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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 Estonia**

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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

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## Content

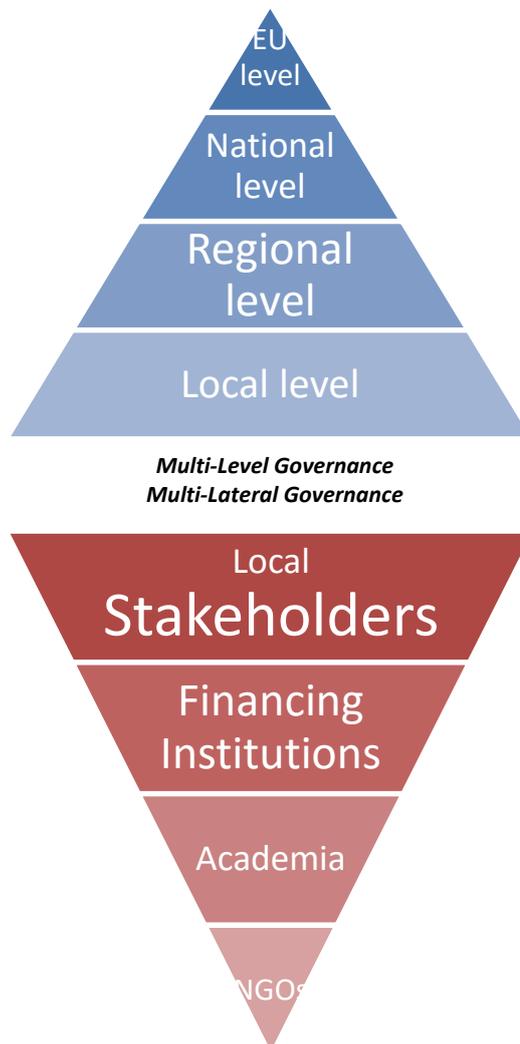
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# 1 Introduction

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.



The examples of projects included in this manual are the ones concerning the Estonian 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

The projects Estonian cluster have been working on are the following:

### 2.1 District heating system at Lauka and Kõrgessaare areas

Starting from 1990-s many residential areas, apartment houses and public buildings started to disconnect from district heating and created their own boiler solutions, mostly based on oil or wood. The reason for that was the high energy loss on pipes and increasing prices in district heating. Today wood- or pellet-boilers are more efficient, also cogeneration of heat and electricity from biomass has become feasible for smaller communities.

The main barriers are:

- Effective communication missing to convince local people joining district heating again, after 25 years, when this solution was available and functioning.
- Lack of financing and capability of co-financing by citizens and municipality

### 2.2 Energy efficiency and RES in Kahtla School – Saaremaa

Kahtla School in Saaremaa is a small local school with 35 children, built in 1940 as typical schoolhouse of that period. The building is in bad condition and heated locally with coal. This solution is inefficient, expensive and not environmental friendly.

The project main elements are refurbishing the existing building to improve energy efficiency and installing renewable energy heating system (solar, biomass or geothermal).

The main barriers are:

- Lack of experiences in renovation of old public buildings to modern low-energy building.
- Lack of financing resources.
- Lack of awareness about climate-issues within the community.

### 2.3 LED streetlights and smart control systems in Nasva – Saaremaa

Nasva is the historical fishermen village with a population of circa 380 people. Most of the street lighting system in the village needs reconstruction. Old system is more than 20 years old and energy inefficient.

The goal of the project is to create smart and sustainable street-lighting system using latest technology.

New street lighting system is planned, including poles, cables and LED lights. Area to be covered with the street lights is about 100 ha and 380 inhabitants, 10 enterprises and public areas.

The main barriers are:

- Lack of know-how about LED lights, to establish requirements for call for tenders.
- LED technology is changing rapidly and solutions are soon outdated.
- Need of financial support.



## 2.4 Construction of the low-energy social centre building – Kärđla

Integration of low-energy and low-carbon solutions in the new social buildings, including efficient systems of energy use and control and renewable energy sources.

The main barriers are:

- Lack of experience in low energy buildings in Estonia
- No assured financial scheme for implementing the project
- Lack of co-financing resource for implementing the project

## 2.5 Off-shore wind farm NW and NE of the island Hiiumaa – Hiiumaa

Installation of 100-200 wind generators with the total capacity of 700-1100 MW at the shallows of the Apollo and Vinkov. Annual production of the wind park is expected to be around 2.4-3.8 TWh. Together with the wind farm development, a 33 kV interconnection electric cable will be built from mainland to the island, to secure stable power transmission.

The main barriers are:

- Strong opposition by some local interest groups
- Local uncertainty about environmental impact on landscape and bird wild life
- High initial investment
- Lack of co-financing resource in the local community for participating in the project

## 2.6 LED streetlights and smart control systems – Hiiumaa

Cabling, poles and streetlights will be changed to new efficient LED technology lights. Smart control systems will be introduced to arrange better usage of light mode during the different months of the year, according to the amount of natural light.

The main barriers are:

- High maintenance costs of the old, depreciated street lighting
- High energy costs limit the time municipalities can use streetlights
- No assured financial scheme for implementing the project
- Lack of co-financing resource for implementing the project

## 2.7 Vormsi CHP

Central heating boiler is more than 10 years old and in very bad condition. As Vormsi has the goal to be 100% energy self-sufficient and there are large amounts of biomass (wood) on the island, introducing CHP is the logical step.

Companies based on the island have the need for heat in summertime. That offers a very good starting point for CHP solutions.

The main barriers are:

- Lack of private funding
- Necessary change in local planning act
- Possibly national approval needed concerning environmental impact



## Common barriers for all projects

Common question for all projects were the following:

- why communities are passive regarding energy projects
- why they are not interested to participate and contribute.

Common barriers identified for all projects are:

1. Lack of available technical consulting options
2. Energy issues not prioritized
3. Weak cooperation between stakeholders

## 3 Barrier A. Cooperation between stakeholders is weak

Reasons for weak cooperation between stakeholders are:

- Legal obstacles
- Lack of local success stories
- Lack of knowledge within community
- Little experience about what is done in other countries related to energy
- Lack of trust in cooperatives
- Lack of resources to participate on energy cooperatives
- The concept of involvement and representative democracy is understood in different ways

### 3.1 Examples from good practices

Good examples can be found in the cluster of Scotland where communities have an important role to play in energy projects. Especially projects in Isle of Bute where different stakeholders are involved in energy projects. So BUTE PV Bulk Buy in Isle of Bute includes farmers; Local Council; social housing providers and their tenants; private householders and others, as well as electricity company.

An other project in Isle of Bute – Biodiesel, was initiated and operated by a Community Enterprise. The local Authority (Argyll and Bute Council) was a beneficiary, insofar as a convenient and efficient disposal route was offered for waste cooking oil from its local catering operations (schools etc.).

From Scotland we can learn how to activate communities and involve different stakeholders like farmers, landowners etc.

### 3.2 The role of Multilevel Governance

MLG ensures that national authorities will be on board and take the initiative to solve legal obstacles and facilitates cooperation between all stakeholders, including the local community. Step-by-step methodology to overcome the barrier

To overcome this barrier, we used:

- Logical Framework Approach (LFA)
- Field trip to Scotland
- Mentoring programme and specialists by Estonian Development Fund



## 4 Barrier B. Lack of technical consulting

Lack of technical consulting options is an important barrier as some good ideas cannot be realised, if there is no possibility to receive expert's advice. In fact there is no requirement for involving specialists in the process. No national energy agency is established in Estonia, while municipalities are faced with significant shortage in financing. Therefore community awareness and interest and motivation of municipalities is low.

### 4.1 Examples from good practices

Good examples are clusters of Cyprus, Sweden and Portugal, where they have strong support by national or regional energy agencies. Gotland is the good example, where the island is one strong municipality, and can support development of sustainable energy in the best way.

### 4.2 The role of Multilevel Governance

The national level is important to support the establishment of energy agencies. Also municipalities' capacity can be strengthened through the hiring of energy specialists.

### 4.3 Step-by-step methodology to overcome the barrier

To overcome this barrier, we used:

- Logical Framework Approach (LFA)
- Mentoring programme and specialist by Estonian Development Fund
- Sustainable energy training program for different stakeholders

## 5 Barrier C. Energy issues are not prioritized

Reasons for this barrier are:

- Sense of long-term perspective is missing
- Scandinavian success stories are not believed
- Lack of local success stories
- Community is not interested in development
- No trust in the possibility for investments
- Lack of knowledge within community
- Simple and clear message is missing
- Little experience about what is done on other countries related to energy
- Lack of resource for positive motivation
- No effective communication channel (politicians are not trusted)

### 5.1 Examples from good practices

Good examples are regional and local government practises in Gotland, Öland and Samsö where sustainability and energy issues are considered as one of the main development fields in all strategic



documents.

## 5.2 The role of Multilevel Governance

National level should pay more attention on the role of local level implementing national strategic goals. Local governments should hire specialists and use consultants on identifying options for integrating energy targets into general development plans. It is important to involve all levels from national to local for solving the barrier.

## 5.3 Step-by-step methodology to overcome the barrier

To overcome this barrier, we used:

- Logical Framework Approach (LFA)
- Sustainable energy training program for different stakeholders
- Field trip to Scotland



## 6 Summary table

Barrier	Examples	Role of MLG	Key steps of the methodology
Cooperation between stakeholders is weak	cluster of Scotland	National level concerning to legal obstacles. Local communities concerning to cooperation between stakeholders.	Logical Framework Approach (LFA)
Lack of technical consulting options available	clusters of Cypros, Sweden and Portugal	National level concerning to energy agencies. Municipalities concerning to energy specialists needed.	Logical Framework Approach (LFA)
Energy issues are not prioritized	Gotland, Öland and Samsö	All levels from national to local have important role.	Logical Framework Approach (LFA)