



Evaluating the Implementation of Energy Efficiency Measures from Article 8 and the Path to Article 11 Compliance

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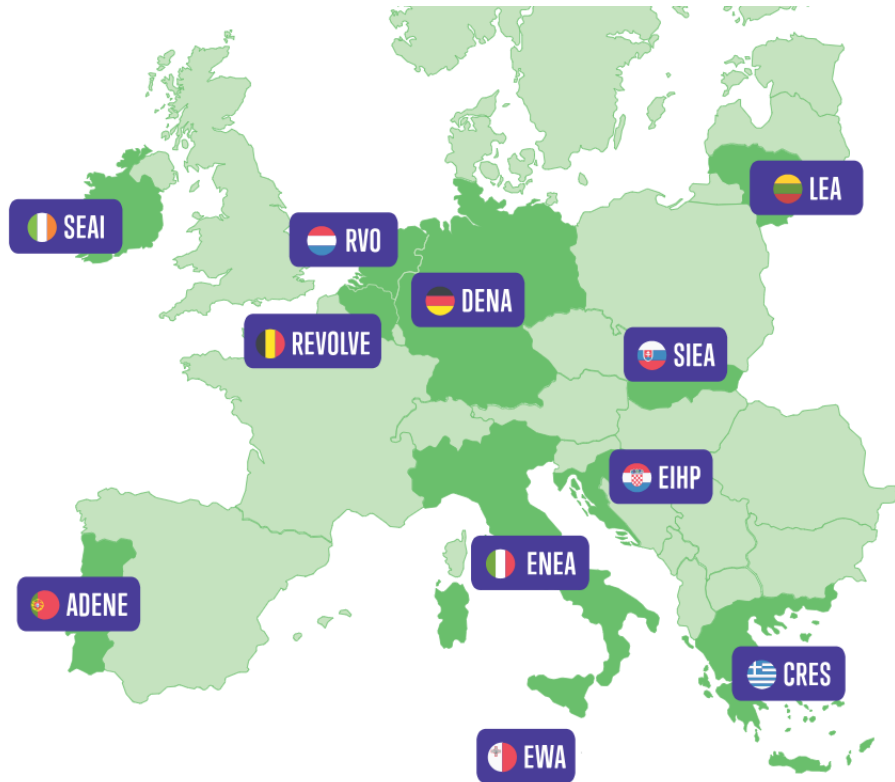
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Context

Effect of Energy Audit (EA) obligation, mandated by Energy Efficiency Directive (EED), on the implementation of Energy Efficiency Measures (EEMs)

- A differentiation exists among countries regarding the implementation of EA obligation ([LEAPto11 D2.1](#))
- This starting point, together with the role of EnMS, is key for EEMs data collection and analysis



Objectives and novelty



EVALUATION OF EEMS
DATA COLLECTION
AND MANAGEMENT



IDENTIFICATION OF
GOOD PRACTICES ON
EEMS IN CURRENT
ART.8 CONTEXT AND
DIFFERENT
OBLIGATION PHASES

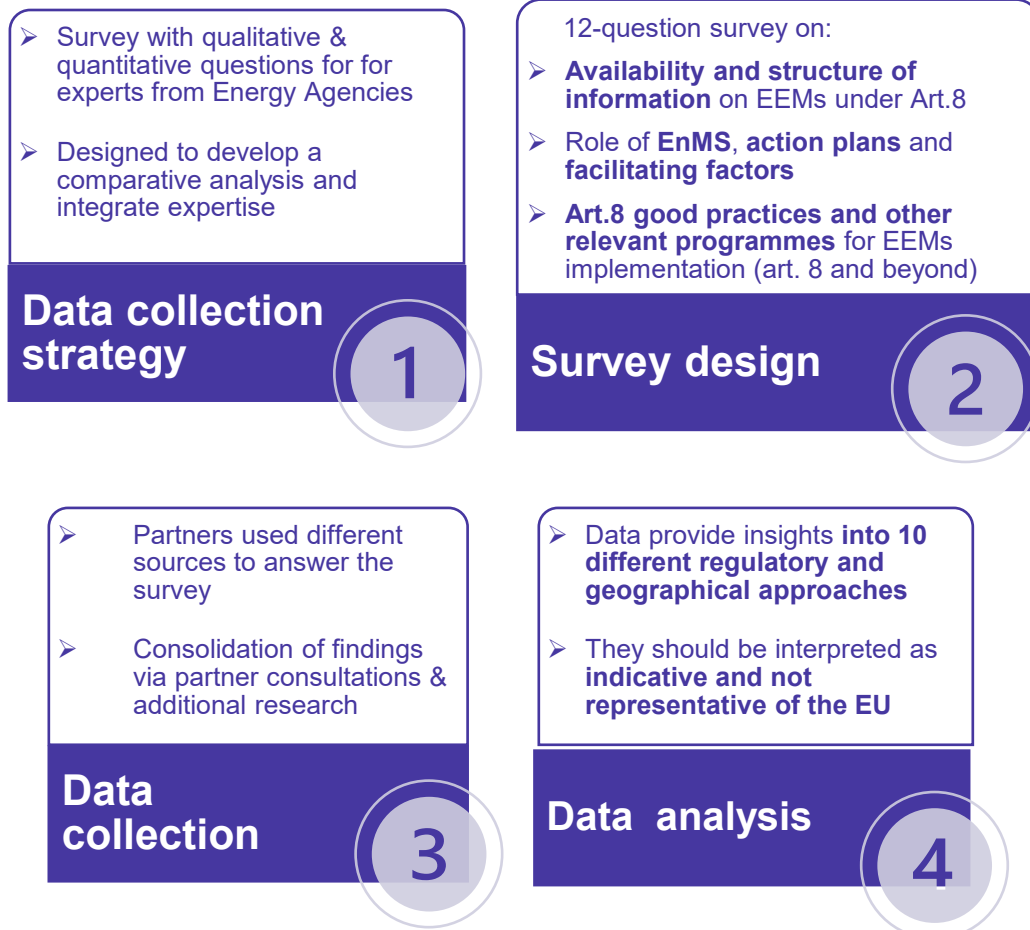


IDENTIFICATION OF
PROGRAMS **BEYOND**
ART.8 PROVIDING
INFORMATION ON
EEMS



ASSESSMENT OF THE
CURRENT STATUS
BEFORE
TRANSITIONING TO
THE NEW ART. 11
REQUIREMENTS

Methodology



Information sources

- ❑ **Public databases**
- ❑ **Non-public sources**
 - Energy Agencies
 - External databases
- ❑ **Direct interactions with bilateral calls**
- ❑ **European institutional sources**

Balanced approach

Partner countries used public, non-public (internal and external) sources based on availability and question type



Involved organisations

- ❑ **National Energy Agencies:** main contributors, providing data in over half of cases
- ❑ **Ministries of Energy, Climate & Environment:** frequently consulted
- ❑ **Other ministries:** limited role, consulted for specific cases

Implemented and recommended EEMs reporting metrics in EA guidelines

Country	Implemented EEMS			
	Investment costs	Energy / CO ₂ / Water Savings	Economic Savings	Economic Indicators
Germany	✗	✗	✗	✗
Greece	✗	✗	✗	✗
Ireland	✗	✓ [energy]	✗	✗
Italy	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓
Netherlands	✓	✓ [energy]	✗	✓ [PBT]
Malta	✗	✓ [energy, water]	✓	✗
Portugal	✓	✓ [energy]	✓	✓ [PBT]
Slovakia	✗	✗	✗	✗

- **Guideline availability:** all examined Countries provide publicly available guidelines for EAs, except one (Croatia) where they are regulated by law
- **Implemented vs recommended EEMs:** information is more frequently requested for recommended EEMs (9 countries) than for those that have already been implemented (7 out of 9 countries)
- **Metrics:** commonly recommended indicators include energy and economic savings, initial investments, and payback time
- **EE incentives:** while the consideration of incentives is occasionally suggested, they are often overlooked in practice

Implemented and recommended EEMs reporting metrics in EA guidelines

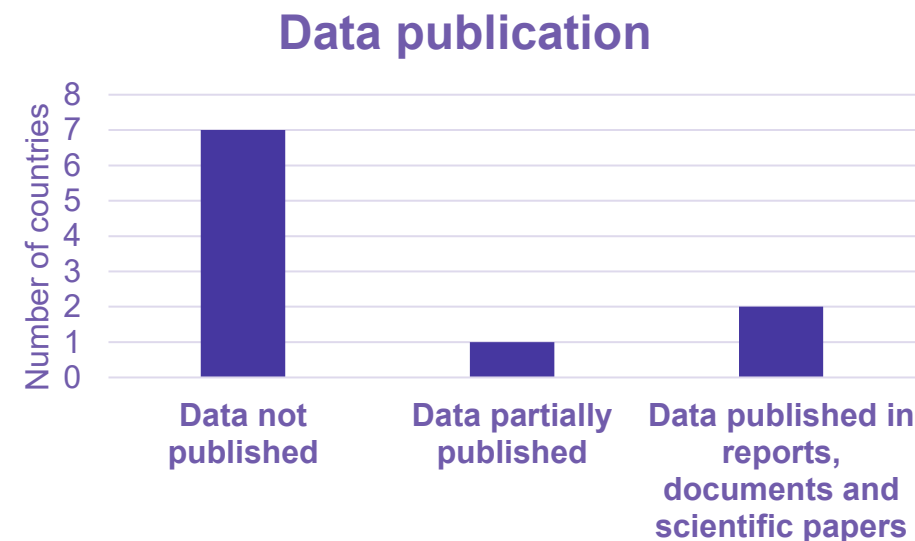
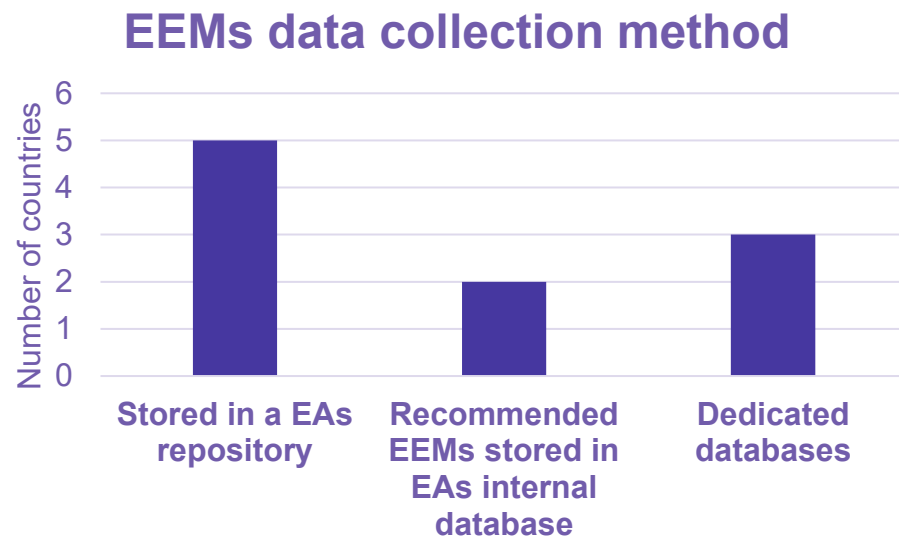
Country	Implemented EEMS				Recommended EEMS			
	Investment costs	Energy / CO ₂ / Water Savings	Economic Savings	Economic Indicators	Investment costs	Energy / CO ₂ / Water Savings	Economic Savings	Economic Indicators
Germany	✗	✗	✗	✗	✓	✓ [energy, CO ₂]	✓	✓ [NPV, IRR]
Greece	✗	✗	✗	✗	✓	✓ [energy]	✓	✓ [PBT]
Ireland	✗	✓ [energy]	✗	✗	✗	✓ [energy]	✗	✗
Italy	✓	✓	✓	✓	✓	✓ [energy]	✓	✓ [NPV, IRR, PBT]
Lithuania	✓	✓	✓	✓	✗	✓ [energy, CO ₂]	✗	✓ [PBT]
Netherlands	✓	✓ [energy]	✗	✓ [PBT]	✓	✓ [energy]	✗	✓ [NPV, PBT]
Malta	✗	✓ [energy, water]	✓	✗	✓	✓ [energy, water]	✓	✗
Portugal	✓	✓ [energy]	✓	✓ [PBT]	✓	✓ [energy]	✓	✓ [PBT]
Slovakia	✗	✗	✗	✗	✓	✗	✓	✓ [NPV, IRR, PBT]

✓ included in EA guidelines with a specific indicator

✓ included in EA guidelines with free format

✗ not included in EA guidelines

Availability of EEMs data



- **From EA obligation to data collection?** Portugal - [EA web portal SGCIE](#)
Italy - [EA web portal Audit102](#)
Ireland - [EA compliance notification system](#)
- **Data availability:** High variation across countries impacts on policy evaluation and cross-country comparison
- **Evolving trend:** Transition from document-based collection to digital database and online platforms

Existing information on EEMs

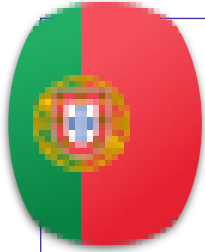
General results

- **Variations in reporting** impact comparisons
- **Key challenges:**
 - **Data gaps** with partial or missing information
 - **Differences in reporting periods**
- **EEMs per audit:** ratio varies from **0.5 to 3**
- **Implementation rate**
 - Preliminary comparison between recommended and implemented EEMs
 - Differences reflect **national approaches to EAs** and follow-ups
 - Recommended EEMs not always align with later implementation

Information at Country level

- In **four countries out of ten**, information on implemented and recommended EEMs can be extracted from a database
- In some other countries the current situation is evolving towards higher data availability
- In **Germany** information on recommended EEMs is available, while in **Ireland, Italy** and **Portugal** also for implemented ones and in the last two countries for the 2019-2023 period
- For these countries, two indicators can be computed for implemented or recommended EEMs, or both
 - **Average final energy savings per EEM (toe)**
 - **Final energy savings / Energy consumption (%)**

Obligation to implement EEMs and Action plan



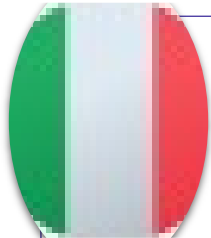
Portugal

- Only LEAPto11 country with an **obligation to implement EEMs** under Art.8
- Monitoring since 2008 via SGCIE system and **nearly 100% implementation rate**



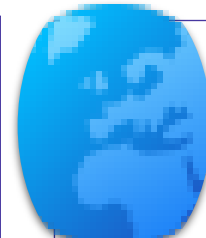
Netherlands

- Obligation for EEMs with a ≤ 5 -year PBT under national regulations (not related to Art.8)
- Companies report every 4 years, tracking 120 standard EEMs



Italy

- Since 2020, obligation for **energy intensive companies** applying for a tax relief to develop an EA and implement at least one measure
- New legislation operational in September 2024 and verification methods under revision



Other countries

- In Germany and Ireland no obligation but collect data on implementation
- In remaining countries no obligation to implement EEMs, and no data collected

Voluntary action plan practices

- ✓ Drawing an action plan: Greece, Lithuania
- ✓ Publishing an action plan: Germany, Greece, Lithuania, Portugal

Drawing an action plan required as part of national regulations

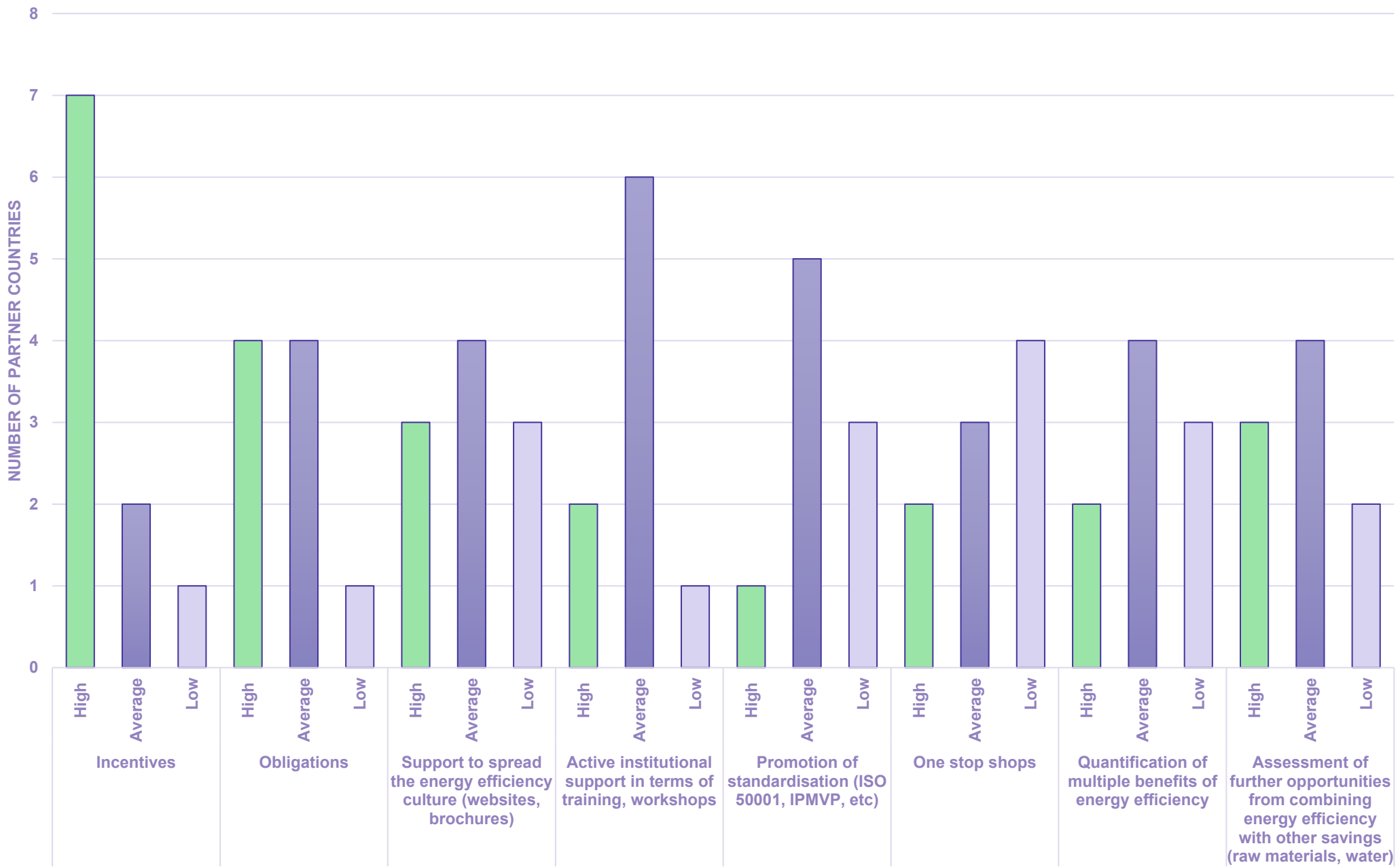
- ✓ Germany, the Netherlands, and Portugal

In half countries there are neither voluntary practices nor legal obligations

EEMs facilitating factors

- Opinions of the individual experts and not official stance of their respective agencies
- The Y-axis represents the number of agencies attributing each relevance level (high, average, low) to a factor

Relevance of facilitating factors for EEMs implementation



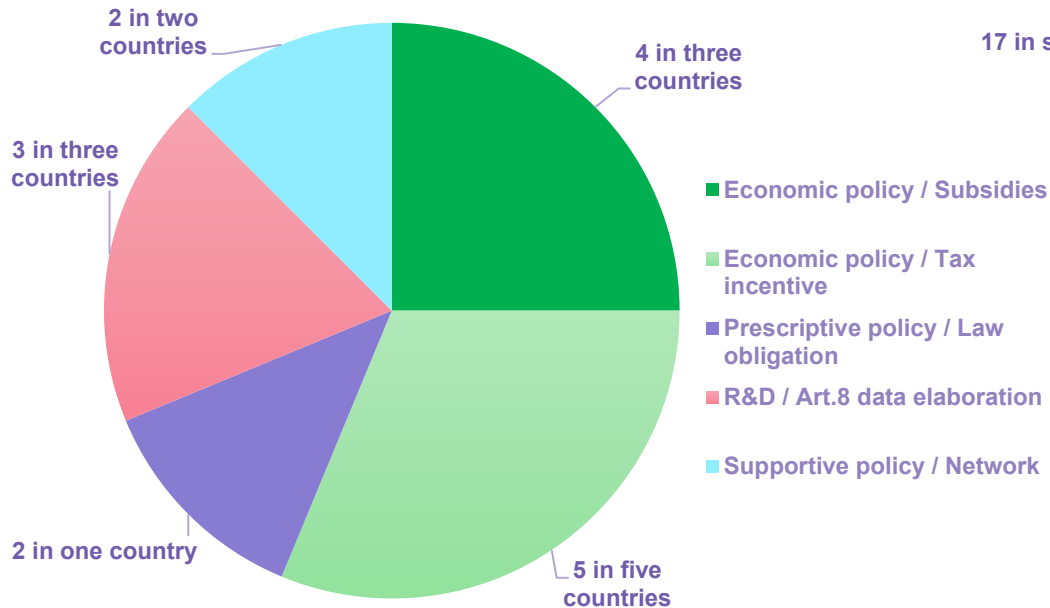
Identification of good practices and other programmes

Both **Art.8 good practices** and **other programmes** to be relevant should meet two criteria

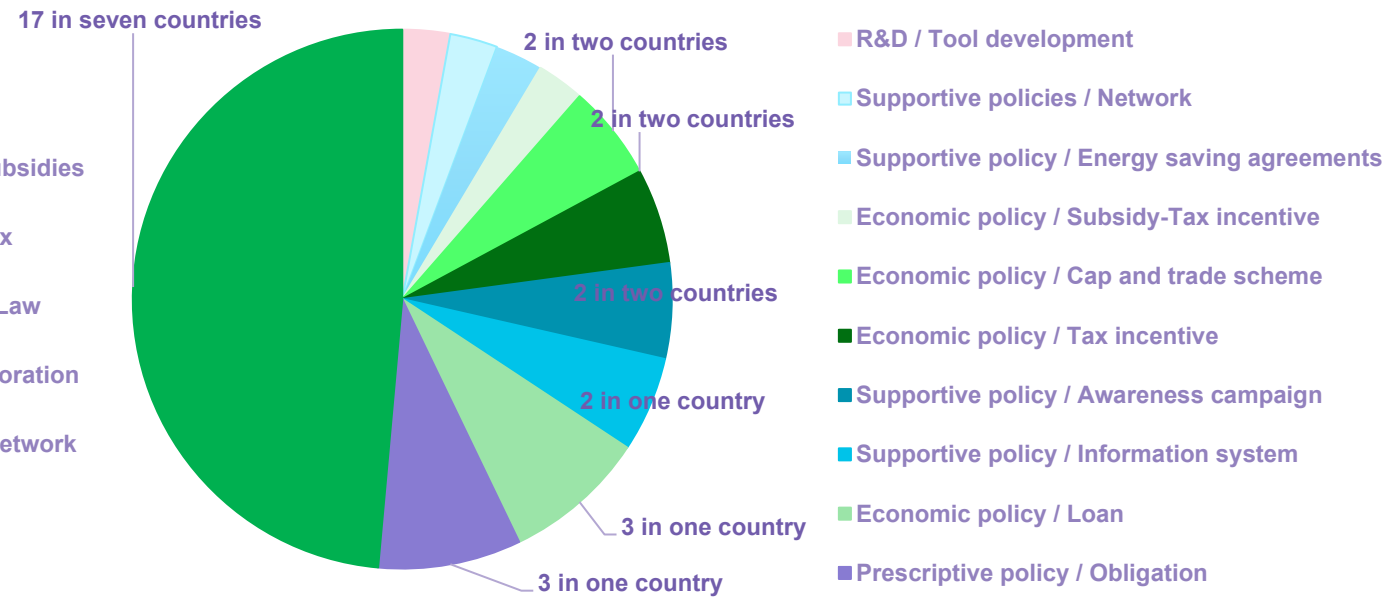
1. Having a **significant impact** in terms of energy savings and business participation
2. Developing **effective data collection** on EEMs

The difference is that good practices deal with EEMs implementation under EED Art.8

Distribution of good practices by type



Distribution of other programmes by type



Art. 8 good practices supporting EEMs implementation

18 good practices aimed at encouraging EEMs' implementation

❑ Economic policies:

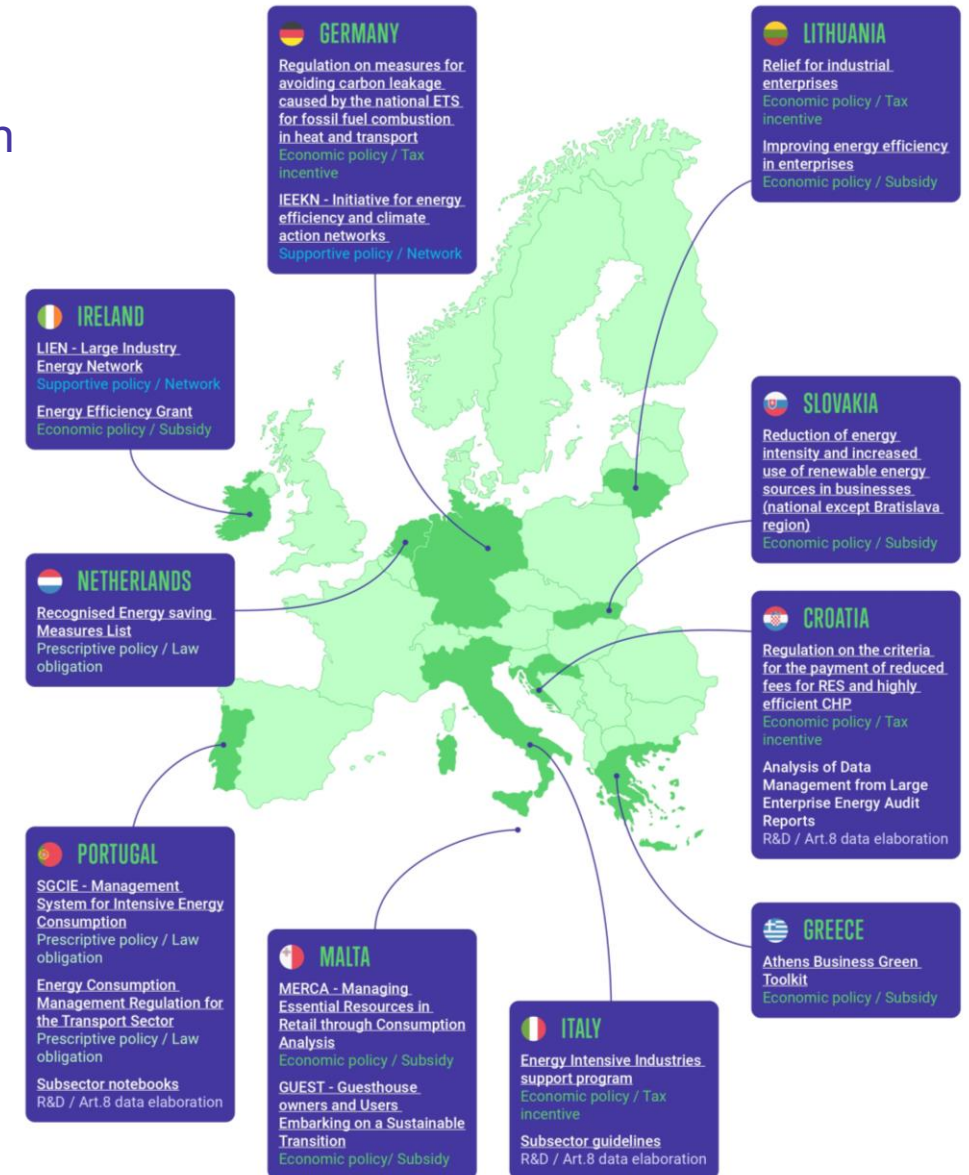
Tax incentives for energy intensive industries under the condition that an EA is conducted or **Subsidies** using structural funds to support the implementation of EA recommendations

❑ Supportive policies:

Networks of companies where having an EA is a condition to participate

❑ R&D:

Subsector notebooks analyzing sectoral data from EAs and identifying EEMs

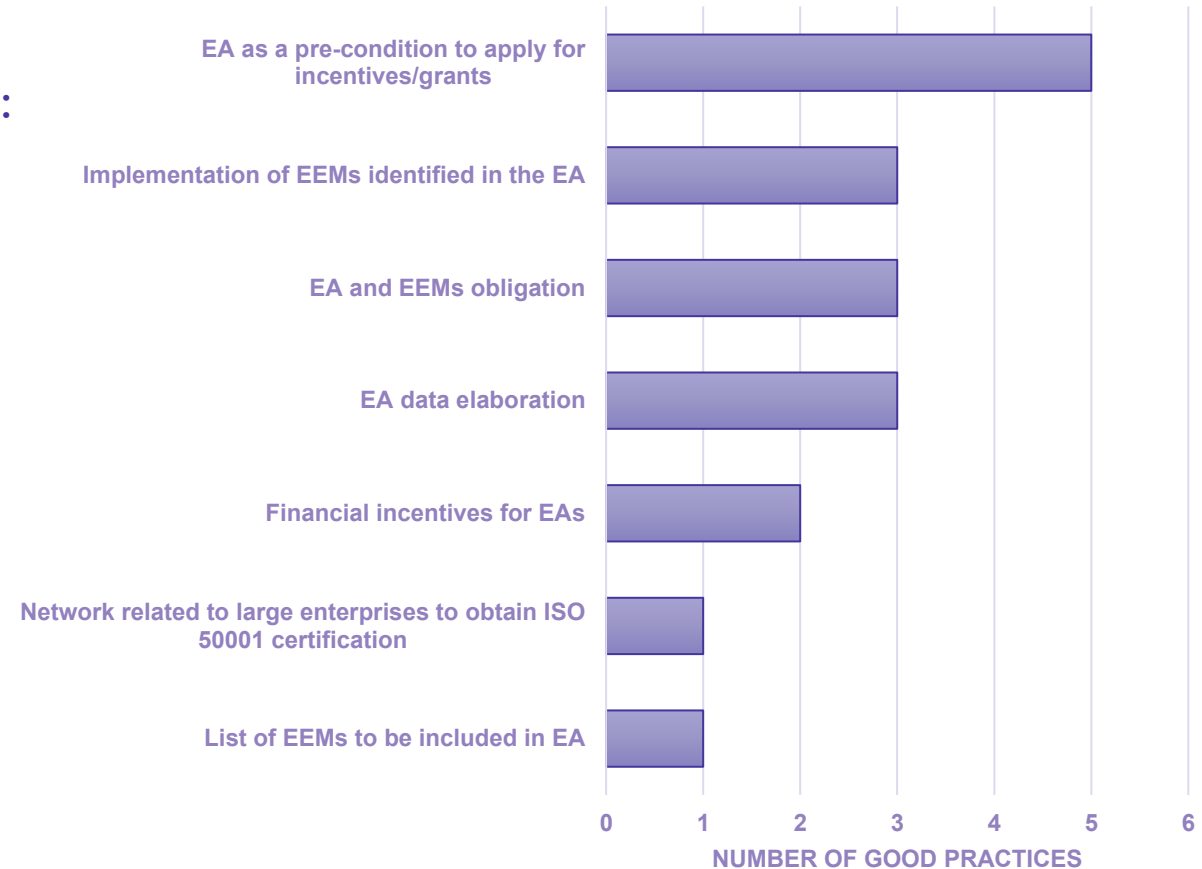


Art. 8 good practices and their link with EA

Identified good practices show different links with EA

- **EA as a pre-condition to apply for incentives/grants:** Croatia, Germany, Ireland, Italy, Lithuania
- **Implementation of EEMs identified in the EA:** Germany, Slovakia
- **EA and EEMs obligation:** Lithuania, Portugal
- **EA data elaboration:** Croatia, Italy, Portugal
- **Financial incentives for EAs:** Greece, Malta
- **Network related to large enterprises to obtain ISO 50001 certification:** Ireland
- **List of EEMs to be included in EA:** Netherlands

How good practices are related to EAs or EnMS?



Other relevant programmes

35 other relevant programmes identified

- **Economic policies**

Emissions/energy **cap** to be achieved through **trade** and EEMs, **loans** and **tax incentives** for investments in EEMs, direct **subsidies** to support EEMs adoption

- **Prescriptive policies**

Regulations requiring businesses to implement EEMs

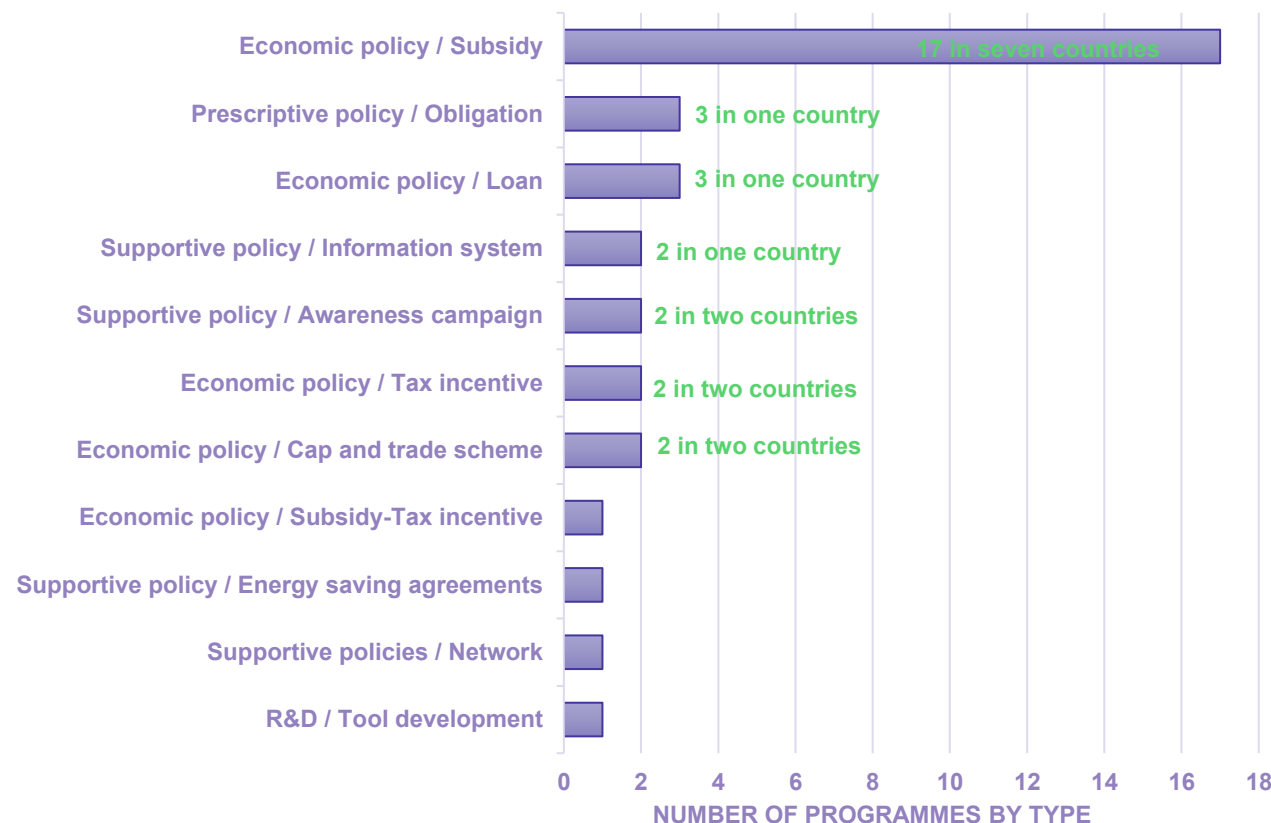
- **Supportive policies**

Awareness campaigns, **energy-saving agreements**, **information systems** and **networks**

- **R&D and innovation**

Data analysis and **tool development**

Distribution of programmes by type



Main conclusions

Lack of harmonisation

- **Strong variation** in data collection and reporting practices
- Fragmented/voluntary approaches hinder **comparability and effectiveness assessment**

Need for common framework

- EU-wide framework (EED Art. 11) would improve **transparency and policy evaluation**
- Structured, transparent data essential to **unlock EE potential**

Link between reporting and policy instruments

- Weak connection between **reporting obligations and policy tools**
- Stronger link with **incentives and compliance** could boost EEM implementation
- Action plans under Art. 11 are a key opportunity for better follow-up and accountability

Mutual learning

- **Exchange of good practices** (guidelines, plans, monitoring tools) should be strengthened

Thank you for your attention



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