfer of necessary equipment to Africa in progress.

FUTURE PROSPECTS

- Potential replicability of the project: Yes
- Other potential partner countries: All African countries

ACADEMIC COORDINATOR
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In the framework of the Horizon 2020 “Long-term EU-Africa research and innovation Partnership on Renewable Energy” (LEAP-RE), SETADISMA is devoted to foster rural electrification. This project aims at developing a comprehensive analysis of mini-grids in African rural areas providing a renewable-energy smart-grid concept that supports the local development. The main objective of SETADISMA is to develop and validate new modelling approaches for energy assessment, technology development, digitalization, and socio-economic aspects with the support of more than 30 case studies across the African partner countries. This approach can be tested in terms of reliability, robustness, and replicability to lead the design and development of more resilient mini-grid systems. A fully integrated capacity building and dissemination action is performed to guarantee the continuous exchange and transfer of knowledge among the project partners’ and local stakeholders.

RESULTS

Innovative technical-economic models have been developed to optimize the sizing and use of isolated mini-grids, powered by renewable sources, and equipped with suitable energy accumulations. The probability models consider the uncertainties associated with investment, as well as the progressive ageing of the assets. Criteria for the exploitation of local energy resources and questionnaires for the identification of the local sectoral vocation have also been defined, also to estimate the potential trend of energy consumption of each specific background.
The UBORA (Euro-African open biomedical engineering e-platform for innovation through education) project’s main objective was to develop a sustainable web-based platform (https://platform.ubora-biomedical.org) for the generation of safe Open Source Medical Devices (OSMDs), which we consider a key tool to tackle global health concerns and provide equitable access to quality healthcare. Key activities:

- setting the foundations of the OSMD field through the creation of a unique collection of more than 200 medical device projects, shared freely for the benefit of patients, medical professionals and technology developers;
- conception and validation of a new teaching/learning model for transforming biomedical engineering education by focusing on safe, EU regulation compliant and equitable medical technologies;
- design and implementation of a singular online infrastructure, UBORA, for fostering international cooperation and open innovation in the development of open source medical devices.

RESULTS

The platform continues to run with a community of over 900 innovators from more than 30 countries demonstrating the relevance of global partnerships for transforming the biomedical industry. UBORA (“excellence” in Swahili) has enabled the design of more than 200 medical device concepts and prototypes; the training of 800 engineers who are engaged in redefining the future of biomedical engineering towards equitable healthcare technologies; the industrialization of 2 medical devices following open schemes; the creation of 1 spin-off company and 1 consortium, the launching of 1 foundation.

FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: Egypt, Ethiopia, Kenya, Uganda, Tanzania, Malawi, Nigeria, South Africa, with the support of United Nation Economic Commission for Africa
- Generally, all countries with Universities teaching Biomedical Engineering can be involved.

ACADEMIC COORDINATOR
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The UNESCO Chair aims to the definitions of principles and technical design instruments for the simulation and design of fully autonomous energy communities through innovative methods for the integration of electrical and thermal systems, only powered by renewable sources produced locally. The UNESCO Chair project will examine a new perspective where it could be necessary to adapt the energy demands of users (also by negotiating consumption for civil and industrial use) with the available energy resources, in terms of both overall consumption and hourly distribution. The project adheres to the mission of UNESCO as it wants to contribute to the spread of sustainable development programmes through the promotion of Sustainable energy use and production. It corresponds to the UNESCO Global Priority Africa because some African Partners of the project will be strongly involved in the design of sustainable energy structures specifically based on the features of their countries.

**RESULTS**

One-Year Specialisation Programme on Sustainable Energy Communities (Master CERS), executive programme also for young graduates.

Articles:
Guerrazzi, E., Thomopoulos, D., Fioriti, D., Mariuzzo, I., Schito, E., Poli, D., Raugi, M., Design of Energy Communities and Data-Sharing: Format and Open Data (2023) Energies, 16 (17), art. no. 6268.

**FUTURE PROSPECTS**

- Potential replicability of the project: Yes
- Other potential partner countries: a maximum of 9 other African countries

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**PARTNERS**

ENI SpA (Italy); EDF (Electricité de France) (France); Italian Chamber of Commerce in Senegal and West Africa (CISAO); Region of Toscana (Italy); Province of Pisa (Italy); Regional Technological Energy District and Green Economy (Italy); Unione Industriale Pisana (Industrial Association Pisa) (Italy); Confindustria Livorno Massa Carrara (Industrial Association Livorno, Massa Carrara) (Italy); Camera Commercio Pisa (Chamber of Commerce Pisa) (Italy); Tajik State University of Commerce (Republic of Tajikistan); International Information Technology University (JSC) (Kazakhstan); International University Of Kyrgyz Republic; Universite Cadi Ayyad (Maroc); Universidade Federal de Santa Catarina, Florianópolis (Brasil); Institut Agronomique National de Tunisie; Universidad Autónoma de Asunción (Paraguay); Universidad del Cono sur de las americas (Paraguay); Naryn State University (Kyrgyz Republic); University of Pretoria (South Africa); Strathmore University (United Kingdom); Universidad de Vigo (Spain); Universidad Nacional de Lanús (Argentina); Imperial College London (United Kingdom); Italian National Research Council (CNR) (Italy); Mongolian University of Life Sciences; University of Colorado (USA); Xian Jiaotong University (China); University of Science and Technology Houari Boumediene (USTHB) (Algeria); Wien University (Austria); Universidad IberoAmericana (Paraguay); Universidad Nacional de Quilmes (Argentina); Universitat Wuppertal (Germany); Universite de Sousse (Tunisia); Universidad Nacional de Cuyo (Argentina); University of Cape Town (South Africa); Midlands State University (Zimbabwe); Lagos State University (Nigeria); CNRS Centre national de la recherche scientifique (France).
Università IULM is committed to fostering international collaboration and academic exchange with Africa. The university actively seeks strategic partnerships with government institutions, embassies, and international organizations. Leveraging its expertise in communication, media studies, and journalism, IULM designs and implements initiatives, elevating their academic quality. Innovative pedagogical methods, like online lectures, transcend geographical boundaries, ensuring effective learning.

Cross-cultural sensitivity is paramount in IULM’s approach, fostering mutual respect. The university’s commitment extends beyond immediate outcomes, targeting long-term goals such as higher education modernization and promoting media freedom and democratic values. Active engagement in European integration efforts bolsters regional cooperation.

IULM’s provision of language courses, like free Italian classes in Guinea, exemplifies its dedication to bridging cultural gaps. In summary, Università IULM’s approach combines strategic partnerships, academic excellence, innovation, cross-cultural sensitivity, long-term vision, and global engagement. These elements, driven by academic expertise, facilitate successful international cooperation and educational exchange.
Università IULM and the Italian Embassy in Conakry, Guinea, collaborated on an international cooperation project under the “Italia, Culture, Africa” initiative by the Ministry of Foreign Affairs. Beginning in March 2019, Guinean students accessed free Italian language classes at the Italian Embassy. IULM developed a course encompassing the main communication and information principles, such as media evolution, citizen journalism, communication design, and business and corporate marketing. Professors delivered online lectures to students hailing from Conakry’s prominent universities: Université Général Lansana Conté, Université Gamal Abdel Nasser, Université Catholique d’Afrique de l’Ouest UCAO, and Université Kofi Annan de Guinée. The initiative aimed to raise awareness of Italian language and culture among university students in a region notably interested in Italy.

**RESULTS**

The project between Università IULM of Milan and the Italian Embassy in Conakry was fruitful. Guinean students improved Italian language skills and explored communication and journalism principles via remote lectures. This deepened cultural ties between Italy and Guinea as students from Conakry’s four universities engaged with Italian language and culture. Offering forty hours of lecture, the project enhanced cross-cultural understanding and laid the groundwork for future collaborations in education and cultural exchange between the two nations.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries

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**ACADEMIC COORDINATOR**
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“PAgES: Post-Crisis Journalism in Post-Crisis Libya” is an EU-funded project from January 15, 2019, to January 14, 2022. It involves five European partners (IULM, UNIMED, La Sapienza Università di Roma, Università di Aveiro, Universidad de Granada) and four Libyan universities (Università di Tripoli, Università di Zawia, Università di Misurata, Università di Sirte). The project hosted online seminars in October, addressing digital age journalism challenges with global experts. This aligns with the “Cross-Media Journalism” program, aiming to modernize Libyan higher education. It plans a two-year Master’s program in Cross-Media Journalism, involving EU and Libyan faculty, students, and journalists, taught in English. The project’s goal is Libyan higher education modernization, promoting media freedom and democratic development in post-crisis Libya, which faces press freedom issues. Euro-Mediterranean cooperation is crucial in achieving these objectives.

RESULTS

The PAgES project, spanning from January 2019 to January 2022, has yielded significant outcomes. It successfully developed a two-year, 120 ECTS credit Master’s program in Cross-Media Journalism, taught in English, involving European and Libyan educators and professionals. The project also hosted online seminars featuring global experts, addressing digital age journalism challenges. The project contributes also to modernizing Libya’s higher education system, supporting democratization, and improving media freedom in a post-crisis context, with a focus on Euro-Mediterranean cooperation.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African countries
The University for Foreigners of Perugia is an international institution where Italian and international students meet each other everyday, sharing experiences and studying together in a multicultural and multilingual environment. The University has around 50 partnerships with Universities and Research Centres in Africa. These relations are essential for internationalization as well as for the development of projects related to scientific research, innovation and strategic cooperation.

The University has assigned n. 2 PhD scholarships and n. 1 research contract on Green topics (PON 2014-2020 “Research and Innovation”) with a specific focus on ecological transition processes in Africa, collaborating with the African Centre for Technology Studies in Nairobi and the Stellenbosch University.

The University for Foreigners of Perugia hosts the UNESCO Chair on “Water Resources Management and Culture”.

The Chair, according to the UNESCO Medium-Term Strategy for 2022-2029, carries out research activities towards two global priorities – Africa and gender equality, involving experts in these topics, focusing on the relationship between water and climate change and affirming the need for solidarity with those populations vulnerable and affected by crisis and emergency situations.
The project promotes human development by reconciling social inclusion, economic prosperity, innovation and environmental responsibility. The project aims to ensure that rural communities strengthen their resilience with respect to environmental shocks and economic fragility (cause of food insecurity, unemployment and extreme poverty) by activating a community welfare system that uses the solar energy for food safety, education, and health and by supporting small producers in the agri-food chain in creating job opportunities and accessing the most profitable organized market.

The project adopts the Water-Energy-Food approach, promotes Climate-Smart Agriculture, promotes association forms of Agro-Business, Inclusive Governance (participation in the strategic decision-making choices of the most vulnerable targets as young people, small producers, women, and girls) and Women Empowerment actions.

RESULTS

The project aims to generate a change based on the adoption of a transformative and systemic (multi-stakeholder) agro-ecological approach that strengthens rural realities and makes farmers aware producers, unites public institutions with the world of academic research to think and plan development in an integrated and inclusive way.

The project aims to promote the governance for a sustainable development processes by favouring access to organized markets, responding to needs relies on local strengths and spreading of agroecological practices.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African countries
EXPO 2030 ROMA FOR AFRICA

THE UNESCO CHAIR ON “WATER RESOURCES MANAGEMENT AND CULTURE”

Category
RESEARCH FOR LOCAL DEVELOPMENT

Geographical area
Africa

Donor(s)
UNESCO

Project duration
2023 – 2025

PARTNERS

• H2CU Centre Sapienza University of Rome
• UNESCO National Commission of Italy

The UNESCO Chair will contribute to promote a transdisciplinary study of water management combining scientific and sociocultural aspects and strengthening the dialogue between scientific and social disciplines by overcoming the fragmentation of knowledge. All the education, research and dissemination activities will contribute to promoting the central role of higher education in reorganizing knowledge to address the environmental and social challenges in their interdependence and developing new perspectives related to international law and Africa studies.

RESULTS

The UNESCO Chair will contribute to promote a transdisciplinary study of water management combining scientific and sociocultural aspects and strengthening the dialogue between scientific and social disciplines by overcoming the fragmentation of knowledge. All the education, research and dissemination activities will contribute to promoting the central role of higher education in reorganizing knowledge to address the environmental and social challenges in their interdependence and developing new perspectives related to international law and Africa studies.

FUTURE PROSPECTS

• Potential replicability of the project: yes
• Other potential partner countries: All African Countries

ACADEMIC COORDINATOR
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The project, organized by the University for Foreigners of Perugia in collaboration with the Embassy of Italy in Mogadishu, is aimed at promoting the teaching of the Italian language and culture in Somalia, contributing to strengthen the cultural and scientific relations between Italy and Somalia and the development of cultural diplomacy. The initiative is focused on the training of teachers of Italian language as SL/FL in Somalia belonging to the Somali National University through the organization of an online course aimed at development of Italian language teaching techniques and methodologies as well as the presentation and analysis of the books text used by Somali teachers. The project involved around 25 Somali teachers (outcome) selected by Somali National University who have had the opportunity to improve their skills in the teaching of Italian language and to share their competences with other colleagues.

**RESULTS**

The project has contributed to promoting the dissemination of the Italian language in Somalia, strengthening the cooperation with the Somali National University. The initiative has also contributed to improving the skills of Somali teachers in teaching of the Italian language as SL/FL.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
The student training for capacity building is an action-based scholarship project aimed at promoting the training of young students in the higher education domains of International Relations and cooperation, Sustainability and Communication with a specific branch sustained by the Italian Ministry of Foreign Affairs and International Cooperation focusing on the training of trainers for teaching Italian language as SL/FL in Africa. The initiative is focused on North and Central Africa, and it develops through a network of institutional and university partners in the selected countries with the task of selecting the target students (outcome 1) for the scholarship plan to get them into university undergraduate and graduate programs (outcome 2) with the aim to create an Africa network of graduate students and support job creation opportunities in the home countries (outcome 3).

**RESULTS**

The student training for capacity building project is an initiative launched by the University for Foreigners of Perugia in 2023 in coordination with partner institutions in Africa. In the upcoming years the training of students will be carried out in Perugia within BA and MA degrees so to promote quality education and increase job opportunities for the target students in their home countries. A specific line of the project sustained by the Italian Ministry of Foreign Affairs is aimed at training teachers of Italian language in response to the lack of these professionals in the target countries.

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: All African countries
The University for Foreigners of Siena is a public university specialized in the teaching of Italian as well as many other languages. It also specializes in scientific research on the diffusion of the Italian language and culture in the world and in contact between Italian and other languages and cultures.

With some specific countries in Africa (Algeria, Egypt, Libya, Cameroon, Gabon) we cooperate in terms of Scholarship for Bachelor, Master Degree, Phd Courses and for specific courses of Italian Language. In 2022-2023 we were a partner with the Libya and Egypt to promote specific project (with local Universities and Ministry of Education) for training in the field of languages and didactics.

We also collaborate for University Corridors for Refugees – UNICORE promoted by the United Nations High Commissioner for Refugees (UNHCR) for pre-departure language training in favor of refugee students destined for Italian universities as part of the University Corridors for Refugees project.
SCHOLARSHIPS AND PROJECTS FOR ITALIAN LANGUAGE STUDENTS AND TEACHERS IN AFRICA

Category
- HIGHER EDUCATION
- Support to local universities
- Transnational education

Geographical area
Africa

Donor(s)
UNISTRASI

Project duration
2020-2024

PARTNERS
- Local Ministry of Education and Universities
- Italian Ministry of Education and Foreign Affairs

The University for Foreigners of Siena is a public university specialized in the teaching of Italian as well as many other languages. It also specializes in scientific research on the diffusion of the Italian language and culture in the world and in contact between Italian and other languages and cultures. With some specific countries in Africa (Algeria, Egypt, Libya, Cameroon, Gabon) we cooperate in terms of Scholarship for Bachelor, Master Degree, PhD Courses and for specific courses of Italian Language. In 2022-2023 we were a partner with the Libya and Egypt to promote specific project (with local Universities and Ministry of Education) for training in the field of languages and didactics. We also collaborate for University Corridors for Refugees – UNICORE promoted by the United Nations High Commissioner for Refugees (UNHCR) for pre-departure language training in favor of refugee students destined for Italian universities as part of the University Corridors for Refugees project.

RESULTS
- Increase in academic and educational relations with the countries involved
- Training and updating of groups of teachers who will operate in the local context

FUTURE PROSPECTS
- Potential replicability of the project: Yes
- Other potential partner countries: Other Countries in Africa

ACADEMIC COORDINATOR
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Università Politecnica delle Marche (UNIVPM), founded in 1969, is based in Ancona but geographically dislocated on the territory of the Marche region with its branches. As the first Italian University to obtain Quality Certification of the International Standard ISO 9001, UNIVPM has about 17000 students and includes five faculties (Engineering, Science, Economic Sciences, Medicine and Agricultural Sciences), which employ about 1100 academics and technical/administration staff. There are 7 Departments out of 12 considered of excellence by ANVUR, the National Agency for the Evaluation of the University and Research System. All of them have cooperation projects with Africa. In the previous European Research and Innovation Framework, FP7, Horizon2020, Horizon Europe and other European research programs (Erasmus+, PRIMA, COST, LIFE, DG ENV, ERANET, AAL, JPI MYBL, JPI WATER, JPI OCEANS, INTERREG PROGRAMME, MED PROGRAMME) UNIVPM has secured funding for over 170 EU projects with a total budget of over 43M€ and participated in 25 projects with the role of coordinator. Furthermore, UNIVPM is active in numerous European partnerships, such as Climate KIC, Water Europe, JPI Oceans, and Built4people. Many of them deal with Food Safety, Health, and Climate and Ecological Transition. Furthermore, as an incubator, UNIVPM has founded a Contamination Lab (C-Lab) to encourage the launch of new activities and promote cultural contamination among students of different nationalities, academic backgrounds and expertise.
### SEAFENNEL4MED

**Innovative sustainable organic sea fennel (Crithmum maritimum L.) based cropping systems to boost agrobiodiversity, profitability, circularity, and resilience to climate changes in Mediterranean small farms**

<table>
<thead>
<tr>
<th>Category</th>
<th>Geographical area</th>
</tr>
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<tbody>
<tr>
<td><strong>RESEARCH FOR LOCAL DEVELOPMENT</strong></td>
<td><strong>Africa – Tunisia</strong></td>
</tr>
<tr>
<td>Rural development, land management, agrifood and food supply chains</td>
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<table>
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<tr>
<th>Donor(s)</th>
<th>Project duration</th>
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<tbody>
<tr>
<td>PRIMA programme (European Union) and Italian Ministry of University and Research - Call 2021 – Section 2</td>
<td>2022-2025</td>
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</table>

**SEAFENNEL4MED project deals with the introduction of sea fennel (Crithmum maritimum L.) germplasm well adapted to Mediterranean conditions for the development of new sustainable organic cropping systems, able to increase the resilience of the agro-livelihood system based on agro-ecological principles that contribute to the zero-pollution ambition and to cope with limited resources and environmental constraints. Specific objectives of the project are: i) the selection of sea fennel ecotypes, well adapted to the Mediterranean climate; ii) the introduction of sustainable farming systems for production of organic sea fennel crop; iii) the development of high value foods; iv) the valorization of sea fennel by-products for production of functional food ingredients/nutraceuticals; v) the demonstration of socio-economic benefits, environmental impacts and sustainability of the proposed innovations; vi) the dissemination of sustainable sea fennel-based cropping solutions and products in the Mediterranean.**

### RESULTS

The project will contribute to the improvement of the sustainability of Mediterranean agriculture and food production, through the development of new sustainable organic cropping systems for the cultivation of sea fennel, a Mediterranean resource with a high economic potential, by reducing negative impacts on the environment while increasing yields. The solutions proposed represent an opportunity for boosting rural development in the Mediterranean area, especially in coastal areas, allowing to increase farmers’ livelihood by new crops and food product innovations.

### FUTURE PROSPECTS

- Potential replicability of the project: **yes**
- Other potential partner countries: **Egypt, Morocco, Algeria, Turkey**
The initiative by LabMACS(The Laboratory of Modelling, Analysis, and Control of dynamical Systems - Dipartimento di Ingegneria dell’Informazione - UNIVPM) addresses Tanzania’s deforestation challenges through a technology-driven and educative approach. RoboForestation addresses the challenges of food shortage, deforestation, and aridity across diverse Tanzanian regions (outcome 1). The project proposes the creation and monitoring of new plantations nearand with schools by introducing tablets and low-cost robotics, which allow the monitoring of the plants according to climate changes. Beyond transforming schools into hubs for environmental education (outcome 2), the project aims to create a circular economy mentality. The timber from cultivated trees opens avenues for open workshops and enterprises to build school supplements, while the grown trees offer nutritional supplements for schools and contribute to environmental conservation (outcome 2). The project draws on the expertise of different faculties in technology (developing apps dedicated to monitoring), agriculture (studying the best tree species), and food science (formulating diets based on locally grown produce).

### RESULTS

<table>
<thead>
<tr>
<th>Site</th>
<th>School</th>
<th>Total surface [ha]</th>
<th>Surface available [ha]</th>
<th>Existing trees</th>
<th>Tree potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilasara</td>
<td>Kilasara Secondary School</td>
<td>5,8</td>
<td>1</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Same</td>
<td>Joyland Secondary School</td>
<td>12,7</td>
<td>7,6</td>
<td>8000</td>
<td>7600</td>
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<td>Lekirumuni</td>
<td>Rossana Primary School</td>
<td>6,5</td>
<td>5,2</td>
<td>500</td>
<td>5200</td>
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<td>Ngare Nairobi</td>
<td>Ngare Nairobi Primary School</td>
<td>26,8</td>
<td>13,4</td>
<td>3000</td>
<td>33400</td>
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<tr>
<td></td>
<td></td>
<td>51,8</td>
<td>27,2</td>
<td>12500</td>
<td>27200</td>
</tr>
</tbody>
</table>

### PARTNERS

- Università Politecnica delle Marche (IT)
- THE APOSTOLIC LIFE COMMUNITY OF PRIESTS, (ALCP) (TZA)
- Tanzanian Schools: Ngare Nairobi Primary School, Rossana Primary School, Joyland Girls’ Secondary School, Kilasara Secondary School

### FUTURE PROSPECTS

- Potential replicability of the project: yes
- Other potential partner countries: UNESCO All African Countries
Stemming from a collaboration between LabMACS (The Laboratory of Modelling, Analysis, and Control of dynamical Systems - Dipartimento di Ingegneria dell’Informazione - UNIVPM) and ALCP schools, the project aims to integrate technological advancements and robotics into Tanzanian primary education. In July 2023, LabMACS actively involved Secondary School students in Educational Robotic activities with customized kits. After this experience, the project proposes a three-year program for students aged 8-11: digital awareness (EU DigComp 2.1 level 3) in the first year, followed by digital literacy (EU DigComp 2.1 level 6) and robotic literacy (EU DigComp 2.1 level 7) in subsequent years. This holistic approach, validated on European projects (www.robopisces.eu, www.roboaquaria.eu, etc.) includes supplying essential kits, computers, and teacher training, directly addressing new strategic partnerships and capacities building for international cooperation in developing countries. The pilot case studies, designed with and for ALCP, demonstrated enhanced capabilities in local education improvement and leveraged Transnational Education (TNE) principles to effectively and affordably integrate technological advancements.

**RESULTS**

The project establishes a foundational platform for technological literacy by integrating robotic kits into schools. The structured three-year program systematically targets specific digital competencies, ensuring the cultivation of proficient digital skills among future citizens and addressing the need for more early technological education in Tanzania. This project aligns with LabMACS’ commitment to advancing education through pragmatic, cost-effective models. The initiative aims to create a scalable model for nationwide adoption, aligning with TNE principles for global educational progress. (Already involved students: 1500)

**FUTURE PROSPECTS**

- Potential replicability of the project: yes
- Other potential partner countries: UNESCO, All African Countries

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The creation of innovative models of hydraulic infrastructures; • limiting the salinisation of the land through the adoption of sustainable techniques; • improving the use of water resources; • the optimization and diversification of agricultural production and the introduction of resistant species with salt; • the promotion of community participation and support for rural associations through awareness campaigns and training and capacity building activities; • strengthening collaboration between communities and local institutions to identify priority needs in education, health, communication and socio-economic development.

**RESULTS**

The creation of innovative models of hydraulic infrastructures; • limiting the salinisation of the land through the adoption of sustainable techniques; • improving the use of water resources; • the optimization and diversification of agricultural production and the introduction of resistant species with salt; • the promotion of community participation and support for rural associations through awareness campaigns and training and capacity building activities; • strengthening collaboration between communities and local institutions to identify priority needs in education, health, communication and socio-economic development.

**FUTURE PROSPECTS**

• Potential replicability of the project: Yes
• Other potential partner countries: All African Countries

**PARTNERS**

• UNIVPM
• UPC Catalunia
• UASZ Senegal

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**EXPO 2030 ROMA FOR AFRICA**

**REINFORCEMENT PROGRAM OF SKILLS AND DIAGNOSIS IN CASAMANCE TO APPLY THE REHABILITATION OF AGRICULTURAL LANDS TOUCHED BY SALINE INTRUSION**

**Category**

**HIGHER EDUCATION**

**Geographical area**

Africa – Senegal Casamanche

**Donor(s)**

**Project duration**

2024-2025

**SDGs**

The salinized plain in Bona (Casamanche-Senegal)
EXPO 2030 ROMA
FOR AFRICA
PROJECTS FOR A COMMON GROWTH