

Draft WP5 | Detailed Workplan

**Final Version | 15 Apr. 2021**

Acronym

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| --- | --- |
| DoA | Description of Action |
| GA | Grant Agreement |
| MS | Milestone |
| M&E | Monitoring & Evaluation |
| O&F | Organisational & Funding |
| tbd | to be determined |
| WP | Work Package |

## Description of WP5 - Long-term Perspective

Start date: M3 (Dec. 2020) ; End date: M63 (Dec. 2025)

**Work Package Leader- co-Leader:**

* Mr Abdellatif Zerga & Mr Erick Tambo | Pan African University Water and Energy Science (**PAUWES**)
* Mr Stefan A. Haffner | German Aerospace Center (**DLR**)

**All Partners in the Work Package**

| **No** | **Name** | **Short name** | **Country** | **Main Contact Person** | **PM in WP5** |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | LGI CONSULTING | LGI | France | Ms Niclette Bukasa Kampata | 0 |  |
| 2 | DEPARTMENT OF SCIENCE AND INNOVATION | DSI | South Africa | Ms Tinyiko Ntshongwana  Ms Refilwe Mashigo | 2 |  |
| 3 | Ministere e L'enseignement Superieur et de la Recherche Scientifique | MESRS | Algeria | Mr Mokthar Sellami  Mr Lassassi Moundir  Mr Benyoussef El-Hadi  Ms Souami Feriel | 7 |  |
| 4 | AGENCE NATIONALE DE LA RECHERCHE | ANR | France | Mr Framncois Moisan | 0 |  |
| 5 | POLITECNICO DI MILANO | POLIMI | Italy | Ms Emanuela Colombo  Mr Riccardo Mereu | 1 |  |
| 6 | STRATHMORE UNIVERSITY | SU | Kenya | Ms Anne W. Wambugu  Ms Hope N Njoroge | 5 |  |
| 7 | HELSINGIN YLIOPISTO | UH | Finland | Ms Melissa Plath | 1 |  |
| 8 | AFRICA ENERGY SERVICES GROUP LTD | AESG | Rwanda | Ms Kibibi Ndope | 1 |  |
| 9 | German Aerospace Center | DLR | Germany | Mr Stefan A. Haffner | 11,4 |  |
| 53 | UNIVERSITE PANAFRICAINE INSTITUT DES SCIENCES DE L'EAU ET DE L'ENERGIE | PAUWES | Algeria | Mr Abdellatif Zerga  Mr Erick Tambo | 6 |  |
| 75 | Executive Agency for Higher Education, Research, Development and Innovation | UEFISCDI | Romania | Ms Elena SIMION | 3,5 |  |
| 83 | ZENTRUM FUR SOZIALE INNOVATION GMBH | ZSI | Austria | Ms Elke Dall  Mr Dietmar Lampert  Mr Utku Demir | 3 |  |
| **Total PM in WP5** | | | | | **0** | |

### Task 5.1: M&E Concept and Impact Assessment

Start date: M1 (Oct. 2020); End date: M63 (Dec. 2025)

**Task Leaders:**

* Ms Elena SIMION | Executive Agency for Higher Education, Research, Development and Innovation (**UEFISCDI**)
* Ms Anne W. Wambugu & Ms Hope N Njoroge | Strathmore University (**SU**)

**Contributors:**

* Mr Stefan A. Haffner | German Aerospace Center (**DLR**)
* Mr Abdellatif Zerga & Mr Erick Tambo | Pan African University Water and Energy Science (PAUWES)
* Mr Mokthar Sellami & Mr Lassassi Moundir& Ms Souami Feriel | MINISTERE DE L'ENSEIGNEMENT SUPERIEUR ET DE LA RECHERCHE SCIENTIFIQUE (**MESRS**)
* Ms Elke Dall & Mr Dietmar Lampert & Mr Utku Demir | Zentrum für Soziale Innovation (**ZSI**)

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| **T5.1** | **Final PM** | **Comments** |
| **SU (lead)** | **3** | SU, together with UEFISCDI, will conceptualise and conduct the MEL activities together with T5.1 colleagues |
| **UEFISCDI (lead)** | **3,5** | UEFISCDI, together with SU, will conceptualise and conduct the MEL activities together with T5.1 colleagues |
| **ANR** | **0** | In kind contribution due to the needed synergies in the process of M&E with WP1, WP2 and WP3 |
| **DLR** | **1** | DLR will contribute to the aspect of a long-term MEL approach |
| **DSI** | **0** | In kind contribution due to the needed synergies in the process of M&E with WP1, WP2 and WP3 |
| **LGI** | **0** | In kind contribution due to the needed synergies in the process of M&E with WP1, WP2 and WP3 |
| **MESRS** | **1** | MESRS will contribute to the monitoring report Pillar 1 |
| **POLIMI** | **0** | In kind contribution due to the needed synergies in the process of M&E with WP1, WP2 and WP3 |
| **ZSI** | **1** | ZSI will contribute to the baseline study |
|  | **9,5** | **Total - T5.1** |

**Action 1: Theoretical Framework development (M1 – M12)**

A general framework of reference will be developed to enable assessment at each objective level and will include a metrics as well a set of potential indicators to enable the tracking of the R&I and the capacity building activities in Pillar 1 and 2 and the non R&I activities developed in Pillar 3. The framework will act as a reference upon which the monitoring and evaluation requirements of Pillar 1 and 2 projects will be formulated and implemented.

**Sub-Action 1: Pillar 1-2 Theoretical framework (M6-M12)**

Responsible partner & PMs: **UEFISCDI** (0,5 PMs), SU (0,5 PMs); MESRS (0,5 PMs)

The framework for Pillar 1 ad Pillar 2 will therefore take into account funding agencies’ expectations, and priorities in Pillar 2, and research and innovation activities in Pillar 2. The framework will make clear reference on the relevant policy roadmaps, the scientific literature and the grey literature which represents its backbone.

This task will include an interaction with WP3 and WP2 in order to established a first assessment with the main R&I projects already activated in Pillar 2 and Pillar 1 in order to harmonise the set of core indicators, their respective values (qualitative and quantitative).

**Sub-Action 2: Pillar 3 Theoretical framework (M6-M12)**

Responsible partner & PMs: **ZSI** (0,5 PMs), DLR(0,3 PMs)

The framework for Pillar 3 will be take into consideration the call’s objectives and the Theory of Change at the base of the LEAP-RE project as well as additional LEAP-RE management rules set into WP1. Indeed, interaction with WP1 and the coordinators of LEAP-RE will be necessary to assess the metric to be used for Pillar 3 which is represented as the non-R&I component of LEAP-RE.

**Sub-Action 3: Baseline (M6-M12)**

Responsible partners & PMs: **UEFISCDI** (0,5 PMs), SU (0,5 PMs); DLR(0,3 PMs), ZSI (0,5 PMs)

The framework will be transfer to Pillar 1 and Pillar 2 Managers in order to proceed with the Monitoring and Evaluation of the respective Pillars which will be done WP by WP and the Co-Coordinators of LEAP-RE for Pillar 3. Therefore, interaction with WP1, WP2 and WP3 will be constant.

**Action 2: Design the LEAP-RE programme’s Monitoring, Evaluation and Learning (MEL) Plan (M1-M19**

The MEL plan will translate theoretic concepts developed in the Theoretical framework into operational practice, supporting timely collection of data by documenting the frequency and schedule of data collection as well as by assigning responsibilities of relevant LEAP-RE personnel. The MEL Plan include a description of the measurable indicators and the more qualitative processes of change and progress, arising from programme results, that contribute to LEAP-RE’s objectives. The MEL will also state time intervals at which these indicators can be measured and the progress expected to be achieved at different time intervals will also be collected. The MEL Plan will then be operationalised.

**Sub-Action 1: MEL Plan document preparation, sharing and delivery (M6-M12)**

Responsible partner & PMs: **UEFISCDI** (1 PMs), SU (1 PMs), DLR (0,1 PM)

A MEL plan will be developed to help operationalize the processes of monitoring, analysing, and evaluating progress, as well as the learning feedback.

**The MEL Plan will have three chapters where the approach is described for being then operationalised along the project execution.**

1. **Monitoring,** focus on the routine collection, tracking and reporting of the full range of qualitative and quantitative indicators established for the hierarchy of intended results. The approach selected in WP5 will drive the definition of the Monitoring approach to be applied at Pillar level and WP level for Pillar 1, Pillar 2 and Pillar 3
2. **Evaluation**, focus on periodic assessments of the collected indicator data according to the established metrics in the Theoretical framework.
3. **Lesson Learnt,** to maximise the learning curve of LEAP-RE and to assure that LEAP-RE outcome and impact can influence decision making within and beyond LEAP-RE and to assure that feedback loops are created within and outside the LEAP-RE M&E community to encourage adoption of best practices and interventions, in order to progressively enhance efficacy and efficiency.

**Sub-Action 2: Pillar 1 | 2 | 3 Monitoring and Evaluation (M6-M53)**

Responsible partner & PMs: **UEFISCDI** (1 PMs), SU (0,5 PMs); MESRS (0,5 PMs)

Chapter 1 and Chapter 2 of the MEL will be shared with Pillar 1 and Pillar 2 Managers in order to proceed with the Monitoring and Evaluation of the respective Pillars which will be done according to the call in Pillar 1 and WP by WP in Pillar 2. Same procedure will be followed for Pillar 3 and managed by the Co-Coordinators of LEAP-RE. Interaction with WP1, WP2 and WP3 will be therefore constant in order to activate a participative process. The process will provide timely management of the corresponding activities and expected results, as well as contributing data for the independent evaluation

Evaluations will systematically and objectively assess progress towards and achievement of LEAP-RE’s intended results and contribution to eventual impact. This will provide the basis for feedback and lesson learning, inform decision making, thus will be conducted at strategically important points in the LEAP-RE timeline. Evaluations will be participatory processes, involving input from all programme partners, key LEAP-RE actors, and stakeholders in the LEAP-RE ecosystem. They will be conducted independently of routine monitoring and may require subcontracting to an expert team, external to LEAP-RE, for which terms of reference would be established.

**Sub-Action 3: Pillar 1, Pillar 2 and Pillar 3 Learning (M12-M53)**

Responsible partner & PMs: **UEFISCDI** (0,5 PMs), SU (0,5 PMs), DLR (0,3 PMs)

From the Sub Action 2 , Chapter 3 of the MEL will be prepared by working closely with Pillar 1 and Pillar 2 Managers and the Co-Coordinators of LEAP-RE for Pillar 3

### Task 5.2: Dialogue with Policymakers and other Stakeholders for Research Uptake

Start date: M3 (Dec. 2020); End date: M63 (Dec. 2025)

**Task Leaders:**

* Mr Abdellatif Zerga & Mr Erick Tambo | Pan African University Water and Energy Science (**PAUWES**)
* Mr Stefan A. Haffner | German Aerospace Center (**DLR**)

**Contributors:**

* Mr Mokthar Sellami & Mr Lassassi Moundir & Ms Souami Feriel | Ministere de l'enseignement Superieur et de la Recherche Scientifique (**MESRS**)
* Ms Emanuela Colombo & Mr Riccardo Mereu | POLITECNICO DI MILANO (**POLIMI**)
* Ms Niclette Bukasa Kampata (**LGI**)

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| **T5.2** | **Final PM** | **Comments** |
| **DLR (lead)** | **5,4** | DLR, together with PAUWES, will conceptualise and coordinate the organisation of the four planned round tables, with contributions from T5.2 colleagues |
| **PAUWES (lead)** | **4** | PAUWES, together with DLR, will conceptualise and coordinate the organisation of the four planned round tables, with contributions from T5.2 colleagues |
| **LGI** | **0** | In kind contributions |
| **MESRS** | **1** | MESRS will contribute to the four round tables with around 0,25 PM per event |
| **POLIMI** | **1** | POLIMI will contribute to the four roundtables with around 0,25 PM per event |
|  | **11,4** | **Total - T.2** |

**Dialogues**

LEAP-RE promotes institutional dialogue as a feedback mechanism for the uptake of research results and informed policy making. For contributing to the design of the envisaged AU-EU Platform for R&I and capacity building in RE, this task intends to develop mechanism addressing multi-stakeholder cooperations in general and research uptake in particular, which are starting already at the stage of priority setting for funding R&I activities and takes effect, when research outputs are available and have to be communicated with end-users in different sectors and geographical level.

Therefore, in the course of the project, dialogues with different stakeholder institutions will be organised to establish the Theory of Change and Impact Pathway (TCIP) instrument as a general tool for cooperation, and as already applied in the project. As a substantial element of the TCIP approach, the outputs of the project’s Monitoring, Evaluation and Learning (MEL) mechanism will have to be related to international, EU and Pan-African frameworks (SGDs, Agenda 2063, CfTA, etc.). Therefore T5.1’s contributions to the discourse, about collaboration mechanism, will be included. Together with WP4, joint positions will have to be developed for also promoting collaborative knowledge management and communication, and identifying gaps and existing approaches that could be linked.

The governments of the member states of the AU-EU HLPD are key addressees of these dialogues towards bringing the co-development of cooperation mechanisms in a) priority setting, b) MEL, c) the development of a Knowledge Management and Communication Frame (KMCF) into the collaboration discourse. The goal is to discuss key infrastructure elements which might be needed for the collaboration.

**Dialogue Action | Organisation of two Rounds Tables**

**Dialogue #1 LEAP-RE Round Table**

Title: “Theory of Change and Impact Pathway in Multi-lateral Cooperations?”

This roundtable could be organised in the context of an AU-EU HLPD Senior Officials Meeting with representatives of ministries and other funding institutions around M24 (Sep. 2022).

**Dialogue #2 LEAP-RE Round Table**

Title: “Monitoring, Evaluation and Learning in an AU-EU Knowledge Management and Communication Framework”

This roundtable could be organised in the context of an AU-EU HLPD Senior Officials Meeting with representatives of ministries and knowledge managers around M45 (Jun. 2024).

**Empowerment for research uptake**

LEAP-RE outputs shall be used towards the design of new empowerment actions towards decisionmakers through already existing networks of European and pan-African universities, R&I labs, and research to practice convening.

The formulation of recommendations for different stakeholder groups (quadruple helix) as the entrance to a dialogue between science and end-users of knowledge seems to be a key for research uptake and feedback loops. With regard to the quantity and diversity of actors in the AU-EU-Region, smart solutions need to be developed to ensure an efficient and effective science end-user dialogue. Therefore, a coordinated network of actors could be considered as a part of the solution together with new formats and methods as a pilot contribution to the LEAP-RE Knowledge Management and Communication Framework (KMCF).

**Empowerment Action | Organisation of two Rounds Tables**

**Empowerment #1 LEAP-RE Round Table**

Title: “Coordinated Communication in the Stakeholder’s Network Labyrinth”

This round table could be organised as a lone standing event around M20 (May 2022) with knowledge managers in innovation-hub-like institutions. The focus would be methods, technologies, and channels for the science-end-user dialogue.

**Empowerment #1 LEAP-RE Round Table**

Title: “AU-EU Knowledge Hubs System”

This round table could be organised around M41 (Feb. 2024) with knowledge managers and ministries of the AU-EU HLPD, which are related to Science, Education, Development and Energy.

In all four round tables, the LEAP-RE community will be promoted, and the participants will be encouraged to visit the LEAP-RE website for registering.

### Task 5.3: Strategy for RE research-capacity in Africa

Start date: M3 (Dec. 2020); End date: M63 (Dec. 2025)

**Task Leaders:**

* Mr Mokthar Sellami & Mr Benyoussef El-Hadi & Ms Souami Feriel | Ministere de 'Enseignement Superieur et de la Recherche Scientifique (**MESRS**)
* Ms Elke Dall & Mr Dietmar Lampert & Mr Utku Demir | Zentrum für Soziale Innovation (**ZSI**)

**Contributors:**

* Ms Tinyiko Ntshongwana & Ms Refilwe Mashigo |Department of Science and Innovation (**DSI**)
* Ms Anne W. Wambugu & Ms Hope N Njoroge | Strathmore University (**SU**)

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| **T5.3** | **Final PM** | **Comments** |
| **MESRS (lead)** | **5** | MESRS, (1) Analysing African strategic agendas in RE , [Areas or research and innovation, research programs, keywords] (1.1 and 1.2); (2) Benchmarking AU-EU R&I in RE [by domain and by African regions based on bilateral scientific cooperation] (2.1 and 2.2); (3) Mapping and visualising results of networks [nodes are countries, institutions] (3.1) and support conceptualisation of scientometric study (3.2); conceptualise and coordinate the development of the T5.3 working document, with contributions from T5.3 colleagues and draft deliverable D5.8 with inputs from co-partners; develop a questionnaire to evaluate level of AU-EU cooperation in RE and how could be designed the long term partnership through the instruments of teaming and twinning and access to infrastructures of research (4.1) and overall . |
| **ZSI (lead)** | **2** | In addition to the support given to MESRS with the leadership of tasks (see above), ZSI will dedicate its limited resources to conceptualising (together with MESRS and DSI) and conducting/implementing the scientometric analysis (3.2). |
| **DSI** | **2** | DSI will contribute towards the scientometrics study on Africa’s capacities (3.2) as well as the conceptualisation of approaches to and implementation of Twinning, teaming of research and pooling of infrastructure and the twinning of post-doctoral programmes exercise (5). |
| **SU** | **2** | Develop approaches to Twinning, teaming of research and pooling of infrastructure (5) |
|  | **11** | **Total - T5.3** |

This task addresses innovative models of cooperation for R&I capacity-building. African strategic agendas will be analysed and selected activities in the field of RE will be benchmarked. The target is to support new (or existing) mechanisms which may involve networking, teaming (by creating centres of excellence), twinning (institutional co supervision, post-doctoral programmes), and sharing infrastructures. The framework of such vision was declined in the new Africa-Europe Alliance for Sustainable Investment and Jobs, Horizon Europe and the new Research Framework Programme for the period 2021-2027 that open up new opportunities in the join AU-EU strategy (5th SOM, AU-EU HLPD on STI). This work will be undertaken **Toward innovative models of cooperation for R&I capacity-building in RE** following thefive next steps:

(1) Analysing African strategic agendas in RE [SDGs, Africa2063, STISA] and selecting activities in the field of RE [Areas or research and innovation, research programs, keywords]

(2) Benchmarking AU-EU R&I in RE [by domain and by African regions based on bilateral scientific cooperation, identified keywords]

(3) Mapping and visualising results of networks [nodes are countries, institutions]

(4) Identifying R&I partnership [Institutions, training programmes, pooling or access to Infrastructures].

(5) Strengthening existing mechanisms or launching new mechanisms for networking

- teaming (by creating centres of excellence),

- twinning (institutional co-supervision, post-doctoral programmes),

- sharing infrastructures.

the new Africa-Europe Alliance for Sustainable Investment and Jobs, Horizon Europe and the new Research Framework Programme for the period 2021-2027 that open up new opportunities in the join AU-EU strategy (5th SOM, AU-EU HLPD on STI).

**(1) Analysing African strategic agendas in RE [SDGs, Africa2063, STISA] and selecting activities in the field of RE [Areas or research and innovation, research programs, keywords]**

**1.1] SDGs and African Agenda Analysis (M1 to M6):** Comparison of the SDG Agenda 2030, the Agenda 2063 « Africa we want », including STISA (2014-2024) objectives in RE-related capacity

Goal 7 of the SDGs aims at achieving universal access to affordable, reliable, sustainable and modern energy by 2030, while Agenda 2063 (including STISA objectives) has targets for an increase of 50% in electricity generation, 50% distribution and 70% of Africans having access to electricity by 2023. But the growth of Africa’s sustainable development is underpinned by a set of target categories connected to Renewable Energy, with strong level of relevance.

- SDG1: Poverty and Development

- SDG3: Disease and Mortality

- SDG4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- SDG5: Achieve gender equality and empower all women and girls

- SDG6: Ensure access to water and sanitation for all

- SDG7: Ensure access to affordable, reliable, sustainable and modern energy

- SDG9: Inclusive and Sustainable Industrialization

- SDG11: Make cities inclusive, safe, resilient and sustainable

- SDG12: Ensure sustainable consumption and production patterns

- SDG13: Take urgent action to combat climate and its impacts

**1.2] Selecting activities in the field of RE [Areas or research and innovation, research programs, initiatives, keywords]**

For each Agenda2030 SDGs AND/OR Africa2063 target an excel file is under construction including the following information’s:

1. Targets linked to renewable energy and its relevance [strong, high, weak]
2. Associated keywords or string
3. Which RE technologies could solve [1. Solar Photovoltaic Energy, 2. Wind Energy, 3. Energy Efficiency in the Building, 4. Solar Thermal Energy, 5. Marine energy, 6. Storage of Energy, 7. Geothermal Energy, 8. Bioenergy, 9. Hydrogen and Fuel Cells, 10. Hydroelectricity, 11. Materials**:** (industrialization of certain components of renewable energy systems such as solar panels or wind turbine blades)].
4. Current African initiatives and Feedback of visible implemented programs or actions, based on reports on STISA or Africa2063 Evaluation process

**(2) Benchmarking (M1 to M12):** The benchmarking process is used to identify and analyze previous projects to determine their impact on the local or regional community, and to identify the human capacity as potential resource for R&I.

**2.1) Benchmarking the LEAP-RE projects in Pillar 2 and the coming projects in Pillar1.**

To identify how LEAP-RE projects could be connected to AU-EU R&I needs, we’ll first use a matching process and comparison between the objectives of the six multi-annual roadmaps, thanks to the associated keywords, the technical keywords identified in the matrix of step [1] and the selected programs in Pillar2. This action will be completed next December 2021 based on the projects which will be accepted and funded under Pillar1.

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| **Multiannual roadmaps** | **PillarII projects** | **Keywords** | **Connexion to matrix (step1)** |
| **Example with Multiannual roadmap 6….** | | | |
| 6: Innovative solutions for priority **domestic uses** (clean cooking and cold chain) | WP10 PURAMS, solar cooking, standalone solar cooker, silicon solar cells, | clean cooking; energy poverty; improved cooking stoves; Electric clean cooking, Improved cookstove, Solar cooker, Cold chain, Supply chain, Cold chain logistics | saves health, time and money [SDG1], job opportunities [SDG8], Reducing smoke emissions, air pollution [SDG3], climate vulnerability [SDG11], girls kept out of school [4], etc… |

**2.2) Benchmarking (M1 to M12): AU-EU past projects (e.g. FP7-ERAfrica, MED-Spring, AU Grant projects and H2020 projects in sustainable energy).**

The characteristic of the R&I partnership is to strive to integrate research and innovation activities that have an impact on citizens. Thus, it will be assisted by the valuable lessons learned from projects developed or underway in the field of sustainable energy; these are AU grant projects in renewable and sustainable energies, or EU projects. We can mention, but not limited to AREI (Africa Renewable Energy Initiative (AREI), CSP4Africa (Development of a cost-effective, modular and dry concentrating solar power for Africa), REELCOOP (REnewable ELectricity COOPeration), SOLPART(High temperature Solar-Heated Reactors for Industrials Production of Reactive Particulates), ECOWAS observatory for renewable energy and energy efficiency, EUROSUNMED  “Euro-Mediterranean Cooperation on Research & Training in Sun based Renewable Energies.. ”, etc. This overview of two binary digit research programs offers particularly to identify the gaps of research and cooperation activities, which is an issue of high priority to the EU-AU R&I Partnership in RE.

**3) Mapping and visualising results of networks in RE (nodes are countries and/or institutions) (M1 to M6)**

**3.1) Visualising LEAP-RE network partners (Institutions involved in Pillar1, Pillar2, Pillar3).** This exercise is just to illustrate graphically the link between research teams and institutions for mobility or access to the infrastructures. Nodes providing services as sharing infrastructures will be highlighted with indication of the scientific equipment.

**3.2) Scientometric analysis of high ranked publications of African researchers** and their partners in renewable energy using **Thomson Reuters’s Web of Science** data bases

Facing RE priorities requires analyses based on credible data and the involvement of institutional leaders in the public- and private sectors, along with a mobilization of the RE community. Within this framework we’ll work to establish a mapping of the knowledge sharing and transfer to sustain the innovation process in African countries.

This mapping will cover the identification of scientific networks and publications, as well as universities, faculties and research teams. In addition, investigating existing cooperation and its development over time as well as the identification of the most visible actors will facilitate the elaboration of the road-map in areas of common interest for medium and long-term-milestones and between African and European Research and Innovation communities.

It is important to identify scientific researcher organisations in Africa, by country and by region, not only in RE, but the mapping will be extended to sub or connected areas as reported in the matrix (ref SDG4, … , SDG9, SDG11).

For the identification of regions, we shall adopt the United Nations geoscheme for Africa: North Africa, West Africa, East Africa, Central Africa and Southern Africa. For each country we’ll give a general overview of top 15 institutions, top 15 countries of co-publishing and top 15 leading scientists. We’ll summarize these results in some graphics to show the regional and continental map of scientific capacities and the importance of the links between these communities.

Our instrument of work is the web of science (WOS), a search and discovery platform for more than 7,000 academic and research institutions. It is a product of “Thomson Reuters Institute of Scientific Information” (ISI) and includes above 12,000 high impact journals and 16.000 conference proceedings, reports, and book series. Publications in WoS are classified in 254 categories or 152 Research Areas. Additional useful metrics are sources/journals, authors, affiliation institutions, affiliation countries, citations, funding agencies, organizations, editors. It is important to highlight that in our search we’ll focus only on European, African, and international institutions.

Embedded analysis tools help to refine results, identify top authors, institutions, and publishers in a given field, trace citations, facilitate discoveries and connections across disciplines, regions and institutions. The methodology will be explained first then the limits of such work. The output will be first a general map showing the potentiality in research for each African country/region.

This work will be conducted for each multiannual roadmap in RE with recommendations and/or indicators on building and/or upgrading research infrastructures, enhancing professional and technical competencies based on the national policy if such strategy exists. Collaborative effort between researchers from both continents will be proposed as an option for developing the needed knowledge capacities for maintaining and strengthening long term collaborations by teaming and twinning actions.

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| **Examples of search queries about MAR 6 for North African region. This search query is to execute for each pillar AND for each African region + specific top 10 countries depending on the number of records and publications.** | | |
| ([TS = (cocking or ”clean cooking” or “cooking stoves” or “Electric clean cooking” or “Solar cooker”)]) | AND CU= (Algeria or Egypt or Libya or Morocco or Tunisia or Mauritania) | **OUTPUTS:**  - Graph mapping will be established by adopting the approach of visualization of similarities using optimized algorithms from [VOSviewer](https://www.vosviewer.com/) 1.6.5 and Gephi Sotware, etc..  - ranking and analyse by country, funding agencies, affiliation institutions, authors  - identification of research teams on specific thematics in RE and their position (ranking) in Africa |
| ([TS = (“Cold chain” or “Supply chain” or “Cold chain logistics”)]) | AND CU= (Algeria or Egypt or Libya or Morocco or Tunisia or Mauritania) |

**(4) Identifying R&I partnership [Institutions, training programmes, pooling or access to Infrastructures]. [M12-M36] with involvement of DSI and SU**

**4.1) Analyzing identified nodes of the network and moving to a long-lasting partnership:** Strengthening and maintaining research capacities are the fundamental pillars to generate knowledge, facilitate learning and co-develop innovations in sustainable energy. A comprehensive approach is needed to build research capacity and institutional strengths particularly in Africa. We have identified a set of mechanisms (twinning, teaming and pooling) to launch after undertaking an audit where such research infrastructure collaboration will be most profitable. The first step will be to prepare a questionnaire to identify which actions are possible, when, with which means (not necessarily funding) and with who.

**4.2) Preparation of a swot / questionnaire / round tables with identified and selected partners in both continents.**

These actions will be explored with selected and willing institutions engaged for the future Europe-Africa cooperation. They are to develop.

**(5) Strengthening existing mechanisms or launching new mechanisms for networking [M24-M60]**

- teaming (by creating centres of excellence),

- twinning (institutional co-supervision, post-doctoral programmes),

- sharing infrastructures.

- Revitalizing of universities

• Twinning, teaming and pooling (M6 to M60): Deliver virtual networks of academic communities in RE, with mechanisms for linking scientists and institutions that are committed to working together based on these three collaboration instruments:

5.1 Twinning in post-doctoral programmes: institutions of the network receive researchers selected to conduct a specific task

5.2 Teaming supports the creation of new (or upgrading of existing) Centres of Excellence in partner countries. This mechanism is inspired from Horizon 2020 “Teaming for Excellence” programme to transfer experience from Europe’s top research centres to the new EU MS.

5.3 Pooling of resources provides access to world-class infrastructures to do cutting-edge research in partnership with European institutions depending on their internal legislation.

5.4 Revitalizing of universities and other training institutions in RE;

5.5 Preparing the deliverable D5.9

### Task 5.4: Strategic ambition of the long-term partnership

Start date: M3 (Dec. 2020); End date: M63 (Dec. 2025)

**Task Leaders:**

* Mr Abdellatif Zerga & Mr Erick Tambo | Pan African University Water and Energy Science (**PAUWES**)
* Mr Stefan A. Haffner | German Aerospace Center (**DLR**)

**Contributors:**

* Ms Elena SIMION | Executive Agency for Higher Education, Research, Development and Innovation (**UEFISCDI**)
* Ms Anne W. Wambugu & Ms Hope N Njoroge | Strathmore University (**SU**)
* Ms Kibibi Ndope | AFRICA ENERGY SERVICES GROUP LTD (**AESG**)
* Ms Melissa Plath | HELSINGIN YLIOPISTO (**HU**)

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| **T5.4** | **Final PM** | **Comments** |
| **DLR (lead)** | **5** | DLR, together with PAUWES, will conceptualise and coordinate the development of the T5.4 working document, with contributions from T5.4 colleagues |
| **PAUWES (lead)** | **2** | PAUWES, together with DLR, will conceptualise and coordinate the development of the T5.4 working document, with contributions from T5.4 colleagues |
| **AESG** | **1** | AESG will contribute to the development of the working documents and linking the dialogues to WP4 |
| **SU** | **0** | In-kind contributions |
| **UEFISCDI** | **0** | In-kind contributions |
| **UH** | **1** | UH will contribute to the development of the working documents and linking the dialogues to WP4 |
|  | **9** | **Total - T5.4** |

In the context of T5.1 and 5.2 dialogues and WP4 dialogues, elements for a LEAP-RE governance and stakeholder interactions model will be developed and analysed, to design a draft long-term meta-governance and coordination model for the envisaged LEAP-RE Platform. Dedicated sessions in LEAP-RE events, together with the dialogues organised under T5.2, and regular exchanges, discussions and validation with the PMB, will allow to collect stakeholders’ views on the long-term partnership and ambition. The envisaged meta-governance and coordination model will be developed in a working document in progress, during the project period, and will address the following issues:

* Document and analyse aspects of stakeholders’ strategic requirements for the future
* Strategic learning in the context of
* the MEL concept and activities, and in particular with reference to the UN SDGs, the Agenda 2063, the European Green Deal and other corresponding AU-EU agendas
* dialogues with high-level decision makers (representatives of member states), other initiatives and funders about gaps and practices in the collaboration on R&I and capacity building in RE
* the application of TCIPs/MARs and potential gaps in the existing ones
* Strategic ambition of future partnership
* Formulate a strategic ambition of the partnership based on stakeholder requirements for the future
* Integrate institutional/infrastructural considerations of international institutions and initiatives engaged in T 5.2.

## Deliverables

| **Year** | **Number** | **Title** | **Due Date** | **Responsible** |
| --- | --- | --- | --- | --- |
| **2021** | **D5.1** | Theory of Change, M&E Approach and MEL Plan | M12  **Sep. 2021** | SU – Anne W. Wambugu |
| **D5.8** | Report on the analysis about R&I capacities in Africa | M15  **Dec. 2021** | MESRS – Mokthar Sellami |
| **2024** | **D5.5** | Research briefs based on Pillar 1 and Pillar 2 results for dialogue with external policy and stakeholder partner | M40  **Jan. 2024** | PAUWES – Erick Tambo |
| **D5.4** | Proceedings of round tables for research uptake | M43  **Apr. 2024** | PAUWES – Erick Tambo |
| **D5.11** | Strategy design workshop for the future platform and documentation of lessons learned from external actors | M50  **Nov. 2024** | DLR – Stefan A. Haffner |
| **2025** | **D5.2** | Report on Monitoring for Pillar 1 | 2 | 3 | M53  **Feb. 2025** | SU - Anne W. Wambugu |
| **D5.6** | Funding opportunities to enhance additional activities | M53  **Feb. 2025** | PAUWES – Erick Tambo |
| **D5.7** | List of new LEAP-RE community members | M53  **Feb. 2025** | DLR - Stefan A. Haffner |
| **D5.10** | Strategy guidelines and plan for the design of the long-term partnership | M54  **Mar. 2025** | DLR – Stefan A. Haffner |
| **D5.9** | Report about Twinning & Teaming & Pooling activities | M58  **Jul. 2025** | MESRS – Mokthar Sellami |
| **D5.3** | Report on Evaluation and Learning | M53  **Feb. 2025** | UEFISCDI - Elena SIMION |

## Milestones

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **Title** | **Verification mean** | **Due Date** | **Responsible** |
| MS5 | Launch of the future partnership | Firm/signed commiment from interested parties | M58 | LGI – Niclette Bukasa Kampata |

## Interaction/synergies with other WPs

| **Number** | **Interaction description** | **Responsible** |
| --- | --- | --- |
| 1 | **Task 5.1: M&E Concept and Impact Assessment**   * **Task 4.2.:** Knowledge Capitalisation   + Contributing MEL outcomes to review and update of MARs * WP1 WP2 WP3 WP4 | SU & UEFISCDI |
| 2 | **Task 5.2: Dialogue with Policymakers and other Stakeholders for Research Uptake**   * **Task 4.1.:** Expanding, managing and animating the LEAP-RE community * workshop contributions * contributions to the clustering process * contributions to stakeholder surveys * building a knowledge management and communication framework (Sorting House Mechanism and Sorting House Network, including building an online community) * **Task 5.1** M&E Concept and Impact Assessment **& Task 4.2.:** Knowledge capitalisation, valorisation, & scientific dissemination * building a knowledge management and communication framework (Sorting House Mechanism and Sorting House Network, including building an online community) * designing a coordination and infrastructure approach for long-term MEL activities * **Task 4.2.:** Knowledge Capitalisation   + Contributing dialogue outcomes to review and update of MARs   + Formulate a survey in accordance with the scientific dissemination guidelines in order to collect the results of the dissemination plans from Pillar 2 WPs and Pillar 1 awarded projects * **Task 4.3.:** Innovation Accelerator * building a knowledge management and communication framework (Sorting House Mechanism and Sorting House Network) * **Task 4.4.:** Programme communication * Communication plan and material * Awareness strategy * Design of digital workspaces | PAUWES & DLR |
| 3 | **Task 5.3: Strategy for RE research-capacity in Africa**   * **Task 3.2** Identifies a set of contents and training structure for capacity building activities on technical and horizontal skills. This will serve as input for WP4 (for implementation) and WP5 (feeding the long-term strategy for capacity building) and will complement further indication from WP2 * **Task 4.1.:** Expanding, managing and animating the LEAP-RE community * contribution to the stakeholder surveys | MESRS & ZSI |
| 4 | **Task 5.4: Strategic ambition of the long-term partnership**  **WP4**   * **Task 4.2.:** Knowledge capitalisation, valorisation, & scientific dissemination * Reflecting on the TCIP approach along the existing MARs * building a knowledge management and communication framework (Sorting House Mechanism and Sorting House Network) * **Task 4.3.:** Innovation Accelerator * building a knowledge management and communication framework (Sorting House Mechanism and Sorting House Network) * **Task 4.4.:** Programme communication * Communication plan and material * Awareness strategy * Design of digital workspaces * **WP6 - Building the partnership** * Task 6.1: Strategic design of the partnership * Task 6.2: Partnership governance | PAUWES & DLR |

## Risks

| Contractual risks (number, description, risk-mitigation), **probability (1=low; 5=high)** that the risk occurs and **impact (1=low; 5=high)** if the risk occurs. Other risks (not in GA) can be added so they can be followed during the project. Risk mitigation: **P=preventive actions** / **C=contingency actions**. | | | | |
| --- | --- | --- | --- | --- |
| **Number** | **Risk description** | **Risk mitigation** | **Probability** | **Impact** |
| **1** | Uncertainties linked to COVID pandemic If it occurs: Impacts on collaboration modes | (P) The risk and impact will be monitored from the LEAP-RE perspective including during proposal evaluation (P) Use of virtual meetings (C) The programme is set to start in Jan. 2021; if needed, the start could be delayed | 4 | 4 |
| **3** | Manageability of very large consortium impact if it occurs: Lack of alignment of some partners with programme objectives | P) Programme coordination and PMB of experienced professionals, with sufficient dedicated time and effort (C) Organisation of general workshops with all partners allow to realign on objectives. Workshops will serves as an opportunity to consult the LEAP-RE partners and make sure that they are align with the project objectives consultation of all the LEAP-RE partner | 4 | 5 |
| **4** | Complexity of the programme structure impact if risk occurs: Delays or even failure to deliver | (P) Solid managerial structure and work plan. Pillar management by delegation. Regular PMB meetings. (P) Detailed Work Plans with clear responsibilities for all | 4 | 5 |
| **5** | Increased risk of defaulting partners during 5 years Impact if occurs: Missing link possible and therefore missing functionalities, if input of one party is default | (P) A large majority of partners are only involved in 1-2 WPs, which prevents any systemic risk (no domino effect) (P) Experienced programme coordination team (C) Access to large community allows to easily find partner replacements (C) WP and Task leaders monitor risks and flag problems to enable timely mitigation | 4 | 4 |
| **6** | Problems in conflict resolutions Impact if occurs: Delays, departure of a partner or failure to deliver the final product | (P) Develop continuous mutual trust. Regular meetings (P) Conflict resolution process in Consortium Agreement (C) Perform a progressive de-escalation by reducing tension and building step-by-step solutions. Appoint a mediator(s) to solve conflicts. | 3 | 5 |
| **7** | Weak partner commitment due to lack of physical meetings Impact if occurs: Limited interaction among parties and commitment, especially regarding the inter-WP activities | (P) Use of virtual meetings is becoming the ‘new normal’ (P) Three general workshops (C) Organization of regular virtual meetings and increase of involvement of parties on common activities | 4 | 5 |
| **17** | EU policy shifts Impact: Lack of endorsement of future partnership (EC) | (P) Continuous dialogue (P) Financial sustainability plan not relying on EC | 3 | 5 |
|  | Involvements of European research institutions in participating to train African capacities | Sensibilization, rely on the partner institutions of the project | 3 | 5 |
|  | Lack of response and attention in the AU-EU HLPD and relevant ministries of the member states to the WP5 process and its results | Constant contact with the HLPD Bureau and the ministries / project management agencies involved in LEAP-RE | 5 | 5 |