Presentation of a more detailed Plan of Activities for the whole 12

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Summary

Detailed Description of Work for WP12 (RE4AFAGRI)

Approval

Date	By
2021-10-13 13:00:52	Dr. Manfred HAFNER (HEAS)
2021-10-13 14:12:17	Mr. Léonard LéVêQUE (LGI)

1.1   Description of WP12 – RE4AFAGRI

See Annex 1: WP12 GANTT Chart

Work Package Leader: Manfred HAFNER, HEAS

1.1.1   Task 12.1: Tailoring research and methods to African realities

Task Leaders:
 HEAS and PoliMI
Contributors:
- TFE
- UR/CAVM
- UNZA
- IIASA
- UCT

Objective: Set up a tight collaboration between the partners responsible of all project activities, combining their experience in modelling electricity access systems in real world contexts and a truly local view on the social, environmental, and economic contexts inquired.

Actions:
1. Energy, water and land technologies to be assessed in modelling & business model research: current situation and technological space; [HEAS, POliMI TFE, UR/CAVM, UNIZA, IIASA, UCT]
2. Definition of policy objectives to be prioritized, their synergies and trade-offs; [HEAS, PoliMI, TFE, UR/CAVM, UNIZA, IIASA, UCT]
3. Understanding of the institutional frameworks in the contexts inquired; [HEAS, PoliMI, TFE, UR/CAVM, UNIZA, IIASA, UCT]

1.1.2   Task 12.2: Integration of modelling infrastructure

Task Leader: IIASA
Contributors:
- UCT
- POLIMI

Objective: Advance the state-of-the-art of energy-water nexus modelling by bridging the current gap between large-scale and local-scale frameworks and agricultural and electrification modelling.

Actions:
1. Sharing code, data, and co-validating modelling approaches; [IIASA, UCT, PoliMI]
2. Developing and publishing a standalone user-friendly platform that can be conveyed to the partners and passed on to the broader community through training groups; [IIASA, UCT, PoliMI]

1.1.3   Task 12.3: Field data collection, calibration, and validation

Task Leader: UCT
Contributors:
- IIASA
- UR/CAVM
- UNZA
- PoliMI

Objective: Evaluate the accuracy and the level of insight provided by the platform (validation); adjustment of parameters and functions to tailor the modelling framework to the aims of the project.

Actions:
1. Collecting data from stakeholders (e.g. ministry, statistical offices, smallholder consortia; [UCT, IIASA, UNZA, UR/CAVM, PoliMI]
2. If necessary, carrying out fieldwork; [UCT, UNZA, UR/CAVM]
3. Model calibration and validation; [UCT, IIASA, PoliMI]

1.1.4   Task 12.4: Business models and market validation

Task Leader: TFE
Contributors:
- UR/CAVM
- UNZA
- IIASA
- UCT
- PoliMI
- HEAS

Objective: Assess the market-readiness of an Integrated Planning Tool, test various business model scenarios, characterize energy/water/agriculture opportunities and market dynamics (including value chain mapping).

Actions:

1. Carrying out best practice research and knowledge / tool gap analysis for renewable energy for rural development in Africa; [TFE, UCT, UNZA, UR/CAVM, PoliMI]
2. Organize working groups with practitioners, stakeholder interviews, deep-dive case studies; [TFE, UCT, UNZA, UR/CAVM, PoliMI]
3. Develop a data-supported decision making framework design; [TFE, UCT, IIASA, UNZA, UR/CAVM, PoliMI]
4. Recommendations for stakeholders across the decision-making spectrum; [TFE, UCT, IIASA, UNZA, UR/CAVM, PoliMI, HEAS]

1.1.5 Task 12.5: Capacity building: model training for research institutions

Task Leader: IIASA
Contributors:

- TFE
- UCT
- PoliMI
- UNZA
- UR/CAVM
- HEAS

Objective: Share knowledge about the modelling platform with research institutions in Africa and in Europe and enable those research institutions to become autonomous in operating the platform and applying it to local contexts.

Actions:

1. Preparation of training material for the training workshops; [IIASA, TFE, UCT, PoliMI]
2. Organization of a set of training workshops in different African countries focused at sharing knowledge about the modelling platform developed (i.e. the code, concepts, and data); [IIASA, TFE, UCT, PoliMI, UNZA, UR/CAVM, HEAS]

1.1.6 Task 12.6: Dissemination and capacity building: enabling adapted business models and policy frameworks for private sector and policymakers

Task Leaders: HEAS and PoliMI
Contributors:

- TFE
- UR/CAVM
- UNZA
- IIASA
- UCT

Objective: Support the policymakers in establishing policy frameworks that ensure: (i) that the business models identified can be successfully implemented by local entrepreneurs; and (ii) that the technical and environmental requirements to fulfil development objectives in rural areas are achieved. The task will also ensure the transfer and utilization of the project's results beyond the project duration and partnership.

Actions:

1. Organization of a number of high-level policy discussions where the key implications from both the modelling research results and the business model frameworks and recommendations are communicated and debated with policy partners, in line with the dissemination strategy of WP3; [HEAS, PoliMI, TFE, UR/CAVM, UNIZA, IIASA, UCT]
2. Organisation of two major regional conferences in Africa with high-level stakeholders, in line with the dissemination strategy of WP3; [HEAS, PoliMI, TFE, UR/CAVM, UNIZA, IIASA, UCT]

1.1.7 Task 12.7: Scientific coordination and administrative management & communication

Task Leader: HEAS
Contributors:
- TFE
- UR/CAVM
- UNZA
- IIASA
- UCT
- PoliMI

Objective: Scientific coordination and monitoring projects activities; communication and awareness raising; administrative and financial management.

Actions:
1. Implement a WP12 communication platform to facilitate the information flow among the partners and organization of regular WP12 internal coordination meetings; [HEAS, TFE, UR/CAVM, UNIZA, IIASA, UCT, PoliMI]
2. Monitor the project's progress and proper interactions between tasks to ensure that the project's objectives are achieved on time and according to the budget; [HEAS, TFE, UR/CAVM, UNIZA, IIASA, UCT, PoliMI]
3. Scientific and financial reporting; [HEAS, TFE, UR/CAVM, UNIZA, IIASA, UCT, PoliMI]
4. Communication and promotion of WP12 results targeted to external stakeholders, scientific community and potential end-users of the products/services developed, also in interaction with WP4; [HEAS, TFE, UR/CAVM, UNIZA, IIASA, UCT, PoliMI]

1.2 Deliverables

Number	Title	Due Date	Responsible
D12.1	Presentation of a more detailed Plan of Activities for the whole WP12	M9	HEAS
D12.2	Joint EU-AU report on agreed project vision associated to Task 12.1	M22	HEAS and PoliMI
D12.3	Integrated platform source code on Github as main deliverable of Task 12.2	M29	IIASA
D12.4	User guide for the modelling platform on Github as second deliverable of Task 12.2	M32	IIASA
D12.5	Joint EU-AU report on the platform testing and validation activity as deliverable of Task 12.3	M27	UCT

D12.6	Joint EU-AU synthesis report on the business models research as deliverable for Task 12.4	M32	TFE
D12.7	Report on the capacity building activities as deliverable for Task 12.5	M39	IIASA
D12.8	Joint EU-AU policy report on the enabling policy framework as deliverable for Task 12.6	M42	HEAS and PoliMI
D12.9	Report about the outcome on scientific collaboration as deliverable of Task 12.7	M42	HEAS

1.3   Milestones

Number	Title	Verification means	Due Date	Responsible
M12.1	Kick-off meeting to agree on a detailed work plan and interactions among partners	Minutes of the meeting	M7	HEAS
M12.2	Progress meeting on Tasks 12.1, 12.2, 12.3, 12.4	Minutes of the meeting	M13	HEAS
M12.3	Progress meeting on Tasks 12.1, 12.2, 12.3, 12.4	Minutes of the meeting	M19	HEAS
M12.4	Progress meeting on Tasks 12.2, 12.3, 12.4, 12.6	Minutes of the meeting	M25	HEAS
M12.5	Progress meeting on Tasks 12.2, 12.4, 12.5, 12.6	Minutes of the meeting	M31	HEAS
M12.6	Progress meeting on Tasks 12.5, 12.6	Minutes of the meeting	M37	HEAS

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	HEAS
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	HEAS
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	HEAS

4	**Scientific Dissemination** will be carried out in agreement with the Scientific Dissemination Strategy defined in WP3	HEAS
5	**Other dissemination** activities will follow the guidelines provided by WP4 in the LEAP-RE Communication and Awareness Raising strategy	HEAS
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	HEAS
7	**Financial Reporting** will be managed by WP1 and supported by the WP leader and WP3 Leaders	HEAS

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
R12.1	Limited integration of the models, less capability to provide multi-scale insight.	(P) Long-standing discussion and cooperation among the model developers (C) Rewriting portions of the source codes to allow for a greater integrability.	2	3
R12.2	Need to recur to more approximations, interpolation, assumptions etc. → less precision.	(P) Models already running. Preliminary data sharing ongoing. (C) Local partners support collection of missing data from ministries, organisations, field visits etc.	3	3
R12.3	Low data accuracy jeopardises the validity of model output	(P) Ensure sufficient sample size and questionnaires designed consistent with best practice (C) Triangulate survey data with geospatial data and fill gaps in governmental data with industry information.	3	4
R12.4	The models are underutilised after the end of the project → limited impact is achieved.	(P) Detailed documentation and material for the model training published (C) Special effort devoted to identify most suitable local research institutions.	2	4

R12.5	The working groups on business models and policy lack key stakeholders	(P) Involve all stakeholders in the project (updates, meetings, newsletter) (P) African-wide network of the SDGC/A project partner	2	4

Annex 1: WP12 GANTT Chart

WP12: RE4AFAGRI

ID	Task	Lead	Timeline / Milestones & Deliverables
	Task 12.1 Tailoring research and methods to African realities	FEEM	D12.2 (month 22)
12.1.1	Energy, water and land technologies to be assessed in modelling & business model research: current situation and technological space		
12.1.2	Definition of policy objectives to be prioritized, their synergies and trade-offs		
12.1.3	Understanding of the institutional frameworks in the contexts inquired		
	Task 12.2 Integration of modelling infrastructure	FEEM	D12.3 (month 28), D12.4 (month 31)
12.2.1	Sharing code, data, and co-validating modelling approaches		
12.2.2	Developing and publishing a standalone user-friendly platform that can be conveyed to the partners and passed on to the broader community through training groups		
	Task 12.3 Field data collection, calibration, and validation	UCT	D12.5 (month 25)
12.3.1	Sharing code, data, and co-validating modelling approaches		
12.3.2	Developing and publishing a standalone user-friendly platform that can be conveyed to the partners and passed on to the broader community through training groups		
12.3.3	Model calibration and validation		
	Task 12.4 Business models and market validation	TFE	D12.6 (month 32)
12.4.1	Carrying out best practice research and knowledge / tool gap analysis for renewable energy for rural development in Africa		
12.4.2	Organize working groups with practitioners, stakeholder interviews, deep-dive case studies		
12.4.3	Develop a data-supported decision making framework design		
12.4.4	Recommendations for stakeholders across the decision-making spectrum		
	Task 12.5 Capacity building: model training for research institutions	IIASA	D12.7 (month 40)
12.5.1	Preparation of training material for the training workshops		
12.5.2	Organization of a set of training workshops in different African countries focused at sharing knowledge about the modelling platform developed (i.e. the code, concepts, and data)		
	Task 12.6 Dissemination and capacity building: enabling adapted business models and policy frameworks for private sector and policymakers	FEEM	D12.8 (month 44)
12.6.1	Organization of a number of high-level policy discussions where the key implications from both the modelling research results and the business model frameworks and recommendations are communicated and debated with policy partners, in line with the dissemination strategy of WP3		
12.6.2	Organisation of two major regional conferences in Africa with high-level stakeholders, in line with the dissemination strategy of WP3		
	Task 12.7 Scientific coordination and administrative management & communication	FEEM	M12.1, D12.1, M12.2, M12.3, M12.4, M12.5, M12.6, D12.9
12.7.1	Implement a WP12 communication platform to facilitate the information flow among the partners and organization of regular WP12 internal coordination meetings		
12.7.2	Monitor the project's progress and proper interactions between tasks to ensure that the project's objectives are achieved on time and according to the budget		
12.7.3	Scientific and financial reporting		
12.7.4	Communication and promotion of WP12 results targeted to external stakeholders, scientific community and potential end-users of the products/services developed, also in interaction with WP4		

Legend
D = Deliverable
WS = Workshop, event, etc.
R = Report
* = other activity

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