



LEAP-RE

Long-Term Joint EU-AU Research
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Teaming and Twinning for LEAP-RE

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Abbreviations and Acronyms

Acronym	Description
AU	African Union
EU	European Union
CCSE	Climate Change and Sustainable Energy
HLPD	High-Level Policy Dialogue
AU-EU R&I	African Union – European Union Research and Innovation
AUC	African Union Commission
EC	European Commission
DG RTD	Directorate-General for Research and Innovation
MoU	Memorandum of Understanding
STI	Science, Technology and Innovation
TRL	Technology Readiness Level
KPI	Key Performance Indicator
RE	Renewable Energy
SDG	Sustainable Development Goal

Summary

This deliverable analyses the role of teaming and twinning mechanisms as key instruments for strengthening research and innovation (R&I) cooperation in the energy sector between institutions from the African Union (AU) and the European Union (EU), within the framework of the LEAP-RE programme and the broader AU-EU Science, Technology and Innovation (STI) partnership. The analysis positions these mechanisms as essential enablers for structured, long-term collaboration, complementing project-based funding instruments under Horizon Europe.

Within LEAP-RE, twinning is identified as a flexible and operational cooperation modality that facilitates peer-to-peer engagement between research organisations, universities, centres of excellence, and innovation actors. Twinning supports capacity building, mutual learning, and knowledge transfer, including joint research activities, alignment of methodologies, co-supervision of early-career researchers, and improved access to complementary research infrastructures. It contributes to reducing structural asymmetries between AU and EU institutions and enhances the preparedness of African partners to participate effectively in Horizon Europe calls, particularly in the intermediate Technology Readiness Levels (TRLs 4–7), where energy innovations frequently face barriers to validation, demonstration, and market uptake.

Teaming is assessed as a more strategic and institutional cooperation instrument, enabling the establishment or reinforcement of sustainable joint structures such as research platforms, centres of excellence, and long-term collaborative programmes. In the context of LEAP-RE, teaming supports institutional strengthening, governance improvement, and the alignment of research agendas with shared AU-EU priorities, including renewable energy integration, energy storage, and decentralised energy systems. These structured partnerships contribute in enhancing scientific excellence, and increasing the long-term cooperation.

Both mechanisms play a central role in facilitating the formation of joint research teams, the co-development of competitive proposals under Horizon Europe and related programmes, and the formalisation of institutional partnerships through Memoranda of Understanding (MoUs). They also enable the mobilisation of a broader ecosystem of stakeholders, including industry, SMEs, startups, financial actors, and the scientific diaspora, thereby strengthening innovation pathways and improving prospects for the scale-up and deployment of early-stage energy solutions.

The deliverable further highlights the legal, administrative, and governance challenges associated with the establishment of formal teaming and twinning arrangements across heterogeneous regulatory and institutional environments. In this context, science diplomacy is recognised as a critical cross-cutting enabler, supporting trust-building, policy alignment, and the mitigation of collaboration barriers. By combining structured cooperation mechanisms with diplomatic engagement, LEAP-RE contributes to narrowing collaboration gaps, reinforcing scientific excellence, and advancing a balanced and mutually beneficial AU-EU energy partnership.

Finally, the analysis concludes that the pooling instrument is not addressed at this stage, given the current level of maturity of AU-EU energy partnerships. Priority is placed on consolidating bilateral and multilateral cooperation through teaming and twinning mechanisms before progressing towards more integrated funding and governance models.

1. Introduction

The interconnected crises of climate change and energy poverty affect vulnerable populations and undermine sustainable development efforts worldwide. Africa's unique dual challenge is particularly pronounced: while contributing less than 3% to the world's energy-related CO₂ emissions, the continent faces severe climate vulnerability and significant energy access deficits [1]. Nearly half of Africa's population lacks access to electricity, and a substantial portion, between 70% and 80%, relies on unsustainable biomass for cooking and heating, leading to severe air pollution and desertification [1]. Concurrently, Africa possesses immense, largely untapped renewable energy potential, positioning it as a crucial player in the global green energy transition [1]. AU-EU policymakers recognize the strategic importance of partnering to achieve shared climate and energy goals.

The Climate Change and Sustainable Energy (CCSE) strategy is a cornerstone of the broader AU-EU relationship, rooted in the High-Level Policy Dialogue (HLPD) on Science, Technology and Innovation (STI), its roadmap was formally endorsed at the 4th AU-EU HLPD Senior Officials' Meeting in Brussels in October 2017 [2].

The CCSE partnership supports renewable energy and energy efficiency initiatives, alongside cross-cutting issues like human capital development, capacity-building, innovation, open data, and open access [2]. The AU-EU energy cooperation framework is supported by several key initiatives and funding mechanisms:

1.1 Collaborative Projects and Research under LEAP-RE

LEAP-RE refers to "Long term Europe Africa Partnership Research & Innovation (R&I) and Human and Institutional Capacity Building agenda on Renewable Energy (RE)". This program is conducted by a consortium of 83 partners from European and African countries with a budget of around 35 million Euros including 15 million from the EC, it aims to increase the use of renewable energy via a well-balanced set of research, demonstration, and technology transfer projects in both continents. LEAP-RE is structured in three Pillars:

- Pillar 1: implementation of transnational open calls for proposals for research, innovation and capacity building, funded by national/regional funding agencies and by the European Commission;
- Pillar 2: a cluster of individual R&I and capacity building projects implemented by members of the consortium;
- Pillar 3: program management and strategic issues to build the future AU – EU long term partnership on renewable energy.

LEAP-RE has been instrumental in operationalizing cooperation through a robust portfolio of collaborative projects, it has successfully funded 23 projects in Pillar 1 and 8 projects in Pillar 2.

The thematic diversity of these projects is extensive, aligning with the identified multi-annual roadmaps and thematic priorities of LEAP-RE[3] Key areas include:



- Assessment of Renewable Energy Sources (RES) and their integration into sustainable energy scenarios.
- End-of-life and second-life management, and environmental impact assessment of RE components.
- Development of smart stand-alone systems and smart grids, particularly for off-grid applications.
- Processes and appliances for productive uses in key sectors like agriculture, mobility, and industry.
- Innovative solutions for priority domestic uses, such as clean cooking and cold chain technologies.
- Production and utilization of Green Hydrogen, a rapidly emerging area of focus.[5]

A key feature of these projects is their participatory and inclusive approach, where funded projects conduct renewable energy solution pilots directly with local communities. This ensures alignment with local needs, fostering socio-economic development and improving quality of life [4]. This demonstrates that the R&I component of the CCSE program is not solely focused on advancing scientific knowledge or deploying high-tech solutions in isolation. Instead, there is a strong emphasis on translating research and innovation into tangible, localized socioeconomic benefits that directly address critical development challenges in African communities, such as food security (through agriculture applications), health (via cold chain for medicines and clean cooking solutions), and broader economic growth (through productive uses). This approach leverages R&I as a catalyst for holistic development, integrating energy solutions with broader societal well-being and economic empowerment.

2. Conceptual Framework mechanisms for collaboration: Teaming and Twinning

This deliverable examines the specific collaborative modalities of “teaming” and “twinning” as mechanisms for translating high-level policy commitments into tangible, on-the-ground impacts. The analysis will cover the conceptual definitions of teaming and twinning, their practical implementation through some well-known initiatives in European countries and some attempts between European and African institutions in LEAP-RE projection.

2.1 Teaming for Collaborative Action

In international development, “teaming” refers to the formation of collaborative groups, often global or virtual, comprising individuals and institutions from diverse African and European locations. The essence of teaming lies in shared objectives and collective effort, allowing members to reach best results globally [6].

In the AU-EU LEAP-RE context, teaming is a strategic approach to enable collaboration between partners already involved in previous EU projects, or working on LEAP-RE projects, with the aim to achieve common goals in the field of renewable energy.



2.2 Twinning for Institutional Cooperation

"Twinning" is a specialized instrument for building institutional capacity, defined as a process that "pairs an organizational entity in a developing country with a similar but more mature entity in another country"[7]. It may also involve formal agreements to promote joint research and commercial technology development [8]. The European Community has extensively employed twinning projects since 1998 to facilitate the accession process for countries seeking to join the European Union, often involving the secondment of EU experts for over a year, complemented by short-term missions, and specific technical services [7].

The core characteristics of twinning arrangements are fundamentally institution to-institution relationships, based on partnership between two organizations. These objectives are based on long-term cooperation that often extends beyond the completion of a specific project [7].

2.3 Teaming and Twinning's role in Leap-RE

The LEAP-RE program aims to empower African institutions to lead, manage, and support their own energy transition and climate action efforts. This suggests that teaming and twinning are not limited to the transfer of technical know-how, the formation of joint teams, and the sharing of resources such as equipment and financing for energy projects, but also aim to harmonize policy, legal, and regulatory frameworks to facilitate market integration through alignment with existing regulations.

2.3.1 Data stakeholders, approach and method

The data collection is built using previous databases of energy stakeholders having expressed their interest on LEAP-RE project in 2018 (PRE-LEAP-RE). This database was completed by researchers from projects not selected in LEAP-RE calls, and participants registered for the "teaming and twinning session" during the UA-UE Innovation Agenda conference held in Nairobi (November 2022).

The resulting refined database comprises 566 partners, with 328 researchers from 29 African countries and 238 researchers from 16 European countries. This collection serves as both a resource and a reflection of the growing interest in transcontinental collaboration for sustainable energy innovation [Fig 1].

From this broader pool, a core group of 224 researchers—125 from 12 African countries and 99 from 10 European countries—was identified as having formally committed to engaging in various aspects of the Teaming and Twinning process. These researchers are committed to co-designing agendas, leading tasks, mentoring peers, and engaging in shared learning [Fig 2].

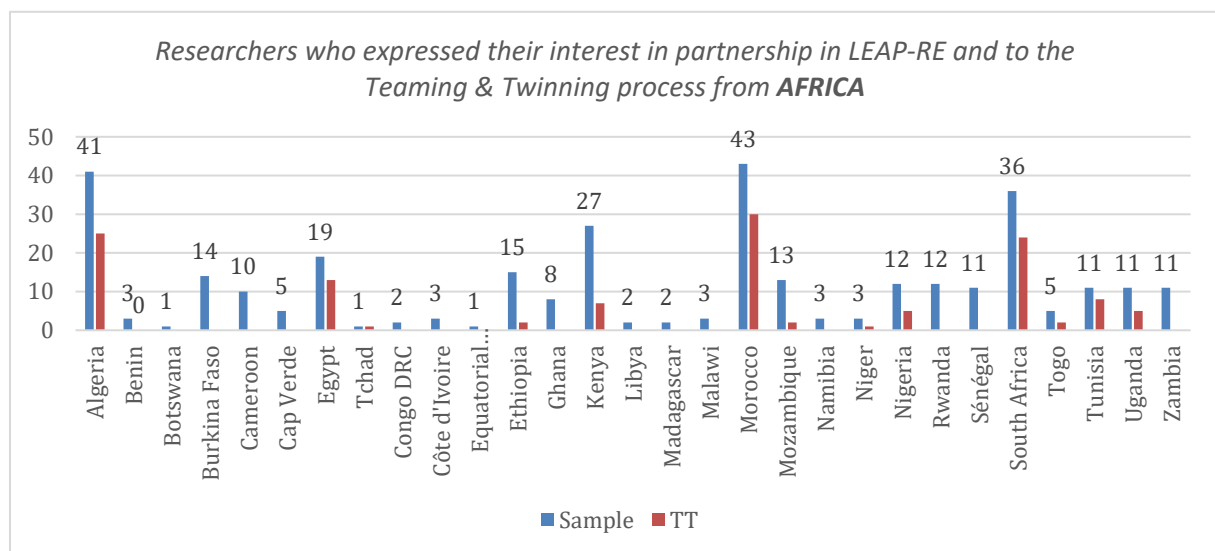
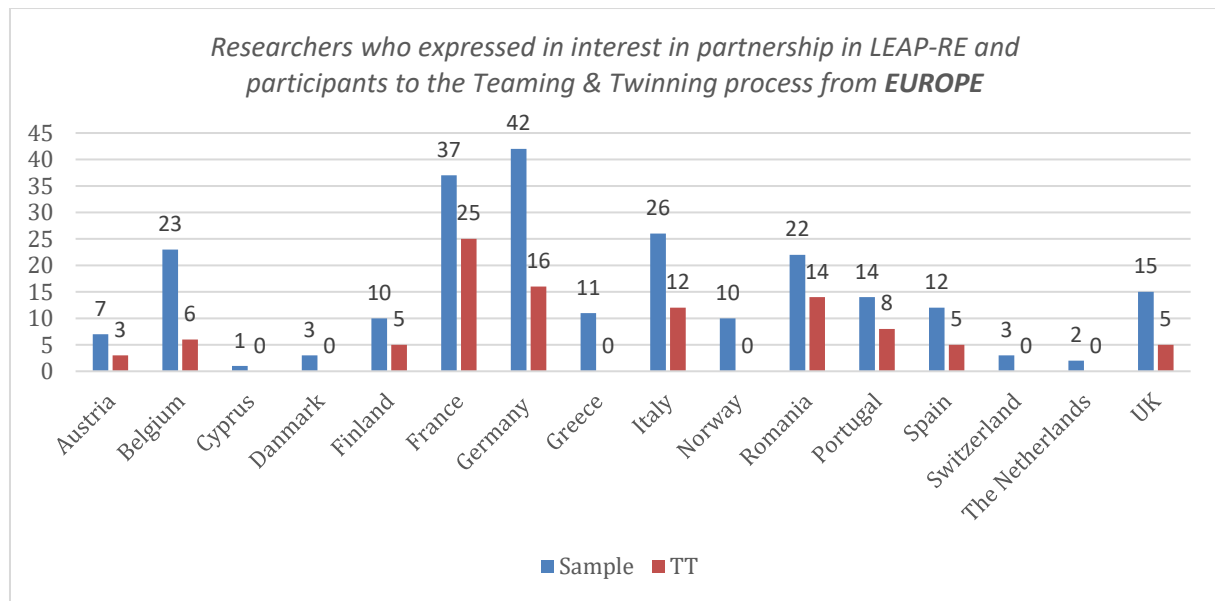


Figure 1 Researchers by country committed to Teaming and Twinning processes

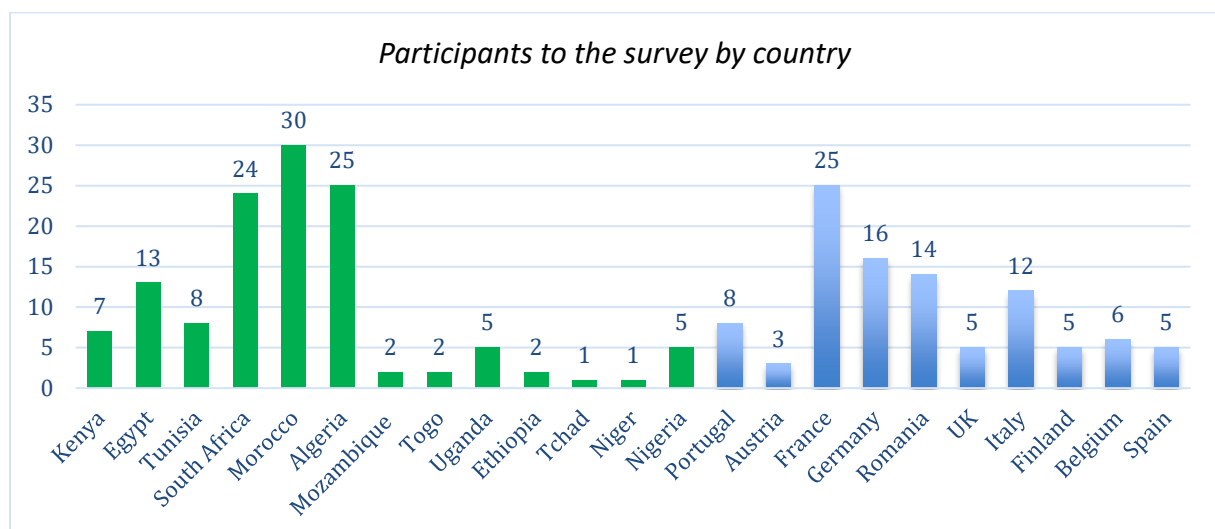


Figure 2 Number of participants to the survey by country 224 - including 86 members already involved in LEAP-RE projects





The inclusion of all 31 LEAP-RE projects in the stakeholder surveys, each represented by their respective coordinators or team leaders, significantly strengthens the credibility and comprehensiveness of the data collected [Fig.3]. This full representation ensures that the survey captures a nuanced and accurate picture of the entire LEAP-RE portfolio, reflecting a wide diversity of experiences, challenges, and progress across Africa-Europe renewable energy cooperation.

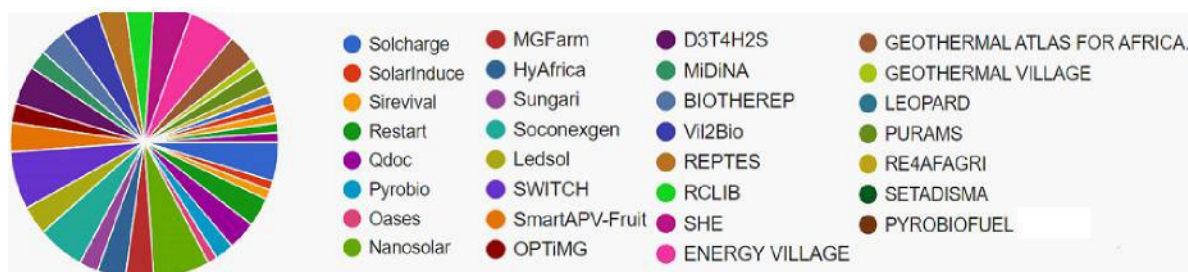


Figure 3 Participation of the 31 LEAP-RE projects teams in teaming & twinning

The participants sample spans a wide spectrum of profiles, including early-career and senior researchers, experienced project coordinators, and subject-matter experts in fields central to green technologies. These fields range from renewable energy systems and energy efficiency to sustainable materials, storage technologies, hydrogen and smart grid integration.

2.3.2 Focusing on strengthening research teams in RE

Our objective is to identify scientific leaders to animate, coordinate and mobilize teams of researchers ready to secure funding, to pool their resources, knowledge, and enhancing impactful research in renewable energy. The eleven groups identified are in relation with the multiannual roadmaps developed in LEAP-RE with extension to new areas "Green Hydrogen" and #NT1 to #NT4:

- ✓ # 1: Group Clean energy future for all,
- ✓ # 2: Group Second-life management of RE components,
- ✓ # 3: Group Smart stand-alone systems,
- ✓ # 4: Group Smart grid for off grid application
- ✓ # 5: Group Green Hydrogen
- ✓ # 6: Group Processes for productive uses
- ✓ # 7: Group RE for domestic uses
- ✓ #NT1: Group New Technology in Energy – Water- Agriculture Nexus,
- ✓ #NT2: Group New Technology in Clean Mobility systems/ transportation,
- ✓ #NT3: Group New Technology in Digital innovation,
- ✓ #NT4: Group New Technology in Carbone capture technologies

Our surveys captured an accurate picture of the repartition of researchers for the different groups [Fig 4], with significant interest from new researchers to join future projects, compared to members already engaged in LEAP-RE [Fig 5]. The #MAR1 is ranked first, given the high priority to deploy renewable energy systems in remote and underserved areas, especially in Sub-Sahara regions. The new thematic Energy – Water- Agriculture Nexus is also attracting many researchers, seeing that RE plays a significant role in enhancing water and agricultural sectors particularly by improving efficiency, sustainability, and resilience.

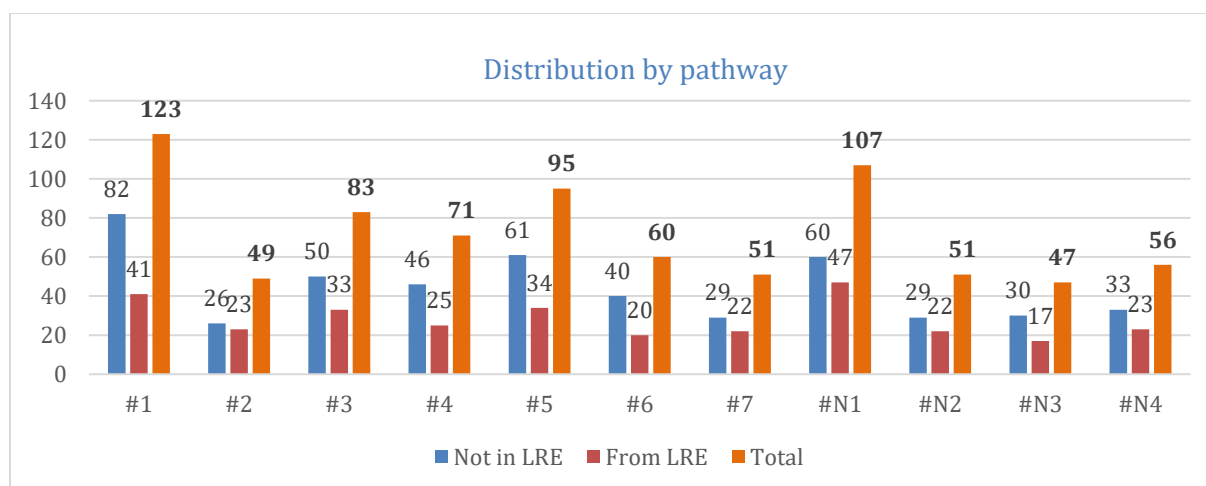


Figure 4 General distribution of LEAP-RE researchers and newcomers interested in developing new partnerships, classified by groups of interest (multi-annual roadmaps), and planning to apply for future projects in sustainable energy

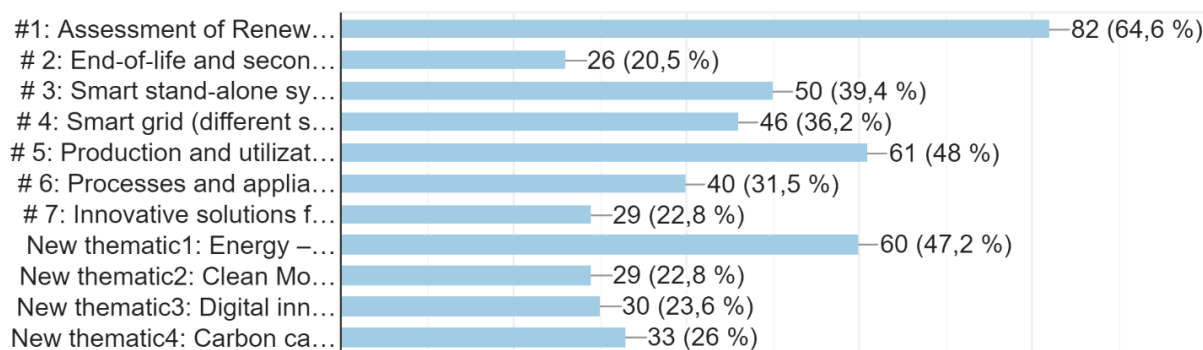


Figure 5 Trends formulated by RE researchers not involved in LEAP-RE

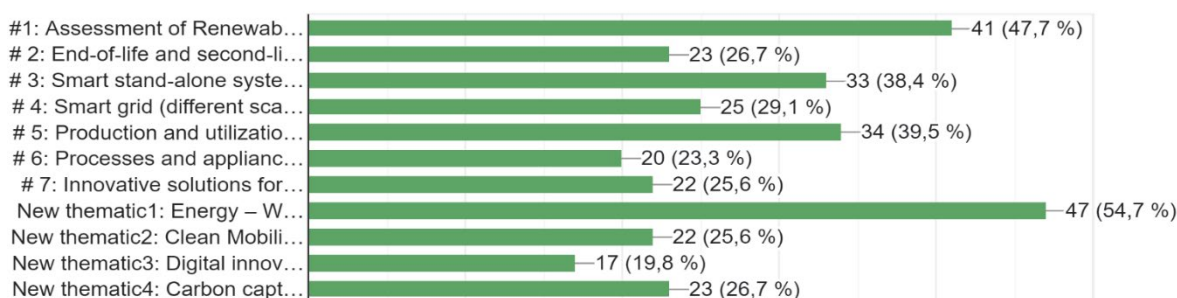


Figure 6 trends formulated by RE researchers involved in LEAP-RE

About the Technology Readiness Levels (TRL): The survey is indicating that researchers have several key ambitions expressed by the need to transition from basic research and development to the deployment and commercialization of technologies that can have a significant impact on the energy sector. Among 88 interviewers, 66,27% are willing projects with TRL 7, and beyond (11.62%), demonstrating the ambition to have bankable and truly innovative projects [Fig: 7], for others their ambition is just limited to TRL1 to TRL3.

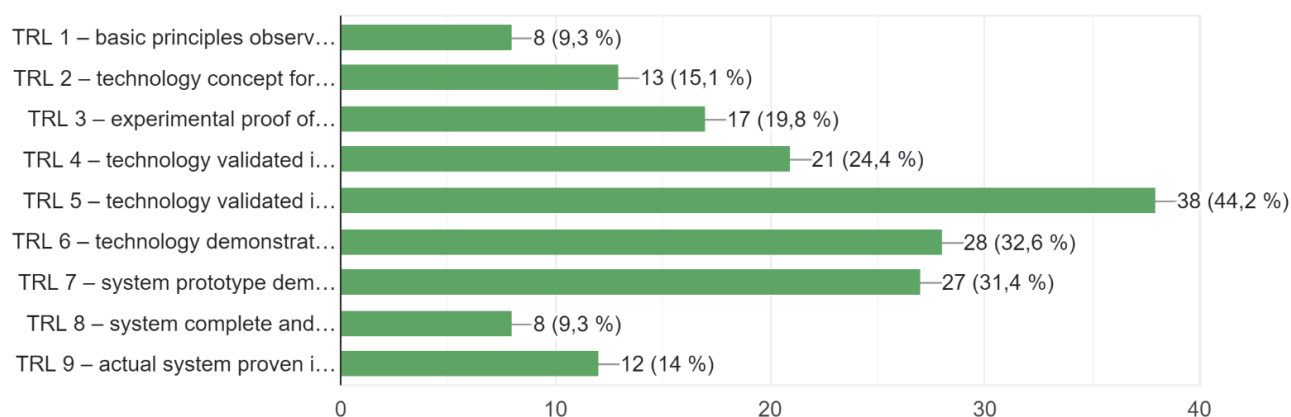


Figure 7 The ambition to go beyond TRL5

The countries targeted for future collaboration: Almost all African countries have launched their own national strategy in renewable energy with different levels of implementation. Interviewers are willing to develop partnership (Fig 8) with teams from Morocco (52.6%), South Africa (47,7%), Algeria (44,5%), Tunisia (43,1%), and Egypt (38%).

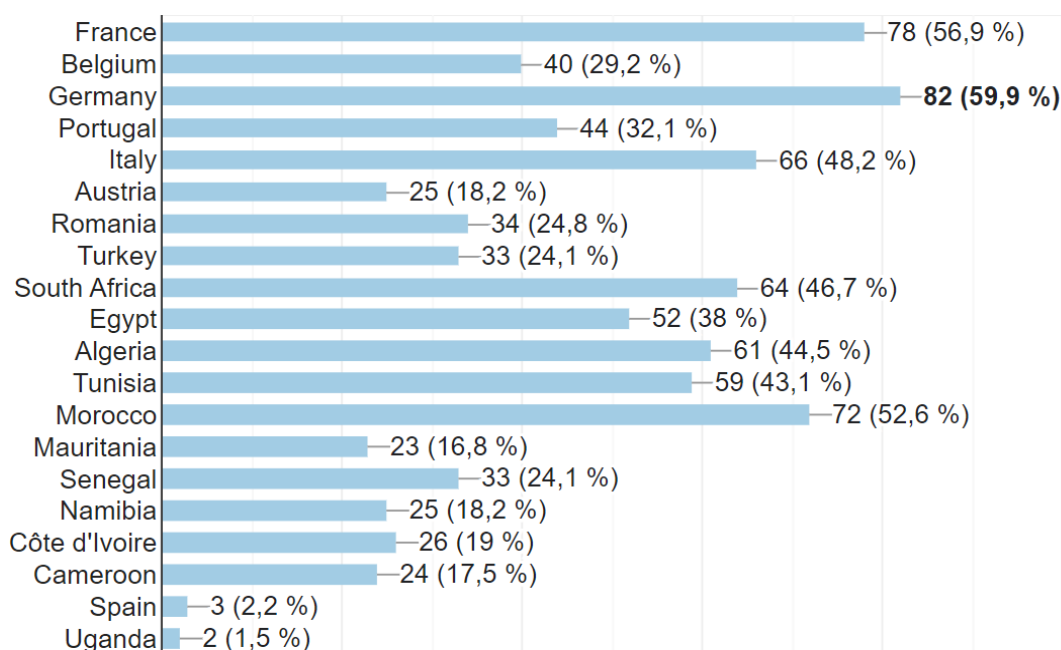


Figure 8 partners projection for future collaboration

These information's are not based on tangible indicators and some countries are missing (Ghana, Kenya). Europe has a clear continental strategy with countries' ambition giving some advantages to Germany (59,9%), France (56,9%) and Italy (48,2%) to attract researchers. Denmark, Sweden, UK have a diverse and dynamic renewable energy sector, with significant research in offshore wind, marine energy, and energy storage. Our ambition is to mobilize all partners for reaching the SDG7 Goals. Relevant instrument to promote innovative solutions are twinning and teaming mechanisms.

2.3.3 Identifying teams and leaders to conduct future impactful research in Energy

The objective is to create research teams that not only conducts impactful research but also contribute to capacity building particularly in African institutions. The survey identified ten classes of stakeholders (Figure 9). Subsequently, researchers were identified to lead each group and drive their teams toward meaningful contributions in this field. They provide a general vision and technical expertise necessary to navigate the complex challenges of each multiannual roadmap for future projects implementation.

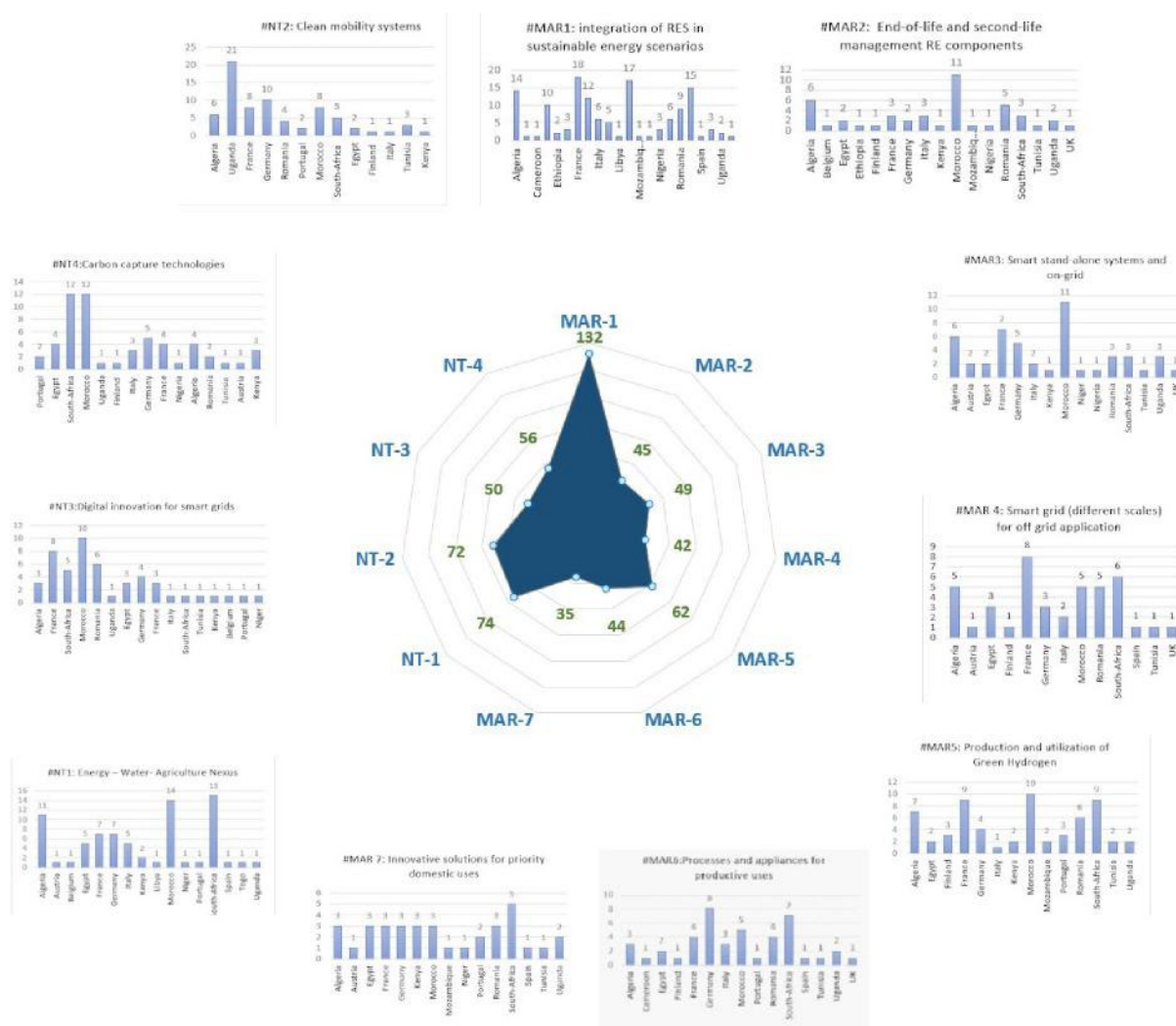


Figure 9 Ambitions of researchers to apply for new projects in future research programs

The #MAR1 is ranked first, given the high priority to deploy RES in remote and underserved areas, especially in Sub-Sahara regions.

The new thematic Energy – Water- Agriculture Nexus is also attracting many researchers, seeing that RE plays a significant role in enhancing water and agriculture sectors, particularly by improving efficiency, sustainability, and resilience. For clarity the details of the distribution by MARS is put in Annexe1 (Ref page 21).



In conclusion, teaming in research and development enables researchers and organizations to harness the collective intelligence and capabilities of diverse experts, resulting in more efficient problem-solving, greater innovation, and higher-quality outcomes. It is an effective way to tackle multifaceted challenges and facilitates progress toward the sustainable development goals, particularly for SDG 7 and its interlinked tasks.

2.3.4 Twinning, the process to foster collaboration in RE

The concept of twinning in research and development as early introduced, refers to collaborative partnerships between institutions, organizations or researchers from different countries or regions, to share knowledge, expertise and even resources. In its wide-ranging sense, twinning refers to an alliance that links two entities to accelerate progress in their respective areas of competency to achieve successful outcomes and unceasing growth. This model is grounded in institution-to-institution cooperation and peer-based collaboration, ensuring reciprocal benefits for all parties.

Twinning initiatives implementation can take various frameworks, such as memorandum of understanding, European-African research projects, or partnerships between universities, research laboratories, startups and SMEs. The twinning agreement includes actions and domains of interest to engage in cooperative activities for the mutual benefits of the involved institutions.

it is assumed that twinning projects will require additional costs to cover some activities, including staff exchange or mobility in general. But it may be technically possible to design a twinning project at no additional cost from the start by focusing on virtual exchanges, until the realization of projects that could have financial benefits. This will probably be the approach that will be targeted first. The Twinning process require formal collaboration based on legal framework to elaborate; partners use generally MoUs.

2.3.4.1 General framework: the MoU template:

A Memorandum of Understanding (MoU) between two institutions in the field of renewable energy and capacity building should clearly outline the terms of collaboration, shared objectives, responsibilities, duration, case de force majeure, and the scope of the partnership in, but not limited on Collaboration in Renewable Energy Research, innovation and Capacity Building.

In a MoU the parties wish to explore a formal collaborative agreement based on a foundation of trust for the mutual benefit and development of the two organizations. The parties will explore their potential for jointly developing the activities based on their respective research, academic and educational needs. The following points could be included:

- a.** Access to research infrastructures, research materials, publications and information;
- b.** Organization of joint research programs and training;
- c.** Exchange of academic staff and students' mobility;
- d.** The development of new common research and curricula in areas of mutual interest.

The implementation of specific points shall be separately negotiated and determined by both Parties in a formal legal agreement.





1. Each Party shall preserve the confidentiality of any information (whether in written, oral or electronic form) disclosed to it by the other Party where the other Party has identified such information as being confidential, or where it would be reasonable to expect, that confidentiality should attach to such information.
2. Each Party shall respect and make no claim regarding the names, brand, trademark, copyrighted material or any other intellectual property rights of the other Party during the period of the Collaboration.
3. Nothing shall diminish the full autonomy of either Party, nor will any constraints or financial obligations be imposed by either Party upon the other Party in carrying out this MOU.
4. The MOU is subject to revision or renewal by mutual agreement between the Parties in writing. It is also understood that either Party may terminate this MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to either Party.
5. This MOU will be in force for three or five years in the first instance. Thereafter, renewal of this MOU will be subject to the agreement of both Parties in writing.
6. This MOU is a statement of the current intention of the Parties. There is no intention to create legal relations by means of this MOU. Only Clauses 3 and 4 of the MOU are intended to be legally binding with effect from the date of the MOU. All other clauses are therefore not legally binding and neither Party has any rights or obligations or may bring proceedings in respect thereof. This MOU is effective when all the representatives have signed the document by the legal representative of the institution.

2.3.4.2: Benchmarking MoUs

A benchmark on MoUs illustrated the diversity of models. The general structure consists on the following sections.

- a) Introduction and Background of the parties: This section outlines the context and reasons for the MoU, followed by an overview of both parties, their missions, the shared interest and a brief statement on the scope of the collaboration.
 - b) Purpose of the MoU and Objectives: The aim of the MoU is to promote innovation, research and development in clean energy and to enhance capacity building through training, academic programs, knowledge exchange, workshops and access to infrastructures.
 - c) Roles and Responsibilities of both parties: A section is dedicated to the specific responsibilities of the parties to provide academic and research expertise, to support students and researcher's faculty in participating to projects, infrastructure and access to laboratories, data, and research facilities.
1. **Intellectual Property (IP) Rights:** This section defines how any intellectual property developed through the collaboration will be managed, including research findings and patents, sharing of royalties or benefits from any commercialization of research outcomes and procedures for handling joint IP or technology transfer. Given the complexity of IP management, a general rule is to added





2. Duration and Review: The duration of the MoU is defined (e.g., 3 or 5 years) and conditions for renewal including in general a review processes to assess the progress of the collaboration and ensure it remains relevant.

3. Monitoring and Evaluation: this section outlines how the collaboration will be monitored, such as regular annual meetings or reporting to track progress and key performance indicators (KPIs) for research outcomes, capacity-building activities, and publications.

4. Amendments and Termination: Given that the MoU is the general framework of collaboration, it is essential to specify the conditions for amendments such as the mutual agreement and the procedures for terminating the agreement if objectives are not met, or if the priorities change. For running actions, in general parties agrees to continue the process until the end of the running agreement.

5. Confidentiality: Both parties must agree regarding the clauses for protection of confidential information shared during the collaboration, ensuring to respect the sensitive nature of research and collaboration.

6. Dispute Resolution: Any disputes arising out of or in connection with this MoU shall be resolved through amicable discussions between the Parties. If the dispute cannot be resolved through mutual negotiations, the matter may be referred to arbitration or mediation, as agreed by the Parties.

7. Signatures: The MoU should conclude with the official signatures of representatives from both parties along with their titles and the date of signing.

This template serves as a general framework for a MoU, it can be customized to reflect the specific goals and terms of the collaborating institutions.

2.3.4.3 The LEAP-RE experience in elaborating MoU

The finalization of Memoranda of Understanding (MoUs) between African and European institutions in the field of renewable energy often faces multiple structural, administrative, and diplomatic obstacles, despite mutual interest and strategic relevance. These difficulties can be grouped into four major areas:

a) Bureaucratic constraints and centralization of international affairs

Many European and African countries, the exclusive competence over international agreements lies with the Ministry of Foreign Affairs. This strict centralization limits the flexibility and responsiveness of research institutions, ministries of higher education and research, or innovation agencies when attempting to engage in direct cooperation with European counterparts. Even technical or non-binding MoUs must often go through lengthy administrative processes involving several levels of approval. This leads to:

- Delays of several months (or years) for signature
- Misalignment between the timing of European funding calls and African approval procedures
- Lack of clarity on who has legal authority to sign (minister vs institution vs university rector)

b) Lack of mutual trust and asymmetry in expectations





Establishing partnerships in renewable energy requires confidence and clarity about intellectual property, technology ownership, and benefit-sharing. European institutions may fear poor enforcement of agreements, while African institutions often express concerns about:

- Being used as “junior partners” without real co-ownership of results
- Lack of transparency in project governance
- Over-dependence on external technology providers

This trust deficit slows down the negotiation and signature of MoUs, especially in collaborative research and innovation.

c) Mobility and visa barriers

Effective cooperation requires frequent scientific exchanges, joint workshops, and on-site demonstrations. However, many African researchers face recurring problems with visa, delayed travel documents, and lack of dedicated mobility funds. This undermines the operationalization of signed MoUs and limits institutional engagement. The lack of reciprocal mobility also affects student exchanges, industrial visits, and joint fieldwork in renewable energy projects (e.g. solar farms, hydrogen testbeds).

d) Brain drain and institutional fragility

European partners sometimes hesitate to formalize long-term collaboration due to the high turnover of staff in African institutions, limited institutional memory, or fears of brain drain. When MoUs lead to capacity-building or doctoral training, there is a perceived risk that trained experts will not return or remain in their home institution.

Conclusion: The AU-EU partnership is gaining momentum. Despite numerous challenges, several Memoranda of Understanding (MoUs) have been successfully signed — notably between South African and Algerian institutions, Kenyan and Italian partners, as well as between German actors and the Pan-African Institute PAUWES. Many other negotiations are still underway. Active engagement with and experimentation in this cooperation mechanism have confirmed its significant future potential. However, the formalization of these partnerships remains a complex and demanding process. The administrative burden and institutional rigidity discouraged co-task leaders from South Africa, Kenya, Germany to participate to this work. The lack of dedicated funding mechanisms to support the negotiation, coordination, and operational follow-up of MoUs further exacerbates the difficulty of building trust and ensuring continuity. Without accessible and flexible financial support, many institutions are unable to sustain the long and resource-intensive process required to bring these agreements to fruition. However, the formalization of these partnerships remains a complex and demanding process. The administrative burden and institutional rigidity discouraged co-task leaders from South Africa, Kenya, Germany to participate to this work.

The lack of dedicated funding mechanisms to support the negotiation, coordination, and operational follow-up of MoUs further exacerbates the difficulty of building trust and ensuring continuity. Without accessible and flexible financial support, many institutions are unable to sustain the long and resource-intensive process required to bring these agreements to fruition.



3. Conclusion and best practices for enhancing collaboration

Teaming and twinning are indispensable strategic mechanisms within the AU-EU Climate Change and Sustainable Energy (CCSE). They are not merely operational modalities but foundational enablers that facilitate deep knowledge transfer, robust institutional capacity building, crucial policy alignment, and the effective implementation of complex, multi-stakeholder projects. These collaborative approaches are vital for driving Africa's green energy transition, enhancing energy access for millions, and contributing significantly to global climate action and sustainable development goals. Their success underscores the power of structured, long-term partnerships built on shared objectives and a commitment to mutual progress.

To further strengthen the AU-EU CCSE program and ensure its long-term transformative impact, the following strategic recommendations are put forth:

- **Strengthen Human and Institutional Capacity:** Expanding and diversifying institutional twinning programs to cover a broader range of technical, policy, and regulatory areas within the energy sector is recommended. Simultaneously, scaling up technical training and skills development initiatives, with a particular focus on empowering youth and women, is vital. Sustainable energy transition requires not just technology but robust human and institutional capital [2]. Empowering local workforces and strengthening African institutions ensures long-term ownership, maintenance, and adaptation of energy solutions, fostering self-reliance and reducing dependency [7].
- **Foster Innovation and Localized Solutions:** The partnership should continue to vigorously support joint research and innovation projects through mechanisms like LEAP-SE, with a strong emphasis on developing and deploying solutions that are contextually appropriate and adaptable to diverse African realities, such as off-grid systems, mini-grids, and clean cooking technologies. Localized solutions are critical for addressing the specific energy access challenges in rural and remote areas [7]. Furthermore, promoting local manufacturing capabilities for renewable energy components will stimulate economic growth, create jobs, and reduce Africa's reliance on imported technologies, aligning with the goal of fostering local value chains [9].



Annex 1: Teaming & Twinning have fostered EU-AU partnership in RE with impact on new projects in energy (LEAP-SE) and related projects in CCSE



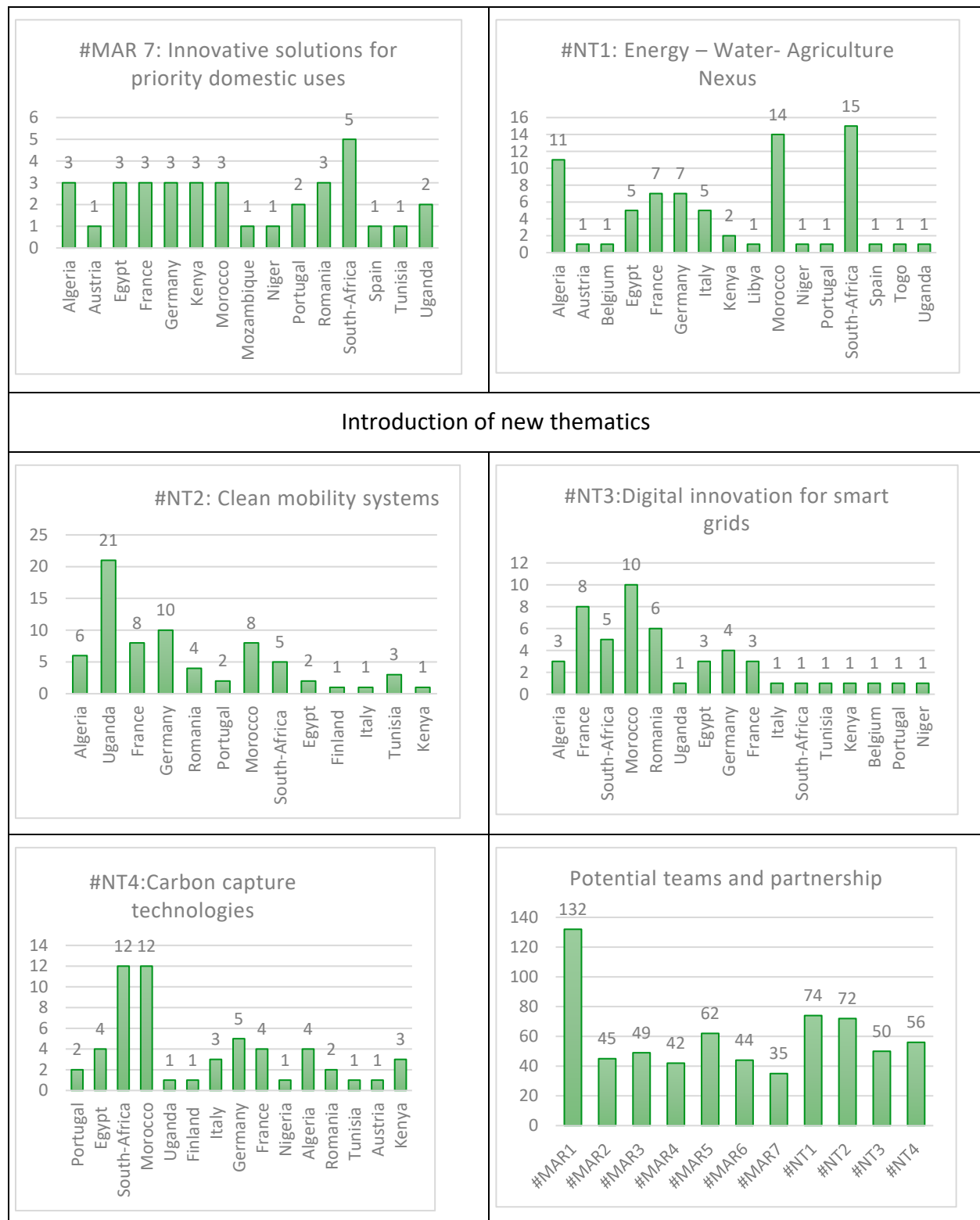


Figure 10 Projects per country and MARS

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