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# ETU Guidelines Mainstreaming implementation tool for energy transition actions

June 2022



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### ETU GUIDELINES

Interreg MED Renewable Energy Community  
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# 1. Background

The Renewable Energy Project is a project co-financed by the European Regional Development Funds in the framework of the Interreg Mediterranean Programme. The Programme is organised into thematic communities, coordinated by eight horizontal projects. **Renewable Energy** is the horizontal project dedicated to the promotion of renewable energies in rural and island areas of the Northern Mediterranean Region. During the first phase of the project, from 2016 to 2019, the community had six modular projects that developed planning, governance and management tools around renewable energies. The project developed the Ecosystem Transition Unit (ETU) model with the aim of incorporating the results into a roadmap for a common ecological transition. The project is currently in the second phase of development, which will last until November 2022. The main objective is to enable the transferring and mainstreaming of the ETU model into local policies. To this end, the project launches the ETU Initiative as a strategy for the capitalisation of the ETU model in the Mediterranean Region. The aim of this initiative is to promote its application in rural areas and islands, taking the energy transition as a catalyst. The project has created 6 regional groups with the aim of addressing the transfer process in the territories.

## 1.1 About ETU Initiative

The ETU Initiative is a proposal created and promoted by the Interreg MED Renewable Energy community as a strategy for the transfer and capitalisation of the ETU model and its tools. The initiative constitutes a campaign for the promotion of local energy communities and the revitalisation of rural and island areas, providing support tools and training and capacity-building activities.

The ETU Initiative is addressed to local authorities, entities and organisations that:

- Want to foster a local energy community;
- Are in the process of updating their Sustainable Energy Action Plan (SEAP) developing their Sustainable Energy and Climate Action Plan (SECAP);
- Wish to promote a project or initiative linked to energy and ecological transition in their territory.

There are three ways to participate in the ETU Initiative as an individual or as the representative of an organisation:

1. **SIGN** - By signing the ETU manifesto, your organisation will be part of the ETU community and will be able to participate in consultations and surveys.
2. **COMMIT** - By signing the ETU Letter of Commitment, your organisation will join our network promoting the integration of ETU principles into energy transition plans and projects.
3. **FOLLOW** - By subscribing to our newsletter to stay up-to-date on developments, and attend the activities and events organised by the project.

## 1.2 About the Ecosystemic Transition Unit Model

The Ecosystemic Transition Unit (ETU) Model is a governance model designed to support the ecological transition of cities, rural villages and islands using energy transition strategies as a starting point. The aim of the ETU model is to help local authorities to organise the complex interaction between different plans and policies in a more integrated way. The ETU model is a tool to complement existing energy and rural development plans, with the aim of supporting a simplified and efficient use of public funds and the participation of civil society initiatives. From the results obtained by the modular projects, we created the ETU toolbox, an open set of tools for citizens and communities to use in order to accelerate the energy transition in their region.

The ETU is based on 4 pillars for energy transition: **energy planning, energy facilities, energy communities** and **energy governance**. The methodology organises strategies and plans by aligning objectives and common targets.

In order to apply the model we recommend you read the following documents:

#### **ETU White Paper**

This document explores the conceptual and methodological framework of the ETU model, including recommendations for mainstreaming policies, plans and the ETU assessment indicators system.

#### **ETU Toolbox Handbook**

This handbook explains the set of tools developed by the Interreg MED Renewable Energy Community projects, and provides a guide on how to apply them to your projects and plans.

#### **ETU Flagship Cases Booklet**

This document provides examples of the application of the ETU Toolbox and ETU model in 9 flagship cases located in Croatia, Greece, Italy and Spain. It provides the overall results and links to a dossier for each case.

## 1.3 Objective of the ETU Guidelines

The aim of these guidelines is to offer a comprehensive tool for mainstreaming the ETU model in local energy transition initiatives. The ETU model aims to integrate different sectoral plans and policy instruments according to each of the pillars, identifying cross-cutting strategies and parameters that help to define a transition roadmap based on a holistic vision.

## 2. How to commit the ETU Initiative?

The ETU Initiative aims to gather examples of towns, villages, and cities from around the Mediterranean Region, from both the Northern and Southern shores, that are taking an ecosystemic transition approach to their plans, projects and initiatives. We want to highlight success stories and allow us to learn from each other; we want to show that an ecosystemic approach is useful in any context, from small territories like islands and rural areas, to large territories and cities.. If you are interested in contributing to our initiative, adhering to the ETU principles or applying the ETU toolbox in your own territory, we invite you to first sign the ETU manifesto:

<https://etuinitiative.eu/the-etu/#manifesto>

After signing the manifesto, you will be invited to sign the Letter of Commitment. By signing the Letter of Commitment, you will be part of the community aligned to the ETU principles and have access to greater visibility for your initiative.

Here are the steps to follow:

## 2.1 STEP 1: Describe your project, initiative or plan.

Please provide a description of the project or plan and why you consider it aligns with the ETU Initiative (*max. 2000 words*). Please also include these basic data of the area where your proposal is located.

DESCRIPTION OF THE SITE	
Country	Name of country
Location	Name of municipality
Population	Number of inhabitants
Territorial extension	km <sup>2</sup>
Population density	inhabitants/km <sup>2</sup>
Type of area	(urban, rural, coastal, island, periurban)
Type of project	<ul style="list-style-type: none"> <li>• Renewable energy community</li> <li>• SEAP/SECAP</li> <li>• Climate action plan</li> <li>• Energy transition program</li> <li>• Energy efficiency in public sector</li> <li>• Energy efficiency in industry/economic activities</li> </ul>
Promoter (s) of the project or plan	Association, public authorities, schools, cooperatives, etc.
Abstract ( <i>max 2000 words</i> )	





## 2.2 STEP 2: Alignment to ETU principles

As a second step to apply the ETU model it is necessary to define how your project or proposal is aligned to the following five principles:

<p><b>1</b></p> <p><b>ECOLOGICAL AND HOLISTIC APPROACH TO CLIMATE CHANGE</b></p>	<p><i>How does your municipality or project contribute to mitigate the climate crisis by considering a cross-cutting approach linking mitigation and adaptation to climate change measures?</i></p> <p><i>(max 100 words)</i></p>
<p><b>2</b></p> <p><b>TERRITORIAL EQUALITY</b></p>	<p><i>How does your municipality encourage fair and sustainable urban-rural synergies and territorial equality?</i></p> <p><i>(max 100 words)</i></p>
<p><b>3</b></p> <p><b>SOCIAL INNOVATION</b></p>	<p><i>How does your municipality foster social innovation and inclusiveness by integrating vulnerable groups?</i></p> <p><i>(max 100 words)</i></p>
<p><b>4</b></p> <p><b>GREEN ECONOMY</b></p>	<p><i>How does your project contribute to advancing green businesses and investment in the green economy?</i></p> <p><i>(max 100 words)</i></p>
<p><b>5</b></p> <p><b>COMMITMENT AND MULTILEVEL COORDINATION</b></p>	<p><i>How does your project or plan contribute to reinforce multi-level political commitment?</i></p> <p><i>(max 100 words)</i></p>



## 2.3. STEP 3: Contribute to the ETU assessment system

The ETU model for the energy transition is organised into four main pillars, focused on resilient planning, enhancing wellbeing and liveability, and encouragement of governance to advance organisational processes. The assessment indicators system allows us to monitor the metrics behind good practices, compare cases, and learn from each other. You may also use SDGs indicators accordingly. Part of your commitment is to help us to advance on the identification of reference values for energy transition actions in different types of territories.

### ETU indicators: Pillar 1 - Energy Planning

This pillar aims to **link energy models and land use planning**. The indicators for this pillar aim to monitor the equilibrium between, on the one hand, energy infrastructures and the space dedicated to energy production with, on the other hand, agriculture land use, mobility necessities and proper occupation of the built environment. For that purpose, the main three indicators to measure are: **compactness, sustainable mobility networks, and food security areas**. This ensures proper occupation of the territory, avoiding either urban sprawl or fragmentation due to any excessive landscape impact by energy installations or an imbalance of crop fields. Sustainable Development Goal (SDG) 13, which calls for urgent action against climate change. In some cases could include the adoption of disaster risk strategies or resilient and adaptation plans.

Question	Indicator	Formula	Unit
<p>Which is the level of compactness of your area (project, neighbourhood, or municipality)?</p> <p>Is compact or sprawled urban occupation?</p> <p>Does your project densify the area?</p>	<p>ETU 1.1 COMPACTNESS</p>	<p><math>m^3</math> built environment/<math>m^2</math> urban land use occupied or, N inhabitants/ha urban land use occupied</p>	<p>inhabitants/ha</p>
<p>Does it count with proximity to public transportation and bicycle networks?</p> <p>Your project or plan improve mobility patterns?</p>	<p>ETU 1.2 SUSTAINABLE MOBILITY NETWORKS</p>	<p>Population with access to sustainable mobility/total inhabitants</p>	<p>% Inhabitants</p>
<p>Which is the provision of crops-fields per capita?</p> <p>Your plan includes solutions to preserve them?</p>	<p>ETU 1.3 FOOD SECURITY AREA</p>	<p><math>m^2</math> agriculture land use/ total inhabitants</p>	<p><math>m^2</math>/inhabitant</p>
<p>How many plans consider the nexus approach on energy, water and food that has an incidence on the area of study?</p>	<p>ETU 1.4 GREEN NEXUS INTEGRATION</p>	<p>Integrated plans aligning water, energy and food strategies.</p>	<p>number</p>

**ETU indicators: Pillar 2 - Energy facilities**

The indicators for the second pillar assess the level of **efficiency** of energy infrastructure, in terms of **energy consumption per capita and self-sufficiency**. Heat energy consumption should also be incorporated as a key indicator to ensure it can be produced from renewable energy sources. The indicators also measure the distribution of RES infrastructure ownership with local inhabitants. These indicators could be also substituted from SDGs related to O7 Affordable and clean energy.

Question	Indicator	Formula	Unit
Which is the overall annual energy consumption of the area analysed divided by the number of inhabitants? How are you improving?	ETU 2.1 ENERGY CONSUMPTION PER CAPITA	$\Sigma \text{MWh year} / N \text{ inhabitants}$	MWh/inhabitant/year
Which is the overall CO <sub>2</sub> emissions registered in the area considering transportation and buildings per capita? Which are the main measures to reduce emissions?	ETU 2.2 CO <sub>2</sub> EMISSIONS PER CAPITA	$t \text{ CO}_2 \text{ year} / N \text{ Inhabitants}$	t CO <sub>2</sub> /inhab year
Which is the percentage of owners about local RES infrastructure?	ETU 2.3 ENERGY FACILITIES OWNERSHIP	% Local owners (public or private) of local RES infrastructure	%

**ETU indicators: Pillar 3 - Energy community**

This pillar is focused on **social inclusion, health and well-being, and the participation and involvement of women and young people**. This group of indicators aims to assess the **social impact** of energy transition actions and plans, and **liveability and quality of life** in terms of access to public and community spaces, access to culture, and access to basic services. These link to SDG 3, concerning good health and well-being, and SDG 7, concerning affordable and clean energy. Pillar 3 aims to assess quality of life by ensuring social cohesion and community engagement.

Question	Indicator	Formula	Unit
<p>How many people are involved in energy sharing systems? (respect neighbourhood, or municipality)</p> <p>Which solutions are suggested by your project/plan?</p>	<p><b>ETU 3.1</b> PEOPLE ENGAGED IN ENERGY COMMUNITIES</p>	$\frac{\sum \text{Inhabitants} * 100}{\text{total inhabitants}}$	%
<p>Which is the average income and ageing of the population in the area?</p>	<p><b>ETU 3.2</b> SOCIO-ECONOMIC VULNERABILITY</p>	<p>Income per family; Ageing (% population &gt; 65 years)</p>	EUR year % inhabitants
<p>How many women and young people are involved in your project or area of analysis?</p> <p>Which is your target?</p>	<p><b>ETU 3.3</b> EQUALITY ENCOURAGEMENT (SDG 5.C)</p>	<p>% young people and women involved in energy transition projects</p>	%
<p>How many people have access to social interaction in the area?</p>	<p><b>ETU 3.4</b> LIVEABILITY</p>	<p>% population with proximity within 500 metres to public spaces and facilities that enable social interaction and community building.</p>	% inhabitants



## ETU indicators: Pillar 4 - Energy Governance

Pillar 4 is focused on governance structure, the proper integration of tools and plans, and the capacity to catalyse added value in the territory of analysis. The indicators assess the **legal, financial and operational mechanisms** of the proposed project. From the SDGs, it is recommended to include the indicators related to **digitalisation, sustainable tourism** and **unemployment**.

Question	Indicator	Formula	Unit
How do your local policies encourage renewable energies?	ETU 4.1 GREEN FISCAL POLICIES	Emissions saved by implementation of green policies N local green policies	CO <sub>2</sub> eq/year N green policies
Does your plan/project count with sufficient technical assistance?	ETU 4.2 TECHNICAL CAPACITY	N hours dedicated from technical staff (internal or external)	Hours/year
How much economic activity is settled in the area?  How many are associated to green economy?	ETU 4.3 ECONOMIC ACTIVITY	[N activities/ total inhabitants] *100	Economic activities each 100 inhabitants
Does the project or plans count with public subsidies?	ETU 4.4 MULTI LEVEL COORDINATION	[€ EU Funds applied into coordinated regional green transition policies/total € EU Funds at local level]*100	% EU Funds

## 2.4 STEP 4: Share your results

Once you submit your data, our team of experts will contact you to review the results, and once validated, it will be uploaded to our website as an example of a successful implementation of the ETU model. You will receive a letter of commitment and your factsheet accordingly.

Your contribution will help to build up a bank of good practices and give you visibility at the same time. You will be invited to join a final workshop to meet and learn from other cases.

## 3. Mainstreaming recommendations

### 3.1 Mainstreaming the ETU model into SECAPs

#### How to integrate the ETU model into SECAP?

Sustainable Energy Climate Action Plans can find in the ecosystemic approach a way to integrate with other strategic plans at the local level aiming to reduce CO<sub>2</sub> emissions by implementing climate adaptation and mitigation measures. Here are some examples of how SECAPs can align to some of the ETU principles.

**Ecological response to the climate crisis:** Identified possible measures to be taken in order to achieve the SECAP targets (CO<sub>2</sub> emission reduction).

**Territorial equality:** Resilient planning requires strategies and solutions that prevent climate change impacts in territories. SECAPs can include the estimation of sharing renewable energy sources and infrastructures among multiple municipalities, allowing the opportunity of access to green energy to all kinds of territories.

**Social innovation:** Energy poverty is one of the main concerns to ensure a fair green energy transition. SECAPs can foresee priority to the implementation of energy efficiency and access to local renewable energy to vulnerable populations.

**Green Economy:** Implementing the measures identified through the ETU model will result in energy savings, CO<sub>2</sub> emission reduction and increased renewable energy production in local authorities. Producing renewable energy and sharing it locally have a lot advantages:

- reduce use and cost of electricity, heating and cooling;
- promotion of local suppliers reducing transport cost and its impact on CO<sub>2</sub> emissions;
- improved quality of life for citizens;
- increased job creation and preservation;
- increased investment and economic growth.

**Cooperation and commitment:** Draw up by-laws and call for subsidies in order to establish a policy of demand and support and economic advantages that encourages the promotion of private investment.

#### What are the main plans that can be aligned to the SECAP by the application of the ETU model?

For Climate Change mitigation, the main target sectors are: buildings, transport and public lighting. The SECAP may also include actions related to local electricity production (development of solar photovoltaic, wind power, combined heat power, improvement of local power generation), and local heating/cooling generation.

In the table below there is the link between SECAP and other local plans through the ETU model.

<p>1. <b>Buildings sector (public buildings, households and commercial subsectors)</b></p> <p>a. Energy consumption (MWh/Year)</p> <p>b. Baseline Emission Inventory (BEI)</p> <p>c. Measures to be implemented</p>	<p>City or Municipality development plan 2021-2027 Measures identified through ETU model for the building sector can be incorporated in city or municipality development plan 2021-2027 (recommendation and measures)</p>
<p>2. <b>Transport sector (vehicles owned by local authorities, private vehicles and public transport) and</b></p> <p>d. Energy consumption (MWh/Year)</p> <p>e. Baseline Emission Inventory (BEI)</p> <p>f. Measures to be implemented</p>	<p>City or Municipality development plan 2021-2027 Measures identified through ETU model for the transport sector can be incorporated in city or municipality development plan 2021-2027 (recommendation and measures)</p> <p>Transport sector - The same subsectors are included in Sustainable urban mobility plans (SUMPs).</p> <p>Measures identified through ETU model for the transport sector can be incorporated in SUMPs (energy analysis and measures)</p>
<p>3. <b>Public lighting sector</b></p> <p>g. Energy consumption (MWh/Year)</p> <p>h. Baseline Emission Inventory (BEI)</p> <p>i. Measures to be implemented</p>	<p>City or Municipality development plan 2021-2027 Measures identified through ETU model for the public lighting sector can be incorporated in city or municipality development plan 2021-2027 (recommendation and measures)</p>

## Which are the main actors and stakeholders to engage?

The most important stakeholders that should be involved in ETU mainstream in SECAPs are as follows:

- Local politicians: Mayor and key political leaders
- Relevant city or municipal departments and companies (municipal energy and water utilities, transport companies...)
- Experts: Architects, engineers and economists
- Citizens
- Energy agencies
- Media

## 3.2 ETU mainstream in Renewable Energy Communities

Renewable energy communities (RECs) have become an important energy transition action in recent years. Although there have been advances in terms of legal regulations and increase of investments from the public and private sector, there are still some concerns about their implementation and management. The ETU model applied to a REC can be useful to ensure the ecosystemic approach by linking with climate adaptation objectives and also with local community engagement.

### How does REC link with ETU pillars and principles?

REC represents a new model for the local production and distribution of renewable energy, giving direct benefits for the territory from environment, well being and social points of view. RECs are strongly related with the ETU pillars and principles.

### Relation among ETU Principles and RECs:

- **Holistic response to climate change:** Being a model of local production of Renewable Energy, RECs are fully included within the kind of actions answering to the climate crisis and participate in the territory resilience respected to climate change.
- **Territorial equality:** REC is a model able to tackle energy poverty at local level. Indeed, the association is free to decide how to distribute the benefit of the energy production and sharing among the members and could for instance decide to give also a social goal to the REC, covering totally or a part of the energy bill of the members in situation of energy poverty and increasing the territorial and social cohesion of the area.
- **Social innovation:** REC is a new model close to cooperatives, but for energy sharing. In the close future, citizens will be the most relevant actors to launch this new model and extend it massively. An important pillar of the energy transition is now depending on citizens' behaviours. It will be important for them to receive correct and clear information relative to what they can do and how they can do.
- **Green Economy:** Being a model of local production of Renewable Energy, RECs will allow the local investments in RES plants and so increase the needs of the local territories to have local companies and new green jobs for the plants design, installation, maintenance and management. Moreover, the RECs will need the implementation of new digital tools to design and manage the energy fluxes of the RECs among the members and to also manage the distribution of the eventual incentives and economic benefits among the prosumers and consumers.
- **Cooperation and commitment:** A REC is an association among different actors/members, that can be private and public. That means new model of collaboration have to be designed to favour the creation of this new kind of Private/private and/or public/private partnerships. Moreover, RECs can have a relevant territorial planning asset, favouring the cooperation of different municipalities, preparing energy planning together (similar to the case of wide areas SECAPs).

### Which are the main actors and stakeholders to engage?

The most important stakeholders that should be involved in ETU mainstream in Renewable Energy Communities are as follows:

- Local politicians: Mayor and key political leaders
- Municipal departments on energy planning
- Energy companies, energy services providers
- Professionals and experts: Architects, engineers and economists
- Citizens' associations
- Energy agencies
- Media



### 3.3 ETU mainstream in sustainability plans

Sustainability at the local level requires the implementation of several kinds of projects and plans that require a strategic connection. The ecosystemic approach helps to identify cross-cutting measures and actions that can be taken by municipalities and local entities to address in a more effective way their sustainability roadmap.

#### How to link ETU pillars/principles to sustainability plans?

**Ecological response to the climate crisis:** Implementing measures to achieve CO2 emission reduction such as mobility plans, green buildings and energy efficiency projects, considering at the same time measures for environment, biodiversity protection and people's well-being.

**Territorial equality:** Implementing actions that encourage sustainability plans integrating multiple municipalities from rural, to urban type of territories, share of services and interconnectivity. Promotion of sustainable mobility, digitalisation, and energy-water-food nexus.

**Social Innovation:** Incorporating creative and innovative processes at local level, that ensure the participation and involvement of all citizens, specially women and youth.

**Green Economy:** Implementing the measures that incentivise job creation at local level, specially on green and blue businesses. Could be linked to agriculture and industrial activities that provide products and services with environmental and social value in the territory.

**Cooperation and commitment:** Implementing agreements among municipalities, or regional bodies, that share common challenges in terms of access to resources and local renewable energies. Encouraging private and public investments at territorial level, that enhance triple helix initiatives.

#### Which are the main plans you can integrate sustainability plans through the ETU model?

The main sectors related to sustainability plans at local level are: agenda 2030, mobility and logistics plans, energy plans, infrastructure plans, urban planning, landscape planning, terrestrial and marine protected areas management plans, water-energy-food nexus plans, climate action plans.

#### Which are the main actors and stakeholders to engage?

The most important stakeholders that should be involved in ETU mainstream in sustainable plans and projects are as follows:

- Local politicians: Mayor and key political leaders
- Municipal departments on territorial and urban planning, mobility, biodiversity protection, climate action, agenda 2030 implementation.
- Green businesses, entrepreneurs
- R&D departments and think tanks
- Professionals and experts: Architects, engineers, economists, biologists, environmental engineers.
- Cooperatives and associations
- Third sector, social businesses
- Media



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