## Case #2: Energy efficiency

**Energy Efficiency in Residential Buildings in Region X…, Greece**

In Greece, **69% of residential buildings were constructed before 1990**, with **half of the housing stock predating 1980**—meaning they generally lack even basic thermal insulation. This has severe consequences:

* **Energy poverty**: Many households, especially low-income ones, struggle to afford heating (and increasingly, cooling) costs. Even a high energy bill may not translate into decent heating comfort due to the mediocre performance of heating appliances.
* **Health risks**: Due to climate change, summers are getting warmer and heatwaves have become longer and more intense, disproportionately affecting vulnerable groups—particularly the elderly, who make up **25% of Region X’s population**. High urban density in the capital of Region X… exacerbates these risks (‘heat island effect’).
* **GHG emissions**: While Greece has almost phased out the use of coal for electricity generation in the last decade, **residential buildings still rely heavily on outdated oil boilers**. In Region X’s islands, tourism-driven demand for air conditioning leads to an increased use of oil-generated power at peak season, increasing costs and emissions.

**The "Energy Saving at Home" Programme (ERDF 2014–2020)**

To address these challenges and comply with the Energy Performance of Buildings Directive, the government has issued over the years stricter building regulations. An energy performance certificate is now needed to sell or buy a house. In 2013 Greece launched a **subsidy-and-loan scheme** targeting poorly insulated homes (≤ Class D energy rating). As part of this scheme, beneficiaries can receive a grant which covers a percentage of the works’ cost. The rest is covered by interest-free loans distributed by Greek commercial banks. An advertising campaign complements the programmes.

The programme is largely supported by the ERDF and has been implemented in Region X… as in all other Greek regions.

The 2020 evaluation of the programme has highlighted the success of the programme, with more than 100,000 housing units having been renovated, but it also revealed critical shortcomings:

1. **Low uptake among the poorest households**—those most at risk of energy poverty—due to affordability and administrative barriers.
2. **Partial renovations**: Many projects addressed only isolated issues (e.g., windows but not roofs or walls…), limiting energy savings, benefits in heat comfort and cost-effectiveness.
3. **Contractor capacity issues**: Shortages in skilled labour led to delays and inconsistent quality. Contractors are often micro-companies, with a limited capacity to engage in comprehensive renovations.

**The 2021–2027 Programme: Refining the Approach**

The new programme is a continuation of the previous one, but aims at building on lessons learned. Its goal is still to reduce the energy consumption and GHG emissions of households, but also to gain in cost-effectiveness, to fight energy poverty and improve the living conditions of the most vulnerable households. To do so, it introduces:

* **Stricter funding criteria**: 30%+ energy savings are now expected. It is anticipated that this will lead to **deeper renovations** (including thermal renovation + heating/cooling system replacements).
* **Variable subsidy rate**: higher for the poorest households and lower for the highest incomes. The remaining cost can still be covered by interest-free loans.
* **Specific communication towards energy-poor families**: with a view to facilitate uptake

Besides, a programme aimed at improving the skills of contractors has been launched and aims at ensuring that

The programme was actively engaged at the beginning of 2024. Given the delays in administrative treatment and in delivering the works, it is expected that the first renovations have been finalised in the summer 2025.

### Group work #1: Scoping the evaluation

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| **Using programme theory/intervention logics to orientate**  In any sector, scoping an evaluation and deciding on the focus and unit of analysis for an evaluation poses many challenges. What should be included? Which actions? Where to draw the boundaries? What is the focus? Should elements of neighbouring or overlapping actions and programmes should be included? A valuable ‘map’ for programme managers and evaluators to orientate this stage is a preliminary ‘programme theory’ (or intervention logic). At this early stage we do not expect a more elaborate ‘theory of change’ outlining *how* an intervention or policy works and *why*. However, we should be able to depend on a more straightforward programme theory that summarises the assumptions of policy-makers and policy designers about how an investment in services, infrastructure and skills is expected to contribute to policy objectives. If even a basic programme theory has already been developed this can be a useful ‘map’ for those scoping an evaluation, if no such map exists, the scoping stage of an evaluation can be an opportunity to start outlining at least a basic set of assumptions. |

The Evaluation plan foresees that the programme should be evaluated in early 2026. It was initially expected that the programme would start earlier. However, the implementation of the new funding criteria has caused some delays, and it is feared that the evaluation will commence too soon. After discussion, it appears that this is an opportunity to better prepare the evaluation, on a contentious topic (housing, living conditions).

The decision has been made, therefore, to carry out an in-house evaluability assessment (EA) to prepare the Terms of Reference. The EA is expected to help clarify the evaluation objectives, scope (what specifically will be evaluated?) and the unit of analysis (at the level of what actor, place, sector?).

You are part of the team responsible for this EA. You have collected information about the ‘Saving at home’ programme and **you start by identifying the main instruments that are being implemented in the programme.**

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| Subsidy and grants  Interest-free loans  Capacity building of contractors/market  Communication strategy  Technical assistance for programme implementation |

**In parallel, you clarify who the different actors involved in this programme are**, whether in its design, delivery or in its implementation.

*This could be useful to you to better understand how the programme is working, and for whom. You also reckon that these are probably the actors that you will need to contact for the evaluation.*

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| **Institutions or groups involved in design and delivery…** | **Actors or groups targeted by the programme** | **Actors not directly targeted but involved in the implementation** | **Actors not directly targeted but ultimately benefitting or losing from the programme** |
| Ministry of Energy  Ministry of Finance  Managing Authorities | Energy-poor/ vulnerable households | Commercial Banks  Energy inspectors  Market (contractors, engineers, suppliers, service providers)  Municipalities | Energy providers  Households that do not meet the programme requirements  National/European/international suppliers  The Chamber of Commerce  The Technical Chamber |

You also start identifying, at this stage, other organisations or persons who might be **interested by the programme and the results of this evaluation**.

*The evaluation plan was not very clear about how the evaluation will be used. These persons might be involved in the evaluation steering committee and/or be among the future users of the evaluation.*

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| Ministry of Energy  Market (contractors, engineers, suppliers, service providers)  Home-owner organizations  National Coordination Authority (NSRF)  Technical Chambers of Greece  Other EU programmes  European Commission |

The ‘Saving at home’ programme has been running for more than 10 years and you want to clarify what should be the main focus of the evaluation. To do so, you aim at clarifying what criteria should be used to judge success. You consider in particular positive outcomes that are expected on the above actors targeted or expected to benefit from the programme, or negative situations that the programme is expected to address.

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| *e.g. The new renovations will be a success if they achieve a higher level of quality.’*  Positive outcomes (depending on interests of actors)  Longterm benefits (economic) for vulnerable households  Promoting energy targets (decrease of energy consumption and GHG emissions)  Activation of markets  Quality of life for beneficiaries  Further public awareness-raising on energy efficiency issues.  Negative parameters  Administrative delays  Administrative burdens  Restricted market availability  Difficulty for poor households to pay off loans |

Given that the specificity of the new programme is the focus on vulnerable populations, what should be the scope and unit of analysis for this evaluation?

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| *e.g. ‘families in renovated houses benefit from a better heat/cooling comfort’*  Ask evaluation questions having in mind the following:  Scope   * Beneficiaries (type of families/households) * Location (geographical spread of interventions) * Type of interventions   Unit (rate)   * (Number of energy poor- vulnerable families benefitted)/ (Total number of such families in the intervention area) |

### Groupwork #2: Formulating Evaluation Questions

You have presented your initial work to your colleagues and asked some potential users of your evaluation for feedback. Two main concerns have emerged from your consultations:

1. The new programme specifically aims at attracting poorer households. However, some regional actors are concerned that a higher subsidy rate alone will not be enough to do so. **They want to know how the programme is performing** on this regard, and how it could improve.
2. The Greek government considers the renovation of housing units to be important for reaching its GHG reduction goals. For this, however, the renovations need to be more extensive than in the previous programmes. **They want to know whether the GHG emission reduction by euro invested is optimal** and how it could be improved.

In both cases, you start by listing the conditions which may explain the results observed. Try to clarify what actors are concerned by these conditions.

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| ***Concern #1***  *e.g. ‘vulnerable households may not be able to take out a loan’*  Conditions that may explain a *below-expectations* performance of the programme in terms of served users:   * No available liquidity of beneficiaries * Not substantial credit history of beneficiaries * Not adequate capacity of contractors (market) to cover the renovation needs generated by the programme * Not enough/not adequate communication schemes especially for low-income families * Complexity of procedures * Time insufficiency for preparation of proposal * Expensive preparatory stages * Legal problems regarding the property that need to be overcome |

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| ***Concern #2***  *e.g. ‘the quality or span of the renovation works may lead to below-expectations performance’’*  Conditions that may explain a *below-expectations* performance of the programme in terms of energy targets:   * Scale of renovation to reach more stringent GHG targets is too expensive for the target household/beneficiary (high cost/low benefit) * Not adequate capacity of contractors (market) to cover the renovation needs generated by the programme |

Choose one of these two concerns and ask one or several evaluation questions. EQs should help you 1) assess the results of the programme; 2) identify the conditions for the programme’s success or failure; 3) provide information that could be useful to the future improvement of the programme. What in your view should be the unit of analysis?

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| Can we make GHG reduction interventions effective and sustainable for vulnerable households?  How can we make GHG reduction interventions effective in terms of cost/benefit for vulnerable households?  Any lessons learned to guide future policy making? |

What information would you need to answer these questions? What approach, methods, or tools could you use to retrieve this information and make sense of it?

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| …  Information on GHG emissions on local/national scale  Number of households/beneficiaries that submitted proposals  Number of households/beneficiaries with approved proposals  Types of interventions included in the proposals  Energy certificates (ex-ante and ex-post)  Statistical data on social profile and energy emissions of intervention areas |

### Groupwork #3

In the months which have followed this evaluability assessment, your colleagues have issued Terms of Reference for this evaluation. The ToR made the evaluation scope and the most important issues that should be investigated explicit. The EQs have been refined to better align with the interests of the different actors involved in the programme.

Since then, company Z… has been commissioned to carry out the evaluation. During the evaluation, you have faced a number of issues. Rather than dealing with these issues piecemeal, your Department has decided to set up a community of practice with other evaluators, with a view to better address quality issues.

To achieve this, you use the ‘[What if?](https://quadrant-conseil.fr/ressources/outils/cards_whatif.pdf)’ deck of card. Each person in your group selects three cards. The cards briefly present a quality issue. For each card, ask yourselves:

* What should I do in this specific situation?
* What can be done in the future to prevent this from happening?

Discuss this with the group.

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| 1. **During deliberations the Ministry claimed that they were not consulted by the evaluators or conflict between stakeholder and the evaluator**   Search background of conflict between Ministry and evaluator  Bring together evaluator and stakeholder to discuss the conflict  Assess whether the procedure was adhered to  Register opinions of open deliberation (minutes) and include the result of deliberations in ToR (deliverable)  Ask for Evidence-based evaluation conclusions  Analytical and clear ToRs with precise questions  Formulation of explicit selection criteria of evaluator   1. **There is a verbal claim that there is a person with a conflict of interest among the team of the evaluator**   Ask for a written complaint by the stakeholder to proceed with an official inquiry  Proceed with assessment of the procedure and unofficial inquiry  Implement what the relevant regulation foresees in the situation of conflict of interests   1. **The Press is interested in the final result of the evaluation (i.e to see the report), but the Administration raises concerns about it**   When the deliverable is approved, the report will be published on the MA’s website. |

The discussions with the community of practice have prompted a desire to address some deeper issues affecting the quality and ‘usability’ of the evaluations that are commissioned by your administration. An internal study on these questions is launched in your Department. You are concerned in particular with identifying:

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| ***Capacity issues***  *Is there enough methodological / substantive expertise available in-house? On the market?* | ***Available tools***  *What are the tools (checklists, templates…) that are available in-house to ensure quality? How adequate are they?* |
| ***Administrative processes***  *What mechanisms exist to anticipate quality issues (e.g. preliminary studies, consultation of stakeholders) or to address them (e.g. crisis resolution)? Are they working well?* | ***Shared culture and vision***  *Is there an agreement on what constitutes quality and how to improve it within the administration or among policy actors?* |

### Groupwork #4

Below are some ‘scenarios’ of evaluation use. You discuss two of these scenarios with your group. What would you do? How could you better address this situation in the future? Consider in particular how the different groups of potential users could be involved in the evaluation process.

1. The Ministry has heard about your evaluation. You receive a request from them to provide some findings and lessons learned, which could feed the current revision of the ‘Saving at Home’ programme. These elements are requested to be sent within two weeks. However, the evaluation process is still ongoing and you have not yet received any findings.

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| Provide the Ministry with a preliminary report (non binding) or provide oral information  Provide relevant past evaluation  Involve the Ministry as a stakeholder in the process  Organize a workshop of meeting between the Ministry and the consultant  Develop a platform where the stakeholders can upload input on the ongoing evaluation |

1. The evaluation has shown that one reason for the low uptake of the programme by vulnerable households was the difficulty in having the house renovation plan validated by municipalities. This is not something that is in the remit of your administration, but the director in charge of the programme would like to use this opportunity to discuss this issue with the municipalities. However, they were barely associated to the evaluation process (some of them were interviewed but they were not invited to the steering committee).

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| Invite the Municipalities (associations) to actively participate in the process even at this stage  Include the Municipalities (associations) as stakeholders at an early stage of the evaluation process |

1. Following the initial evaluability assessment, the evaluation has used the concept of ‘energy poverty’ to shed a different perspective on the programme. In particular, the evaluation has demonstrated that ‘low revenues’ (which is the criterion for increased support) and ‘energy poor’ (which is the targeted population) were covering two similar, but distinct groups. There is therefore potential to increase the relevance and coherence of support. However, bringing the scheme to better support the energy poor may require important changes.

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