MICAT

Multiple Impacts Calculation Tool

POLICY BRIEF

A tool built around its users: the MICATool co-design process

Authors:

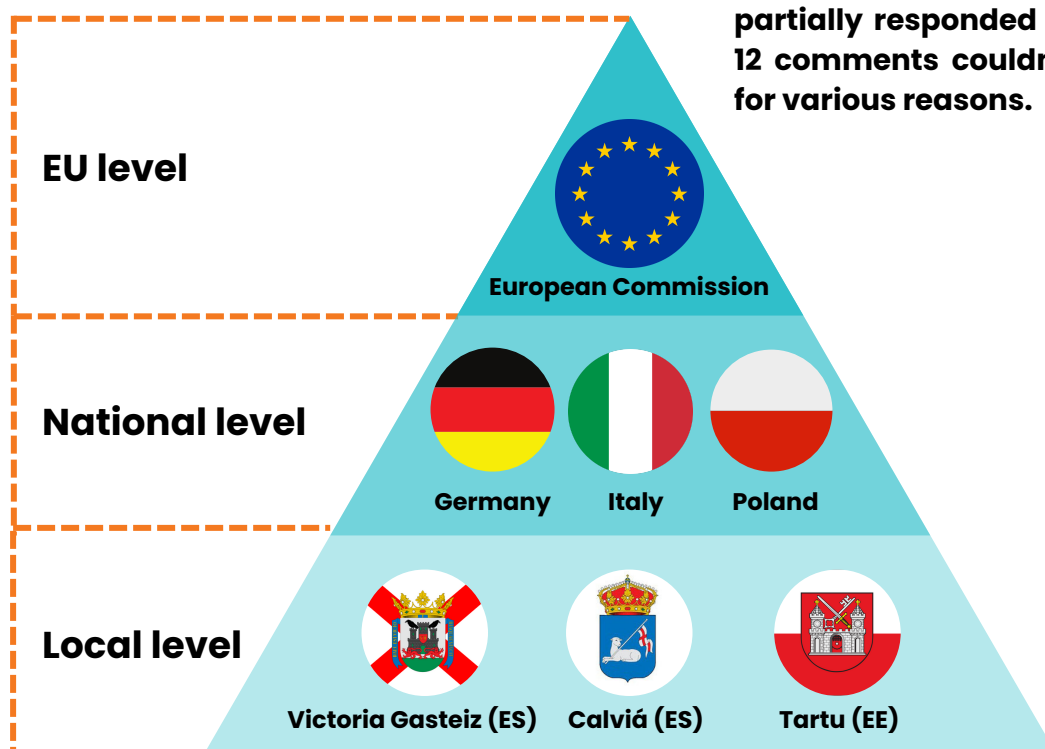Anousheh Parsaei & Giulia Pizzini, IEECP

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EXECUTIVE SUMMARY

The **MICAT – Multiple Impacts Calculation Tool** – project aims to create an accessible online tool, MICATool, for estimating the Multiple Impacts of Energy Efficiency (MI-EE), **allowing policy-makers to compare scenarios and quantify or monetise MI-EE.** The MICATool's primary objective is to facilitate simplified analyses for policymakers and practitioners, allowing them to evaluate, quantify (and when possible monetise) the relevance of multiple impacts of energy efficiency (MI-EE) across various data and policy scenarios.

In order to make the tool as fit as possible to its final users, stakeholder engagement has been a central component of the MICAT project, closely intertwined with the tool's development. The extensive three-year engagement process, structured around a **three-step methodology** and **involving three governance levels**, established a trustful relationship between the project team and end-users. Throughout the engagement activities, 66 unique feedback comments were gathered across three levels. These included remarks on indicators, the MICATool's architecture, data needs, requests for guidance, and suggestions for policy improvement. All guidance-related comments were either fully or partially addressed. **MICATool developers incorporated 20 requests and partially responded to 17 others, although 12 comments couldn't be accommodated for various reasons.**

EU level

European Commission

National level

Germany   Italy   Poland

Local level

Victoria Gasteiz (ES)   Calviá (ES)   Tartu (EE)
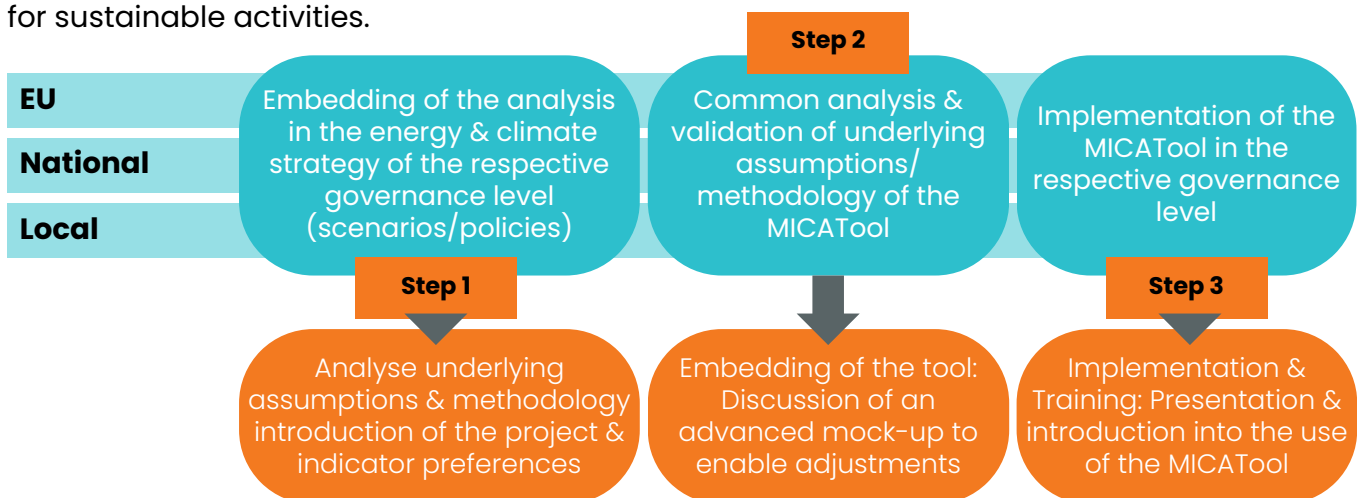
THE ENGAGEMENT STRATEGY AND ITS THREE STEPS

The engagement strategy implemented in the development of the MICATool project featured both a vertical and a horizontal component. The vertical aspect involved three governmental levels, with further division occurring in two out of the three levels. This segmentation included three case studies at **national level (Germany, Italy, and Poland)** and three case studies at **local level (Tartu in Estonia, Vitoria Gasteis, and Calviá in Spain)**.

Experience from previous projects (e.g. ODYSSEE-MURE MB:EE and COMBI) combined with stakeholder involvement, have proven that in addition to national governments and the European Commission, local authorities should be targeted as crucial potential users. This aligns with the imperative for climate action at all governance levels, as emphasised in the European Green Deal and the recast of the Energy Efficiency Directive, unlocking significant potential for energy efficiency. Therefore, on top of serving the purpose of policymakers at national and EU levels, the MICATool is positioned to assist municipalities in formulating and prioritising cost-effective climate policies despite budget constraints. Additionally, it can support investors in making decisions favoring sustainable investments and demonstrate the sustainability of energy efficiency-related investments, particularly relevant in the context of the EU Taxonomy for sustainable activities.

As for the horizontal component of the engagement strategy, the process was divided into three key steps: embedding of the analysis, validation of underlying assumptions, and training, as specified:

1 Initially, the team established the theoretical foundation for assessing Multiple Impacts of Energy Efficiency (MI-EE), categorising impacts, and defining a quantification approach. This foundation served as the basis for subsequent tasks and the overall architecture of the tool.

2 Following this, underlying policies and scenarios (e.g., PRIMES data, NECP scenarios) were incorporated, forming the basis for calculations to assess Multiple Impacts at various governance levels.

3 The subsequent phase involved setting up the online tool, commencing with the back-end. This included integrating scenarios and data, implementing formulas for quantifying indicators, and incorporating methodologies for aggregation, cost-benefit analysis, and avoiding double-counting. The development then progressed to the front-end, prioritising user-friendliness.

Throughout each step, stakeholder involvement played a pivotal role in ensuring the robustness of the work and the user-friendly nature of the tool. The accompanying figure visually summarises the steps taken to embed the MICATool across all governance levels.

EU			
National		Step 2	
Local	Embedding of the analysis in the energy & climate strategy of the respective governance level (scenarios/policies)	Common analysis & validation of underlying assumptions/ methodology of the MICATool	Implementation of the MICATool in the respective governance level

Step 1	Step 2	Step 3
Analyse underlying assumptions & methodology introduction of the project & indicator preferences	Embedding of the tool: Discussion of an advanced mock-up to enable adjustments	Implementation & Training: Presentation & introduction into the use of the MICATool

OUTCOMES FROM THE ENGAGEMENT STRATEGY IN PRACTICE

Throughout stakeholder engagement activities in the project, **66 unique feedbacks** on tool improvement were collected, with 19 at the European level, 27 at the national level (12 in Germany, 7 in Poland, and 8 in Italy), and 20 at the local level (6 in Vitoria-Gasteiz, 11 in Tartu, 3 in Calvià). These feedbacks covered indicators, the MICATool itself, data needs, requests for guidance, and suggestions for policy improvement or discussion.

In summary, **user feedback on the MICATool** plays a pivotal role in driving positive enhancements. While acknowledging the tool's clarity in explanations and language, users have provided valuable suggestions for **additional information and improvements in graphical representation, labeling, and conceptual clarity**. This constructive feedback forms a solid foundation for **refining the MICATool**, ensuring it closely **aligns with user expectations** and evolves into an even more **effective and user-friendly resource** for sustainable energy and climate planning. Notably, the consistent emphasis on key improvement areas, such as **pre-training, investment integration, intuitive sub-sector selection**, and simplified **energy savings calculations**, reflects users' **proactive engagement in shaping a more positive user experience**. This collective input not only guides the positive evolution of the

MICATool but also fosters a collaborative environment where users and developers work together to create an enhanced tool that caters to the diverse needs of organisations and decision-makers in the realm of climate and energy planning. All inquiries related to guidance have been either fully addressed or partially addressed (2). Comprehensive documentation on navigating the MICATool is available in the dedicated section on the website. Additionally, the user experience with the MICATool is enhanced through the inclusion of help boxes, accessible by clicking on the designated symbol.

Besides, the results underscore the fundamental role of **stakeholder engagement,** not only in facilitating **policymakers'** familiarity with the MICATool and promoting seamless usage but also in **reshaping the identified target groups** and **application** fields of the tool. An illustrative example includes the prioritised development of the "import dependency" indicator in response to the geopolitical event of Russia invading Ukraine, addressing a specific need identified by the European Commission. The active involvement of stakeholders in both MICATool development and policy work has not only contributed to the credibility of the project but has also ensured its relevance, legitimacy, and usefulness for ongoing and future policymaking endeavors.

Regarding other feedback, the MICATool developers successfully programmed the tool (or its components) to fully incorporate 20 requests and partially addressed 17 of them. Unfortunately, adaptation of the tool for the remaining 12 comments was not feasible, primarily due to either a lack of data or because the requests exceeded the intended scope of the MICATool.

POTENTIAL APPLICATION OF THE MICATOOL

The stakeholder process has highlighted a central application for examining multiple impacts in National Energy and Climate Plans (NECPs) and potentially as a substitute for the required impact assessment, which is currently being questioned. It could also aid member states in meeting reporting obligations related to the Energy Efficiency Directive's new Article 3 concerning the EE1st principle.

Furthermore, it has been considered for evaluating cost-benefit ratios in funding programs at the national and local levels, potentially boosting the promotion of energy efficiency funding programs due to the substantial magnitude of multiple benefits. Finally, through work at the local level, the MICATool can to some extent contribute to municipalities' Sustainable Energy and Climate Action Plans (SECAPs), reducing associated workload and lowering the threshold for new urban areas to draft a SECAP.

REFERENCES

- ODYSSEE-MURE's MB:EE – *https://www.odyssee-mure.eu/data-tools/multiple-benefits-energy-efficiency.html*

- European Green Deal - *https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en*

- Energy Efficiency Directive - *https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2023_231_R_0001*

- EU Taxonomy - *https://ec.europa.eu/sustainable-finance-taxonomy*

- National Energy and Climate Plans (NECPs) - See in particular Annex I, section 5 of the Regulation EU/2018/1999 - *https://eur-lex.europa.eu/eli/reg/2018/1999/oj*

- Energy Efficiency Directive's new Article 3 - Check when EC presented its proposal for EED recast

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MICAT's partners:

Fraunhofer ISI

IEECP INSTITUTE FOR EUROPEAN ENERGY AND CLIMATE POLICY

Wuppertal Institut

ICLEI Local Governments for Sustainability

IIASA International Institute for Applied Systems Analysis www.iiasa.ac.at

E³ Modelling Energy Economy Environment

WiseEuropa

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www.micatool.eu