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SMILEGOV

Enhancing effective implementation of sustainable energy action plans in European islands through reinforcement of smart multilevel governance

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Manual for Sustainable Energy Projects Implementation

Cluster of Portugal and Cape Verde

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Part. N°		Partner's name	Short name
CO1		Network of Sustainable Aegean Islands - Greece	DAFNI
CB2		Conference of Peripheral & Maritime Regions	CPMR
CB3		Region Gotland – Sweden	GOTLAND
CB4		Ölands Municipal Association - Sweden	ÖLAND
CB5		Hiiu Municipality - Estonia	HIIUMAA
CB6		Saare County Government – Saaremaa - Estonia	SAAREMAA
CB7		European Small Islands Federation	ESIN
CB8		Samsø Energy Academy - Denmark	SE
CB9		Canary Islands Institute of Technology - Spain	ITC
CB10		Regional Agency for Energy and Environment of the Autonomous Region of Madeira - Portugal	AREAM
CB11		Cyprus Energy Agency	CEA
CB12		Local Councils Association – Malta	LCA
CB13		Scottish Islands Federation	SIF

Content

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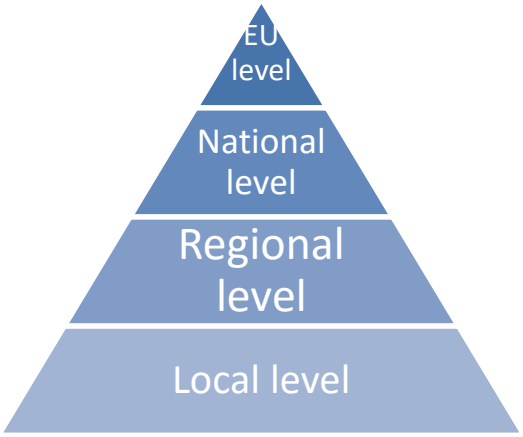
1 Introduction

This manual is supposed to work as support on how to approach different barriers within a good Multi-Level Governance (MLG) project. Multi-level governance can be explained as the effective interaction between different political levels for an improved coordination and coherence between the local, regional, national and European policy level. Also good relations must be in place within each level, for example between different activity areas within a municipality, for processes to run smoothly. This we call Multi-Lateral Governance.

In short, good cooperation is vital for success of projects. Both multi-level and multi-lateral governance is a key concept for SMILEGOV and for this manual.



Multi-Level Governance
Multi-Lateral Governance

The examples of projects included in this manual are the ones concerning the Portuguese Cluster. The manual points on known barriers and suggests a number of different solutions that can be used

to overcome them.

This manual does not provide all the answers and tools needed but it presents a context on why MLG is crucial together with good examples, and how the MLG work could be organized in order to overcome barriers.

2 Outline of the Projects and Barriers

In the Portugal and Cape Verde cluster, the main bankable projects that were worked in the scope of SMILEGOV were:

- Energy efficient street lighting in Madeira and Porto Santo.
- Reversible Hydro Power Plant.
- Battery for energy storage in Porto Santo.
- Biomass district heating to supply hotels and services.
- Energy efficiency in a retirement home.
- Energy efficiency and renewable energy sources in the retrofitting of a hotel.
- Retrofitting of social housing.
- Micro-hydro in water distribution systems.
- Electric buses for the shuttle service Madeira airport-Funchal city.
- Energy efficiency in an Olympic swimming pool.
- Electric vehicles for the public fleets.
- Energy efficiency in a hospital.

For each project, some barriers were identified and analysed, where it was found that the origin of the barriers have common characteristics, thus the main common barriers identified to project development can be grouped in three levels:

- Information and communication.
- Technical.
- Financing.

3 Barrier A – Information and communication

Information and communication barriers relate to the lack of technical knowledge of and experience with technologies and solutions, uncertainty about economic feasibility and financial instruments, including innovative ones, and potential risks. Little information and lack of communication tend to aggravate the perception of risk.

In islands, conditions and requirements are quite different from other territories and a successful project in the mainland or in another island is not a guarantee that it will work in a specific island context, considering the local needs, the small size of the market and cultural characteristics.

This barrier is stronger when the group of promoters and stakeholders, including project designers and planners do not have the right technical and financial skills.

3.1 Examples from good practices

The experience in Madeira shows the importance of a regional agency for energy to establish communication and cooperation links. In some cases, technical needs were identified that could be solved through the know-how and intervention of the energy agency. In other cases, trainings were carried out to overcome some specific common needs.

Workshops were shown to be effective for subjects where information was not sufficient, before the identification of the projects. To address specific barriers, bilateral work sessions and meetings linking the relevant stakeholders were much more effective, because it is easier to focus on the specific problems to be solved and to establish communication with the main key actors and decision makers, who are usually not available for more general workshops and seminars.

From the good practices of SMILEGOV partners, the experience from Samsø, Gotland and Oland related to the participation of stakeholders and communication between different levels of governance could help to overcome some information barriers in Madeira, but these tools have to be adapted to the local cultural and economic context and actual needs.

3.2 The role of Multilevel Governance

Uncertainty about some solutions can be solved with information and better communication between stakeholders on different levels of governance, including local and regional authorities, technology suppliers, installers, project designers, planners and users. For complex projects involving many actors, the communication and cooperation to share information and discuss the project from different angles is fundamental to overcome barriers and to obtain the best results.

An energy agency is fundamental to establish links amongst the stakeholders, to boost cooperation at local, regional, national and international levels, and to provide support and advice on technical issues, economic analysis and financial tools to implement the projects.

3.3 Step-by-step methodology to overcome the barrier

The main steps adopted under SMILEGOV to overcome the barriers related to information and communication were:

1. Discussion with stakeholders through bilateral and common meetings and other ways of communication to confirm the need and common interest of the bankable projects, and to identify the information barriers.
2. Analysis of information and communication barriers to identify causes and solutions.
3. Discussion of solutions to overcome barriers, including creation of communication links, sharing of information and experiences, and training courses.
4. Continuous assistance and follow-up to ensure communication, information and effective cooperation.

4 Barrier B - Technical

Technical barriers are mainly related to the limited capacity of the electric grid to receive energy from intermittent renewable sources, namely wind and solar photovoltaic. As the electric grid is not interconnected to other electric systems and during the night the renewable energy sources may be higher than demand, some energy is rejected, which compromises the economic feasibility and bankability of new projects on renewable energy sources.

4.1 Examples from good practices

The solution to minimise the technical barrier related to the limited capacity of electric grid to receive energy from intermittent renewable sources is to increase the energy storage of the electric system.

In Madeira the energy storage will be based on reversible hydro with water storage. In Porto Santo, as the electric system is considerably smaller, the energy storage will be achieved with stationary batteries. Both projects are considered in SMILGOV as sustainable energy projects.

4.2 The role of Multilevel Governance

The process to implement energy storage solution is complex and needs good communication links among different levels of governance, national, regional and local, and lateral cooperation, namely with environmental departments, to find the optimal solutions to protect water resources and nature conservation.

An energy agency is fundamental to establish links amongst the stakeholders, to promote discussion and cooperation at local, regional, national and international levels, and to support on awareness-raising actions, public acceptance and requirements of financing instruments.

4.3 Step-by-step methodology to overcome the barrier

The main steps adopted under SMILEGOV to overcome the technical barriers related to electric system were:

1. Discussion with stakeholders through bilateral and other ways of communication to about solutions to overcome barriers, including energy storage and funding solutions.
2. Continuous assistance and follow-up to ensure the conditions and requirements for funding.

5 Barrier C - Financing

Financing is a common barrier in all projects, sometimes related with lack of information on financing instruments and sometimes related with legal issues caused by the economic and financial assistance to Portugal, Madeira and municipalities.

Several public organisations in Portugal and in Madeira are near or over their debt limits. In these cases, even for projects that have a safe and short payback, the investment is not possible. As EPC contracts with ESCO can be considered as a debt for public accounting, this solution is also not possible under certain conditions.

5.1 Examples from good practices

The experience in Madeira shows the importance of a regional energy agency to establish partnerships and prepare financing solutions.

The example from street lighting bankable project in Madeira and Porto Santo shows a solution to secure financing through a public-public partnership, between the utility and the municipalities, when municipalities have severe constraints for financing, to not increase debt and even to establish an EPC contract with an ESCO.

From the good practices of SMILEGOV partners, the experience from Gotland in the procurement procedures to create a biogas market from local resources to be used in local buses is an inspiration on how to create opportunities for private investment that supports a public policy to reduce fossil fuels and CO2 emissions. In this process, the public authority acted as a regulator and facilitator with guarantees for the players to promote a new energy carrier in the island without public investment.

5.2 The role of Multilevel Governance

Economic and financial risk perception and knowledge about financing instruments can be improved with information and more effective communication between stakeholders on different levels of governance, including local and regional authorities, technology suppliers, installers, project designers, planners and users.

Cooperation and partnerships among organisations for common initiatives can minimize the risk and allow to obtain better conditions for projects and financing solutions. Islands are usually small markets and the cooperation is an important instrument to get a larger scale.

An energy agency is fundamental to establish links amongst the stakeholders, to promote partnerships at local, regional, national and international levels, and to support on requirements of financing instruments.

5.3 Step-by-step methodology to overcome the barrier

The main steps adopted under SMILEGOV to overcome the barriers related to financing were:

3. Discussion with stakeholders through bilateral and common meetings and other ways of communication to confirm the need and common interest of the bankable projects, and to identify the costs, savings, resources available and financing barriers.
4. Analysis of economic feasibility of the projects, available resources and financing barriers.
5. Discussion of solutions to overcome barriers, including alternative and innovative financing schemes.
6. Continuous assistance and follow-up to ensure the conditions and requirements for funding through public incentives programmes, EPC contracts with ESCO, loans and other financing instruments.

6 Summary table

Barrier	Examples	Role of MLG	Key steps of the methodology
Barrier A - Information and communication	• Existence of energy agency. • Bilateral work sessions, meetings and communication, linking the relevant stakeholders. • Participation of stakeholders and communication between different levels of governance.	• Information and communication between stakeholders on different levels of governance. • Energy agency to establish links amongst stakeholders, to boost cooperation and to provide support on requirements to implement the projects.	• Discussion with stakeholders. • Analysis to identify causes and solutions. • Discussion of solutions to overcome barriers. • Continuous assistance and follow-up.
Barrier B - Technical	• Energy storage in Madeira based on reversible hydro. • Energy storage in Porto Santo based on batteries.	• Communication links among different levels of governance, national, regional and local, and lateral cooperation. • Energy agency to establish links amongst the stakeholders, to promote discussion and cooperation, and to provide support on requirements to implement the projects.	• Discussion with stakeholders. • Continuous assistance and follow-up.
Barrier C - Financing	• Existence of energy agency. • Financing scheme for street lighting in Madeira and Porto Santo.	• Information and communication between stakeholders on different levels of governance.	• Discussion with stakeholders. • Analysis of economic feasibility of the projects, available resources and financing barriers. • Discussion of solutions to overcome barriers.

	• Biogas project in Gotland from local resources for local buses.	• Cooperation and partnerships among organisations for common initiatives. • Energy agency to establish links amongst stakeholders, to promote partnerships and to support on awareness, public acceptance and requirements of financing instruments.	• Continuous assistance and follow-up.

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