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<http://www.leap-re.eu/>



LEAP-RE

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

Material of online training program

Authors : Mrs. Leslie ASHBURNER (UCT)

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Project officer: Irene PINEDO

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Summary

As part of the capacity building aims of SETADISMA (WP13), the partners developed a suite of five online trainings, Off-Grid Solutions for a Sustainable Energy Transition in Africa. The trainings are uploaded onto the LEAP-RE Knowledge Platform, delivered on the EdApp platform and highlighted on the LEAP-RE SETADISMA webpage with access to the EdApp. The trainings have been promoted via LEAP-RE you tube and the opportunity will be disseminated by the partners in a coordinated fashion over the next few years.

Approval

Date	By
2025-02-05 12:19:54	Dr. Riccardo MEREU (POLIMI)
2025-02-05 17:43:03	Mr. Léonard LÉVÊQUE (LGI)



LEAP-RE

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

Research & Innovation Action

WP13 SETADISMA

Task 13.8 Development and Implementation of Training Programs

Version N°1

Author:

Leslie Ashburner, University of Cape Town

Disclaimer

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Deviations from Annex 1

D13.8 “Material of online training program” (Resp. UCT) to be **postponed from M42 to M48**, coherently with the postponing of the end of the WP13.

Task 13.8 Development and Implementation of Training Programs

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1. Summary

As part of the capacity building aims of SETADISMA (WP13), the partners developed a suite of five online trainings, **Off-Grid Solutions for a Sustainable Energy Transition in Africa**.

The trainings have been uploaded onto the LEAP-RE Knowledge Platform.

The results can also be found on the [LEAP-RE SETADISMA webpage](#) with access to the trainings on the EdApp. News of the trainings will be disseminated by the partners in a coordinated fashion over the next few years.

2. Keywords

online trainings, renewable energy,

3. Results

Polimi and UCT facilitated the design of a suite of five online trainings, Off-Grid Solutions for a Sustainable Energy Transition in Africa. The materials were based on the emerging and tested content from the RE Schools and then further adapted. Selected WP13 partners developed the 5 online training courses.

The trainings have been uploaded onto the LEAP-RE Knowledge Platform (see snapshot below).



OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 10: Case Study, Gidwaga Village, Kenya This lesson covers an application of MicrogridSPY modelling to a real-world case study, Gidwaga Village, Kenya. It includes a detailed overview of the village's energy needs, the MicrogridSPY model, and the results of the simulation.	OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 9: Technology Characterisation PART A This lesson covers the Technology Characterisation module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 8: Resource Assessment This lesson covers the Resource Assessment module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 8: Energy Modelling a Community Load Curve This lesson covers the Energy Modelling module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 5: Load Demand Assessment This lesson covers the Load Demand Assessment module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 4: Introduction to MicrogridSPY This lesson covers the Introduction to MicrogridSPY module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 3: Energy Frameworks This lesson covers the Energy Frameworks module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 2: Hybrid Mini-Grids This lesson covers the Hybrid Mini-Grids module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 3: Energy System Modelling This lesson covers the Energy System Modelling module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 1: The need for off-grid electricity solutions This lesson covers the need for off-grid electricity solutions module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 6: Technology Characterisation PART B This lesson covers the Technology Characterisation module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	OFF-GRID ENERGY SYSTEM MODELLING WITH MICROGRIDSPY Lesson 6: Understanding the Renewable MicrogridSPY This lesson covers the Understanding the Renewable MicrogridSPY module in MicrogridSPY. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 9: How to Pitch Your Solar Energy Project to Investors This lesson covers the How to Pitch Your Solar Energy Project to Investors module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 8: Business Models in the Solar Off-Grid Sector This lesson covers the Business Models in the Solar Off-Grid Sector module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 7: The Loan Cycles This lesson covers the Loan Cycles module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 6: Value Proposition Canvas This lesson covers the Value Proposition Canvas module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 5: Solar Off-Grid company Case Study: Astar Technologies This lesson covers the Solar Off-Grid company Case Study: Astar Technologies module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 4: Customer Segmentation This lesson covers the Customer Segmentation module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 3: Business Model Canvas This lesson covers the Business Model Canvas module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	ASSESSMENT OF RENEWABLE ENERGY RESOURCES Lesson 2: Solar Resource Assessment This lesson covers the Solar Resource Assessment module in Assessment of Renewable Energy Resources. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
ASSESSMENT OF RENEWABLE ENERGY RESOURCES Lesson 1: An Introduction to Renewable Energy Resource Assessment for Off-Grid Solutions This lesson covers the Introduction to Renewable Energy Resource Assessment for Off-Grid Solutions module in Assessment of Renewable Energy Resources. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	ASSESSMENT OF RENEWABLE ENERGY RESOURCES Lesson 4: Satellite Applications This lesson covers the Satellite Applications module in Assessment of Renewable Energy Resources. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
ASSESSMENT OF RENEWABLE ENERGY RESOURCES Lesson 3: Wind Resource Assessment This lesson covers the Wind Resource Assessment module in Assessment of Renewable Energy Resources. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 2: Market Analysis and Opportunity Identification in the Off-Grid Solar Sector This lesson covers the Market Analysis and Opportunity Identification in the Off-Grid Solar Sector module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
ENTREPRENEURSHIP IN THE OFF-GRID SOLAR ENERGY SECTOR Lesson 1: Introduction to the Solar Off-Grid Sector in Africa This lesson covers the Introduction to the Solar Off-Grid Sector in Africa module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	Introduction to the Components of a Solar System This lesson covers the Introduction to the Components of a Solar System module in Entrepreneurship in the Off-Grid Solar Energy Sector. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.
DATA FOR RENEWABLE ENERGY SYSTEMS Lesson 1: Introduction to data collection and analysis This lesson covers the Introduction to data collection and analysis module in Data for Renewable Energy Systems. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.	DATA FOR RENEWABLE ENERGY SYSTEMS Lesson 5: Communicating Findings for Impact This lesson covers the Communicating Findings for Impact module in Data for Renewable Energy Systems. It includes a detailed overview of the module's purpose, the data required, and the results of the simulation.

The five courses are published on the EdApp Learning Platform, an Open Access platform where anyone who has the link to the courses can register and complete the trainings. One of the reasons for selecting this particular app, in addition to it being Open Access, is that it is very suitable for using in a mobile phone device, and this makes it more likely to be used by students without laptops.

The courses are comprised of between four and ten lessons each, and include tests and practical exercises for students to check their learning as they progress. The courses are narrated.

Information about the courses and access to the trainings is on the [LEAP-RE SETADISMA webpage](#) as follows:

7. Improve collaboration between Academia, SME, Energy Utilities, Government

Online Trainings

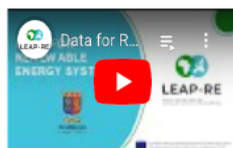
Off-Grid Solutions for a Sustainable Energy Transition in Africa

Welcome to a suite of five online trainings developed by the LEAP-RE SETADISMA partners.



Assessment of Renewable Energy Resources by National Laboratory of Energy and Geology (LNEG)

This course focuses on the assessment of wind and solar resources. In this course, participants will learn how to develop a measurements campaign for renewable energy resource assessment and how to use Reanalysis data and mesoscale modelling to achieve this. The course comprises four lessons and, with the practical exercises, will take approximately seven hours to complete.



Data for Renewable Energy Systems by Strathmore University

In this course, the student will explore the world of data and how it can be used to drive innovation in renewable energy systems. You'll learn how to classify data and choose the right analysis techniques for each type. You will also learn about the process of data cleaning and preparation. You'll learn how to transform raw data into compelling narratives that inform and inspire action. The course comprises five lessons and will take approximately seven hours to complete.



Business and Socio-Economic Contexts of Mini Grid Development by LUT University, Strathmore University and University of Pisa

The course highlights the complex contexts in which mini grid developers operate in Africa and how the interests of both business and local communities can best be served. The success and sustainability of mini-grid projects rely on effective business models that balance economic viability with social and environmental objectives. The course will cover different types of business models, as well as various approaches that can enhance the impact and financial sustainability of mini-grids. The course comprises five lessons and will take approximately seven hours to complete.



Entrepreneurship in the off-grid solar energy sector by Pan African University Institute of Water and Energy Sciences (PAUWES)

This course aims to give prospective entrepreneurs the knowledge, skills, and insights to navigate the off-grid energy sector in Africa. This course will provide an in depth look at relevant business models to support your entrepreneurship journey in the off-grid solar energy sector. Through case studies and theory, the course highlights the dynamics and strategic opportunities of the off-grid energy sector in Africa, and will help you develop a pitch for your solar energy business project. The course comprises nine lessons and will take approximately 11 hours to complete.



Off-Grid Energy Systems Modelling with MicroGridsPy by SESAM at Politecnico di Milano (Polimi)

This course explores the broad concept of Energy Systems Modelling and highlights a new open-source modelling tool, MicroGridsPy, for identifying the optimal size of hybrid mini-grids for rural areas. Participants will understand how to build, run, and analyse results from models through the use of relevant case studies.

The course comprises 13 lessons and, with the practical exercises, will take approximately 16 hours to complete

4. Dissemination

In addition to the online trainings, we created five short promotional videos to attract potential learners to the trainings. The promotional videos are published on the [LEAP-RE You Tube channel](#), with a link to the [LEAP-RE SETADISMA page](#).

During December 2024, the WP13 partners completed a wide first round of disseminating the videos promoting the online trainings, including via partner networks and LinkedIn pages, as well as to the database of Master of Science and PhD students connected to WP13. Sarah @LGI has also supported dissemination through various official LEAP-RE channels.

5. Going forwards

Going forwards, the intention is to continue disseminating the information about the trainings widely, in multiple 'rounds', every two months.

In addition, provision is made to go beyond offering the courses only on EdApp. All WP13 contributing partners are free to take the OpenAccess training resources and use them on a reputable learning platform of their choice, provided that the LEAP-RE programme and the course author institutions are credited and informed. Partners would then liaise directly with LGI to add the links to the new learning platform to the [LEAP-RE SETADISMA page](#). This way, whoever watches the promotional videos, and comes to the SETADISMA page, will see multiple options for where to access the courses, over time.

All resources for the online trainings are stored in the LGI LEAP-RE Sharepoint folder [here](#) to ensure they can be accessed by WP13 partners as necessary in the future.