



Horizon 2020
Programme

LEAP-RE

Research and Innovation Action (RIA)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 963530

Start date : 2020-10-01 Duration : 63 Months
<http://www.leap-re.eu/>



Presentation of a more detailed Plan of Activities for the whole 14

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LEAP-RE - Contract Number: 963530

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Document title	Presentation of a more detailed Plan of Activities for the whole 14
Author(s)	Mr. Ari HAAPANEN, Joel Songok
Number of pages	9
Document type	Deliverable
Work Package	WP14
Document number	D14.1
Issued by	UVA
Date of completion	2021-10-13 09:18:52
Dissemination level	Error (13) !

Summary

D14.1 Presentation of a more detailed Plan of Activities for the whole 14

Approval

Date	By
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LEAP-RE

Long-Term Joint EU-AU Research
and Innovation Partnership on Renewable Energy

Detailed Work Plan WP14 Energy Village Concept

Deliverable D14.1

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Acronym

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

1.1 Description of WP14 – ENERGY VILLAGE CONCEPT

See Annex 1: WP14 GANTT Chart

Work Package Leader: Ari Haapanen & University of Vaasa

Work Package Co-Leader: Dr Getachew Adam & Addis Ababa Science and Technology University

1.1.1 Task 14.1.: Energy village concept and Methodology

Task Leaders: Ari Haapanen & University of Vaasa

Contributors: Dr Getachew Adam & Addis Ababa Science and Technology University
Dr Mario Einax & Botswana International University of Science and Technology
Dr Jean Baptiste Kirabira & Makerere University
Dr Cleophas Mecha & Moi University

Objective: Development and testing of new local methodology solutions for Energy Villages.

Action 1: To create and test a set of tools and methods to develop regional energy self-sufficiency programs by using each region's renewable energy source (RES) potential and total energy consumption - **Energy Village Concept Development**

Sub-action 1: Create, modify, and test methods (existing from previous projects, like ASPIRE).

Step 1: Introduce ASPIRE model to the partners.

Step 2: Adjust and adopt the methodology to suit the village settings in Africa based on data obtained from the stakeholders (iterative process) - **deliverable is a report – UVA**

Contributors: Addis Ababa Science and Technology University, Botswana International University of Science and Technology, Makerere University, Moi University, University of Vaasa

1.1.2 Task 14.2.: Development of Sustainable Energy Communities

Task Leaders: Dr Cleophas Mecha & Moi University

Contributors: Dr Joel Songok & University of Vaasa
Dr Getachew Adam & Addis Ababa Science and Technology University,
Dr Mario Einax & Botswana International University of Science and Technology,
Dr Jean Baptiste Kirabira & Makerere University

Objective: Development and testing of innovative local Market and business models' cases for Energy Villages.

Action 1: Develop an advanced implementation plan for each demo village and feasible business models, which have a high replication potential and show how to realize and operate energy villages, which integrate all energy vectors.

- **Demo villages**

Sub-action 1: Identification of demo villages

Description of steps:

- Draft criteria for selecting the villages (all partners)
- Background analysis for demo villages (all partner) **deliverable is a report- MU**

Contributors: Addis Ababa Science and Technology University, Botswana International University of Science and Technology, Makerere University, Moi University, University of Vaasa.

Sub-action 2: Implement the methods in demo villages

Objective: To engage the villages, identify of the RES potential and energy consumption matrix

Description of steps:

- Engage each village, carry out one kick-off meeting, form local steering council, conceptualize a collaboration agreement and implementation plan
- Obtain the data from the villages, utility companies, regional and/or national data
- RES Energy workshops (2 workshops per villages) **deliverable is a report- AASTU**

Contributors: University of Vaasa, Addis Ababa Science and Technology University, Botswana International University of Science and Technology, Makerere University, Moi University

Sub-action 3: Develop a roadmap for the implementation of the Villages.

Description of steps:

- calculation of energy needs and surplus potential based on collected data
- Evaluation of measures and challenges
- Technical and socio-economic potentials and challenges **deliverable is a report- MaK**
- Explore business opportunities, build business models (prosumers) **deliverable is a report- BIUST**
- Develop a Sustainable Action Plan for all Villages, together with a detailed Implementation Plan for the integrating the knowledge developed through the Demos with the local specificities and characteristics - **deliverable is a report- BIUST**
- Identify the suitable funding instruments for the projects in different countries

Contributors: University of Vaasa, Addis Ababa Science and Technology University, Botswana International University of Science and Technology, Makerere University, Moi University

1.1.3 Task 14.3.: Energy Africa wide network

Task Leaders: Dr Getachew Adam & Addis Ababa Science and Technology University

Contributors: Nebiyu Girgibo & University of Vaasa

Dr Cleophas Mecha & Moi University

Dr Mario Einax & Botswana International University of Science and Technology

Dr Jean Baptiste Kirabira & Makerere University

Objective: To establish an African-wide network of smart energy villages

Action 1: Establish an African-wide network of smart energy villages via LEAP-RE consortium -**Africa-wide network**

Sub-action 1: Build a network involving all partners, villagers, and the local community.

Description of steps:

- Each partner organizes one meeting for the villages and for the whole consortium to foster exchange of experiences and knowledge between the demonstration villages as well as the further project villages
- Building continuous communication

Sub-action 2: Joint publications and establish EV African Network (EVAN).

Description of steps:

- Collaborate in Publication writing: Comparison of results from different parties
- Enhancing the energy-related knowledge and knowhow for defined groups of people through exchange programs and common courses
deliverable is a report- BIUST

Sub-action 3: Identifying the project funding for future projects and apply for other programs, which will be a continuation of this project.

Description of steps:

- Identification of funding calls

Contributors: University of Vaasa, Addis Ababa Science and Technology University, Botswana International University of Science and Technology, Makerere University, Moi University.

1.1.4 Task 14.4.: Policy and recommendations

Task Leaders: Dr Mario Einax & Botswana International University of Science and Technology

Contributors: Ari Haapanen & University of Vaasa

Dr Jean Baptiste Kirabira & Makerere University

Dr Cleophas Mecha & Moi University

Dr Getachew Adam & Addis Ababa Science and Technology University

Action 1: Identify and suggest tools and options to the barriers and obstacles that need to be removed and the drivers and opportunities that will need to be supported - **Policy and recommendation process**

Sub-action 1: Assessment of relevant policies and initiatives related to the EVs.

Description of steps:

- Find out the energy regulation and hindrance to proposed EV solutions **deliverable is a report- MaK**
- Analysis of obstacles and success factors to innovation in EVs
deliverable is a report- MU
- Compare the policies in different countries- interactive workshop

*Sub-action 2: Policy recommendations guidelines and roadmap **deliverable is a report- AASTU.***

Contributors: Botswana International University of Science and Technology, University of Vaasa, Makerere University, Moi University, Addis Ababa Science and Technology University.

Start date – due date: M20-M56

1.2 Deliverables

Number	Title	Due Date	Responsible
D 1.1	Definition of EV methodology framework with national data	M21	UVA
D 1.2	Report: recommended data processing tools for local implementation in pilot villages	M36	Mak
D 2.1	Report on EV vision and roadmap	M56	UVA
D 2.2	Report on background analysis for pilot villages	M18	MU
D 2.3	Report on Village Stakeholder Groups development	M32	AASTU
D 2.4	Technical and socio-economic potentials and challenges of each demo village	M39	MaK
D 2.5	Advanced implementation plans: expansion and replication possibilities	M48	BIUST
D 2.6	Three business models: post-project consolidation and management	M53	MU
D 2.7	Detailed Implementation and Sustainable Action Plans	M54	BIUST
D 2.8	Identification of relevant inspiring cases	M39	AASTU
D 3.1	Report on the web application implementation	M23	UVA
D 3.2	Report on recommended data exchange conceptual model and associated use cases for large-scale replication	M29	BIUST
D 4.1	Mapping of policies and initiatives supporting Energy Villages Concept	M30	MaK
D 4.2	Identification of obstacles to innovation and success factors	M25	MU
D 4.3	Policy Recommendations Guidelines and Road-Map	M54	AASTU

1.3 Milestones

Number	Title	Verification mean	Due Date	Responsible
M3.1	Sustainable Energy and Climate Action Plans	ADD	M45	BIUST
M3.2	Development of the EV African Network	ADD	M42	AASTU
M4.1	ICT tools for demos villages	ADD	M15	UVA
M4.2	Demo Data collection platform	ADD	M18	UVA

1.4 Interaction/synergies with other WPs

Number	Interaction description	Responsible
1	Project Management will be carried out in synergy with WP3 and the Pillar 2 Board Governance indications	UVA
2	Information on the current capacity building /training activities within each WP9-WP16 will be valorized to increase the “impact” of each capacity building activity back to WP9-WP16	UVA
3	Based on the sharing during the first months of LEAP-RE, a constant link on cross-cutting interests relative to Technological development, methodological approach, Modelling tools and other R&I related topics that will take place into WP9, WP10, WP11, WP12, WP13, WP14, WP15, WP16 is promoted in Task 3.1	UVA
4	Scientific Dissemination will be carried out in agreement with the Scientific Dissemination Strategy defined in WP3	UVA
5	Other dissemination activities will follow the guidelines provided by WP4 in the LEAP-RE Communication and Awareness Raising strategy	UVA
6	Monitoring and Evaluation will be carried out receiving input from the M&E plan for Pillar 2 developed in WP3 and coordinated by WP5	UVA
7	Financial Reporting will be managed by WP1 and supported by the WP leader and WP3 Leaders	UVA

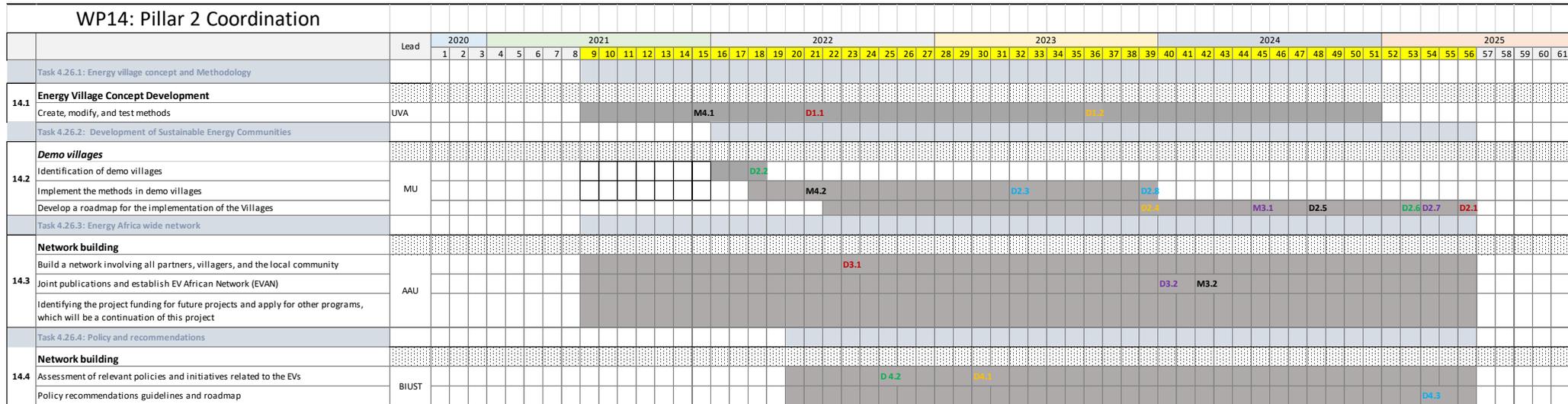
1.5 Risks

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	Proba	Impact
Task 2, 3	Failure to conduct large gathering and data collection due to natural pandemics (COVID-19)	Partners will contact small targeted groups and well as post questionnaire.	2	4
Task 1	Lack of availability /openness in the data for the definition of EVs and EVIS.	The partners will find alternative and/or parallel methods that combine available data with	1	3

		validated estimations when no or little information is found.		
Task 1	Not enough social intervention or lack of agreement in the definition of the roadmap and vision.	The expertise collected by the partners will be used for establishing the most beneficial strategy when the roadmap cannot be clearly defined, always considering energy potential, social acceptance, available infrastructure, economic factors and environmental impact.	1	3
Task 2	Proactive participation of local inhabitants and private property owners.	Workshops at each demonstration site mitigate these risks.	3	5
Task 4	Interoperability and scalability issues of the ICT tools (monitored through the milestone MSX).	Specific testing works are anticipated to decrease the likelihood and impact of that risk. One mitigation measure will be to allow the demonstrations to run in a degraded mode while fixing the issues (avoiding delays in the demonstrations).	1	5

Annex 1: WP14 GANTT Chart



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