



POWERPOOR

Empowering Energy Poor Citizens through Joint Energy Initiatives

POWERPOOR – Portugal’s policy roadmap to alleviate energy poverty (Part of D5.9)

Working on the ground with energy-poor households and policymakers on mitigating energy poverty levels.

July 2023

www.powerpoor.eu

Introduction

Why set a national energy poverty mitigation roadmap?

In the POWERPOOR project, partners are actively assessing causes of energy poverty and suggest short-term and collective energy action solutions to mitigate this problem. A highly diverse network of Energy Supporters and Mentors has been trained and is being engaged to further support energy poor households to implement solutions. The project also sets up Local Energy Poverty Mitigation Offices in engaged municipalities. POWERPOOR strives to trigger high-impact change, not only on the local and regional level, but also on the national and European level. Such a multi-level governance approach will result in long-lasting impact and coordination between local needs and national (e.g. National Energy and Climate Plans) and supra-national enabling frameworks.

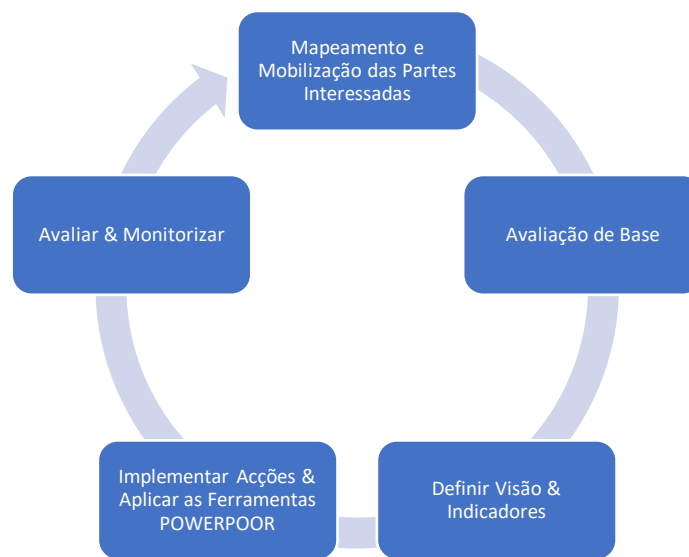
The aim of the national roadmaps is then to build on current project activities and to enable the application of the POWERPOOR approach to promote integrated energy poverty mitigation policies across all regions and cities within the pilot countries. This roadmap is a synthesis exercise based on several outputs of the Work Packages and is to be used by project partners and Energy Supporters & Mentors during the last year of the project and beyond its lifetime (also possibly to be incorporated into future Horizon projects).

Next to the project national partners, stakeholders out of the network of Energy Supporters and Mentors, especially those at the National Liaison Groups, were invited, to take ownership of the national roadmaps and take the process forward. This work resulted in lessons-learned, which, in turn, generate policy recommendations on how the national regulatory / incentive framework should be adapted to mitigate energy poverty in the first place.

The development and adoption of the national roadmap is subdivided into two phases, which each encompasses specific steps on an integrated management cycle (adapted from ICLEI Green Climate Cities Programme). The cycle has been chosen as a basis for the roadmap since it promotes a holistic approach to policy making.

Phase 1 takes place until the end of the POWERPOOR project and includes steps which shall be carried out by partners and Energy Supporters and Mentors until then. Phase 2 takes place within one year after the project, or on any other timeline decided by the partners and stakeholders. Once the cycle has been completed a first time, the process can be repeated (and could potentially serve as a basis for future projects).

Figure 1 Roadmap Methodology



Adapted from [ICLEI Green Climate Cities Handbook 2016](#)

National Roadmap Development

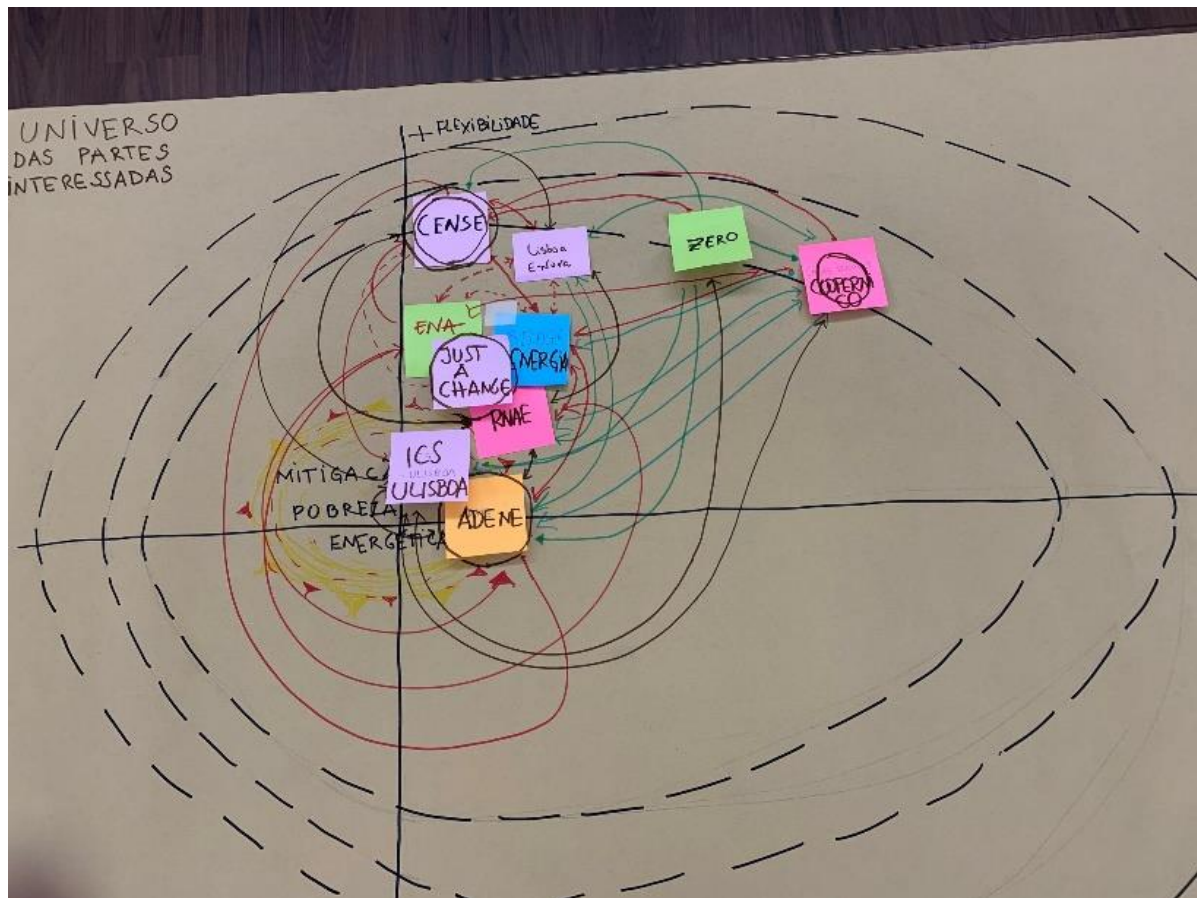
Phase 1

The following three steps correspond largely to the activities carried out within the POWERPOOR project and rely strongly on the findings of Deliverable 4.2 “Baseline Assessment Report”. They will form the basis for the national roadmaps and for the subsequent steps of Phase 2.

Step 1: Stakeholder Mapping, Commitment & Mobilization

As part of D4.1, project partners have carried out an initial assessment of stakeholders who are part of the National Liaison Groups, have created an overview of the expectations the different stakeholders have towards the project as well as their influence and level of expertise. As part of the roadmapping process, it becomes important to identify the relative importance of particular stakeholder groups vis-a-vis energy poverty mitigation and to identify how flexible stakeholders are to adapt their everyday (business) practices and what kind of networks exist between them. The stakeholder universe methodology, as presented in Module 4 lends itself well for this.

Figure 2 Portugal Stakeholder Universe



ANALYSIS

The planets orbiting in the solar system whose main star is the fight against energy poverty (see figure above) represent the members of the POWERPOOR SLG.

The SLG members present at the co-creation session all positioned themselves in the upper part of the system's XX axis, which is to say that they have the flexibility to change (some more, others less) their daily actions to adapt themselves to the energy poverty mitigation demands. A good part of SLG members are energy agencies (national, regional and local) that have positioned themselves closely together as an interest group. From this group of energy agencies there are those who work in energy poverty in POWERPOOR sister projects, namely ENA, in [Ponto de Transição](#) project with CENSE collaboration too, another member of the Liaison Group.

The connections/relationships established between the members were also drawn, which demonstrated that most of the members establish connections (strong, medium or weak) with each other. ADENE and CENSE revealed to have a set of strong connections and energy agencies are strongly connected to each other and with the National Agency for Energy (ADENE) and the Association of Energy and Environment Agencies (RNAE).

The size of the planets was requested after the session, although discussed in it, translating their SLG members relevance (power/political) in a general way and not only in terms of alleviating energy poverty. Here the scale was none, very little, little, medium, very, quite a lot. The member that stood out the most was ADENE with VERY relevance, followed by CENSE and COOPÉRNICO with medium relevance.

Most part of these connections are related to their collaboration in common projects or working contracts.

ADENE collaborates with Public Administration bodies (energy agencies) in the execution of activities essential for the implementation of energy sector policies and measures; fosters the transfer of technologies in the energy area, promoting partnerships between R&D institutions, companies,...; Promote specialised training actions; and also develop actions inherent to raising awareness and informing companies and general public on energy issues and their associated environmental dimension.

CENSE has researchers working on Energy Poverty in Portugal and for that reason is quite requested for work in this area.

Step 2: Baseline Assessment

The state of play / baseline for what concerns energy poverty in the overall country has already been analysed at the beginning of the project and captured in D4.2. As part of the roadmap process, the baseline parameters were analysed again to see if any changes have occurred since the last baseline assessment. The baseline assessment was then validated during the meeting with the stakeholders of the National Liaison Group.

Table 1 Portugal Baseline Assessment Revision

<p>National Energy and Climate Plans (NECPs)</p> <p>PNEC 2030</p>	<ul style="list-style-type: none"> • Promote a long-term strategy to combat energy poverty; • Establish a national assessing and monitoring system of energy poverty, including the number of households in energy poverty; • Proceed with mechanisms to protect vulnerable consumers and study the introduction of new mechanisms; • Develop programs to promote and support efficiency energy and integration of renewable energies to mitigate energy poverty;
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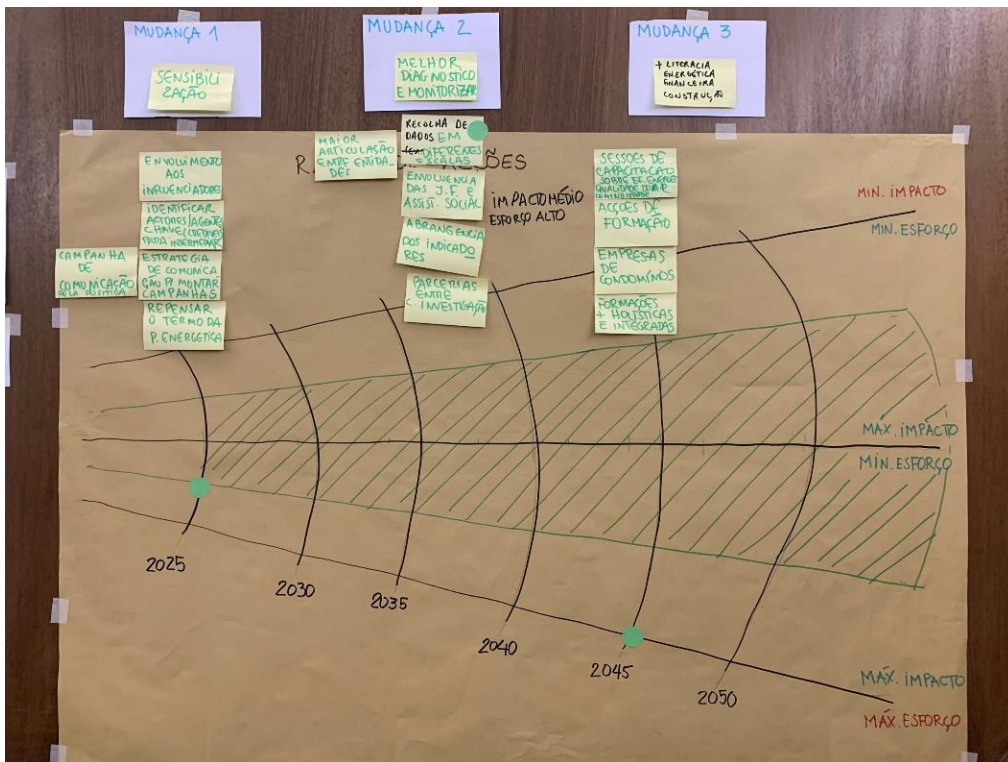
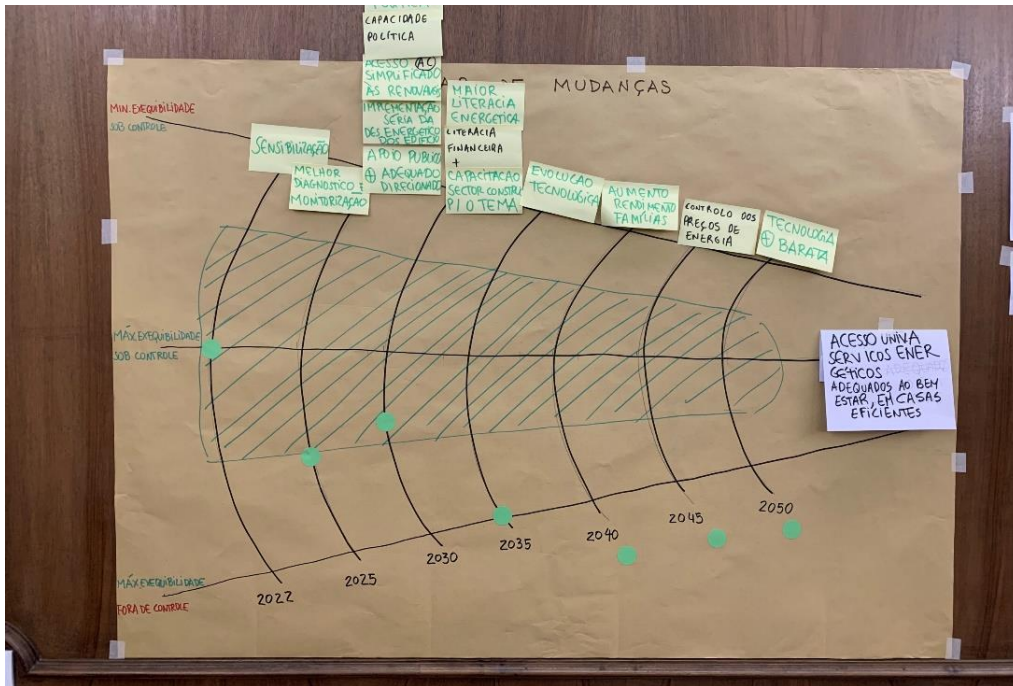
	<ul style="list-style-type: none"> • Promote and support local strategies to combat energy poverty; • Disseminate information to mitigate energy poverty
The building sector - renovation efforts	<p>Existing actions to renovate buildings from Resilience and Recuperation Plan 2021-26</p> <ul style="list-style-type: none"> • Energy Efficiency in Buildings • Efficiency Voucher (only for owners and social tariff beneficiaries) • Energy Efficiency in Public Administration Buildings • Energy Efficiency for Non-Residential Buildings
Social care	Gas and Electricity Social Tariff which consists of a discount on the tariff for access to low-voltage electricity and/or low-pressure natural gas networks.
Policy to promote community-ownership of energy	Decree-Law n° 15/2022, of 14 January, which establishes the organization and functioning of the National Electric System, with provisions relating to renewable self-consumption
Policy to promote (collective) finance / crowdfunding	No Policy
The energy market (e.g., social tariffs / tax incentives)	Family support package measure (01/10/2022 to 31/12/2023): reduce the current rate of 13% to 6% of VAT on electricity - value that is focused on the first 100 kWh of electricity consumed each month, for contracted power not exceeding 6.9 kVA
Consumer protection	<ul style="list-style-type: none"> • Energy bill protection. Mechanisms to support families in difficulty and do not pay energy bills from an energy and network;

	<ul style="list-style-type: none"> • Renewable energy communities. Integration of low income families in both new projects and renewable energy communities; • Identification. Develop and implement mechanisms to identify families in energy poverty.
SECAPs	Nothing addressed
Long-Term Strategy for Building Renovation 2050 ELPRE	See D4.2.
National Strategy for Energy Poverty (not yet in force)	See D4.2.

Step 3: Set Vision, envision Actions and define Indicators

Now that the stakeholders have been gathered, committed and the national regulatory context reassessed, it was time to foster a common understanding on what alleviating energy poverty actually means for the different stakeholder groups. During the stakeholder consultation, a concrete vision for energy poverty mitigation was created and the future radar methodology lends used for this purpose. Discussions on the possible actions thus took place based on a common reference scenario (the vision).

Figure 3 Portugal Future Radar



ANALYSIS

The Future Radars exercise sparked dynamics in the group and everyone contributed actively to defining the ideal future for Portugal in 2050 and which Changes should occur to achieve the defined envisioned future: **UNIVERSAL ACCESS TO ADEQUATE ENERGY SERVICES FOR WELL-BEING, IN EFFICIENT HOUSES**

When Changes were analysed in terms of their feasibility and whether they would be under control of the SLG members, only 3 Changes were left inside the cone, which two of them were on the borderline between having/not having control over these Changes.

Those Changes were analysed from the point of view of the necessary Actions to effectively achieve them.

Actions were analysed from the point of view of their impact and effort to achieve them, resulting in a 12 Actions ensemble. SLG concluded our group had inability to point out at least one action with max impact and min effort. The 12 Actions are distributed among the 3 Changes initially listed as feasible and under the control of SLG members.

It was consensual that more collaboration, cooperation and articulation between institutions is needed.

Finally, it was suggested that Portugal should learn from the experience of other countries.

Table 1 Portugal Actions

Policy Sector	Actions to be implemented	By when?	By whom?
Social care	Regulation to co-finance the electricity cost of energy poor households	2024	Ministry of Social Affairs
Buildings	100% grant support to homeowner's associations for energy renovation of multi-family buildings in social housing developments	2023	Ministry of Energy
Cross-cutting	<u>Change 1. Awareness-raising</u> <ul style="list-style-type: none"> • Influencer involvement • Identify key-actors/agents, believeable, to intermediate • Communication strategy to build positive campaigns • Rethink energy poverty term 	2025 (year/time not discussed)	

Cross-cutting	<u>Change 2. To get better diagnosis and monitoring</u> <ul style="list-style-type: none"> • Data collection at different scale/level • Greater articulation between entities • Both parish councils and social care department of municipalities involvement • Scope of indicators • Partnerships between research centers 	2030 (year/time not discussed)	
Cross-cutting	<u>Change 3. To increase both financial and energy literacy and also capacity for building construction professionals</u> <ul style="list-style-type: none"> • Training offers on energy efficiency, air quality, lighting quality, acoustic, ... , resulting in a more holistic and integrated trainings • Training seminars • Property management companies' involvement 	2035 (year/time not discussed)	

The column of who implements the actions was not filled in because the whole working session of National Roadmap co-creation was focused on the Stakeholders Liaison Group members and their power and capacities to intervene/influence. Actions reflect SLG members effort capacity and none of them was placed into the green cone (max. Impact & min. Effort).

Table 2 Portugal Action-Specific Indicators

Indicator	Baseline (2022)	Target (date dependent on action)
Number of Energy communities (with a focus on lowering energy bills of members)	5	200 (2035)
Number of awareness-raising campaigns per year	0	15/year
Number of municipalities with OSS for energy poverty mitigation	3	100 (2030)

Phase 2

Step 4: Implement Actions and apply POWERPOOR Toolkit

The national roadmap co-creation session with the Stakeholders Liaison Group worked very well. The group understood the methodology and cooperated with the exercises. Later on, there is a possibility of repeating this session where national, regional and local, public and private entities will be considered for the mapping of Stakeholders and subsequent completion of the Future Radars. The discussions did not produce outcomes in terms of budget and scheduling for the actions in all cases. This is why it was chosen to present the actions in a different format for the Portuguese roadmap when compared to the other roadmaps.

Table 3 Portugal Action Elements

Actions Related To Change 1. Awareness

Influencers Involvement
Find influencers who are already involved in sustainability issues and work out with them contents for this theme
Identify Key-Actors/Agents, Beliveable, To Intermediate
Identify who are the professionals which can play an intermediary role indicating families in a potential situation of energy poverty. These professionals must be trusted by the population and exempted (e.g. police officers who regularly visit isolated elderly people as part of their patrols).

Given the difficulties in reaching the most vulnerable/energy poverty populations, it is crucial to establish valid intermediaries' figures as facilitators who ensure effective and successful action. These key agents should belong to the target intervention areas, be an active part of the community, allowing closer contact with locals, facilitating trustful relationships needed to establish effective action, creating bridges to overcome common barriers (mistrust, fear of unknown third parties, fear of poor stigmatization, etc.).

Communication Strategy To Build Positive Campaigns

Development of more inclusive and effective strategies aimed at reaching the most vulnerable consumers. These communication strategies should focus on the vulnerable consumer, that is, those who communicate should put themselves in the consumer's shoes. Through knowledge of their characteristics, their condition, and also by studying successful practices in engagement and communication with this type of consumers, create a communication that promotes engagement and participation.

Action to combat energy poverty necessarily requires the establishment of a communication strategy to ensure, in a clear, specific and measurable way, that messages and information arrive efficiently. For a successful dissemination, the target groups must be defined (citizens and deprived communities suffering from energy poverty, local authorities, social action agents, scientific community, media, etc.) to whom different messages, communication tools and actions, timing, budget, evaluation and monitoring measures must be adapted.

Supported by a communication agency to create a national campaign to raise awareness, disseminated through various media: radio, TV, social media and print

Rethink Energy Poverty Term

The term Energy Poverty may be a cause of exclusion and less participation/involvement in these campaigns because vulnerable consumers may think they are not poor and campaigns are not for them, or simply reject the idea of being characterized as poor, by the associated social stigma. In this way, alternatives should be analysed regarding the description of this problem, which allow creating through a more positive language, a greater connection between the communicator and the target audience.

Actions Related To C2. Better Diagnosis And Monitoring

Data Collection At Different Scale/Level

Increasing data collection both by central administration and by governments and entities at local scale, for example through surveys dedicated to the study of this problem, to collect various types of data - socio-economic, perception of thermal comfort, energy performance of buildings. Data collection processes through devices such as temperature and air quality sensors or energy consumption measurement should also be considered. Researching data already available and collected for other purposes by public bodies at national and local scale, which could be used in the context of energy poverty measurement. Data collection events, to be created or even existing ones, such as the Household Energy Consumption Survey, should be carried out with greater spatial disaggregation and higher temporal frequency, in order to allow monitoring of energy poverty levels.

Articulation between different entities which organise surveys (INE, Universities, DECO, etc.) in order to take advantage of the moment when surveys/census are carried out to insert new questions on the subject. Work on key issues so that we have indicators that can be used

Greater Articulation Between Entities

Greater transfer of knowledge and experience between different entities in the fight against energy poverty, namely from entities dedicated to study and diagnosis, such as universities and research centers, and the entities responsible for the creation of policies and instruments to support vulnerable consumers. The aim is to increase cooperation between entities working towards the same goal.

Create a working group platform where we can continue to work on this matter after POWERPOOR project end. Stimulate reflection actions such as this first one, where concrete solutions to solve this social problem may emerge.

Parishes And Social Care Department Of Municipalities Involvement

Parishes and social workers develop close relationships with families that may be in energy poverty. Their involvement in monitoring processes is valuable.

Involvement of parishes and other entities that have a closer connection to the households and are more trusted, in order to collect important information, identifying vulnerable households and causes of vulnerability, creating appropriate solutions.

In the fight against energy poverty, any successful action will require the involvement and commitment of the Municipal Councils (namely their Offices for Energy Efficiency, Municipal Public Housing, Social Action, Social Rights, Health, etc.), as well as the Parishes, as the public entities closest to the citizens and those who know the problems of their residents.

Meet with Social Action Departments, Misericórdias Association and Parishes previously selected as having identified poverty rates.

Scope of Indicators

The indicators used to measure energy poverty must be multiple and must cover its various dimensions (e.g. it is not enough to know the share of energy expenditure in income nor whether there are arrears on utility bills, it is necessary to understand the quality of the various energy services use).

The diagnosis of energy poverty should be carried out through indicators that have the capacity to represent different causes and to determine this phenomenon factors. The indicators must be suitable for this problem assessment at different spatial scales over time, to allow the impact of mitigation measures assessment and vulnerability levels monitoring. They should also be inclusive, considering different energy poverty expressions (e.g. too much vs. too little energy consumption), as well as consider objective (energy consumption, income or temperature values) and subjective (sense of comfort and/or ability to ensure energy levels) perspectives. Indicators should also consider and represent the vulnerability situation of different groups considered as more vulnerable, such as elderly people, single parents, people with disabilities or chronic diseases and ethnic minorities.

Partnerships Between Research Centers

Greater exchange of data and knowledge between different research centers working on the mitigation of energy poverty, in order to create synergies and promote collaborations, for a combination of efforts and experiences that enhance the development of more complete, less redundant and more informative research.

Actions Related To C3. Increasing Energy And Financial Literacy & Capacity Building On Energy Poverty For Construction Sector Professionals

Training Offers on Energy Efficiency, Air Quality, Lighting Quality, Acoustic, ... , Resulting an a More Holistic And Integrated Trainings

Knowledge about the measures to be implemented to increase energy efficiency, etc. of buildings is not yet consolidated in Portuguese society, so it is necessary to offer the population opportunities to access detailed, concrete, independent (without commercial interest) and credible information. Sessions in which experts (from ADENE, for instance) address these issues, held in person and online, contribute to disseminate this knowledge.

Training sessions aimed at households on adequate living conditions that must be taken into account when choosing an house and indoor quality of life maintenance. A holistic approach should be considered regarding the quality of life inside buildings, integrating aspects and indicators of energy efficiency, air quality, luminosity and acoustics.

Training Seminars

Brief description

ADENE already has training sessions on the ground.

Property Management Companies Involvement

Property management companies' involvement in energy efficiency solutions proposals, access to tax benefits or support programmes addressed to householders, their clients. Social housing managers can also have this involvement. Create training/informational sessions aiming property management companies to become more informed and be able to provide relevant information to households.

Create mechanisms that allow property management companies to bring Energy Poverty to Condominium Assemblies but without increasing costs to householders.

The POWERPOOR toolkit is incremental to the implementation of the individual actions and should be used actively by whichever stakeholder (e.g. municipality or POWERPOOR partner) has been identified, in the previous steps, as being responsible for implementation.

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Figure 4 POWERPOOR Toolkit



Step 5: Monitor & Evaluate

One year after completion of the POWERPOOR project (or any other timeframe decided upon during the stakeholder consultations), the first monitoring & evaluation process should take place to see whether the roadmap's actions, and ultimately its vision, are being met.

Table 4 Portugal Action-Specific Indicators

Indicator	Baseline (2022)	Target (date dependent on action)	Target achieved?
Number of Energy communities (with a focus on lowering energy bills of members)	5	200 (2035)	
Number of awareness-raising campaigns per year	0	15/year	
Number of municipalities with OSS for energy poverty mitigation	3	100 (2030)	

This table tracks the progress of general energy poverty indicators leaning on the categorization provided by EPAH.

Table 5 Portugal General Energy Poverty Indicators

Indicator	Baseline (2022)	Target and Date (Vision)	Target achieved?
Inability to keep home adequately warm	16,4% (2021)		
High share of energy expenditure in income	15,1% (2015)		
Arrears on utility bills	5,3% (2021)		
At risk of poverty or social exclusion	19,8% (2020)		
Household electricity price	0,21 €/kWh (2021)		

Dwellings with energy label C or lower	69,6% (2020)		
Pop. Living dwelling with presence of leak, damp and rot	25,2 % (2020)		
Excess winter mortality/deaths	24,9% (2014)		
Long-Term Strategy for Building Renovation which concerns to renovate buildings, improving thermal comfort and reducing energy bills. 620 M€ for energy efficiency in buildings. (ELPRE)	Renovated buildings area	For 2030 – 363 M of m ² For 2040 – 635 M of m ² For 2050 – 747 M of m ²	
	Primary energy savings	11% for 2030 27% for 2040 34% for 2050	
	Reduction hours of discomfort in households	26% for 2030 34% for 2040 56% for 2050	
National Strategy for Energy Poverty (not in force yet)	Reduce Pop. with inability to keep home adequately warm (18,9% Pop. in 2018)	15% in 2030 5% in 2040 1% in 2050	
	Reduce family units whose energy expenditure represents +10% of total income (1,2 M in 2018)	To 700 000 in 2030 To 250 000 in 2040 To 0 in 2050	
	Reduce Pop. Living in dwelling with presence of leak, damp and rot (2,5 M = 24,4% population)	To 20% in 2030 10% in 2040 Less than 5% in 2050	

Recommendations on how to implement the national roadmap

The above process will have resulted in a national roadmap which has been co-created with a diverse group of stakeholders from the POWERPOOR National Stakeholder Liaison Groups. Following the national policy dialogues and consultations, partners will reflect on the roadmap drafting process and can suggest additional recommendations to specific stakeholder groups on HOW the above-listed actions can be implemented.

For Sub-National Governments

Identify mediators/partners to bridge Energy S&M and energy poverty householders

For National Governments

Creation of a good and robust campaign strategy to facilitate successful campaigns to tackle energy poverty

Greater political will and capacity to tackle energy poverty effectively

Better access to renewable energy production (community/cooperative)

For Civil Society

For The Private Sector

Property management companies should invest more in training their agents to provide clients with a service that is more focused on the energy efficiency of buildings