



Regional energy efficiency observatory

Plenary Session 4: Monitoring Energy Efficiency

Data collection for energy efficiency indicators :
Med OBSERVEER platform template

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Energy efficiency week

Date : 31/03/2022



Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة



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Background

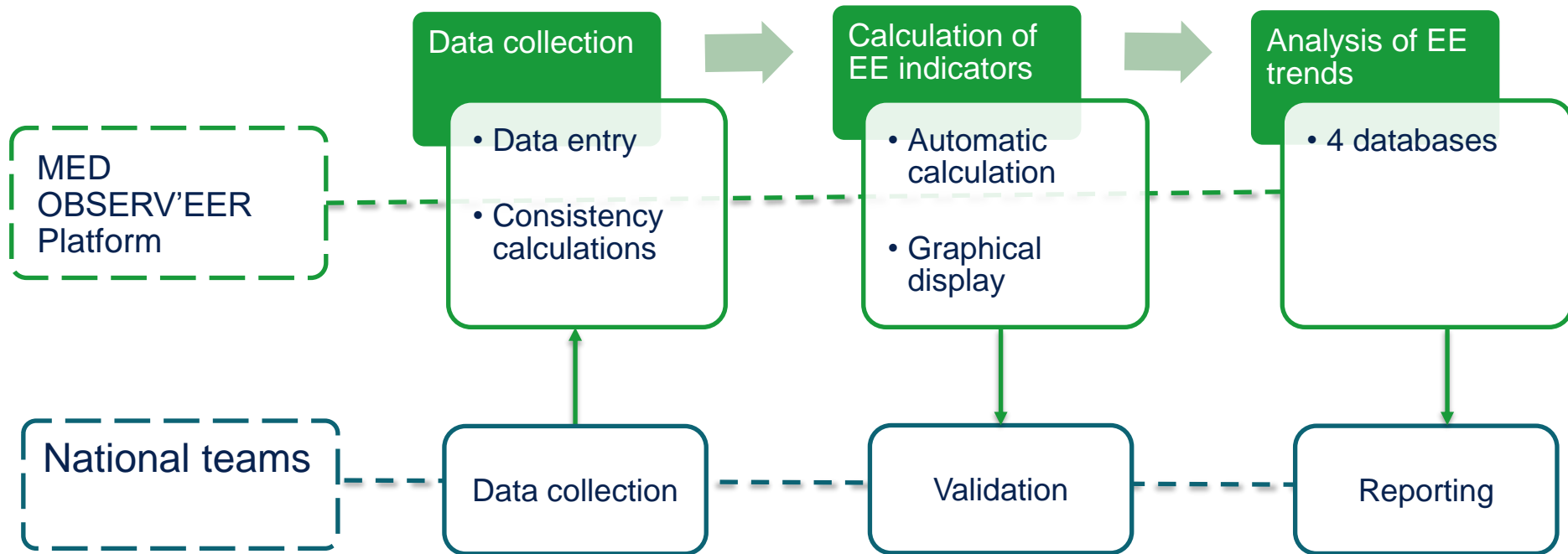
Database goal : to produce harmonised energy efficiency indicators (~100) in SMECs to monitor EE policies

Based on previous MeetMED I → Improved and workable template

Coverage : all end-use sectors + Power

Data collection : 50% activity data 50% energy data from 2000 to 202X (2 updates)

Based on official data provided by NTs with centralized consistency check



1. General organisation of the template

- 4 tab types identified by colours:
 - 4 yellow tabs "Introduction" and "Units" and "Definitions" and general information → guide to use of the file
 - 7 dark blue tabs: **data entry (macro and by sector)**
 - 7 red tabs: for calculating advanced indicators (MEDEX and decomposition)
 - 2 orange tabs of advanced indicator charts: MEDEX and decomposition

63
64
65
66

5/ It is important that all values in the sector sheets are documented by: a unit, a short source (acronym, a calculation, inform "calculation" as the source; if it is a link with another sheet, put the original source agency), as well as a reference and explanatory comments (exact reference of the document, method

Introduction

Informations

Définitions

Units and nomenclature ISIC

Macro

Energie

Industrie

Transport

Résidentiel

Services

Agriculture

MEDEX

2. Presentation of the sectoral tabs: standard organisation

Standard organisation of a sector sheet in 4 parts:

- **Data** needed to calculate the indicators (blank cells by default)
- Data **consistency checks** (green, orange or red cells depending on the degree of consistency):
 - verification that the sum of the sub-sectors, branches or uses is consistent with the sector total
 - Calculation of the variation of the important series over the last 5 years
- **Indicator calculations**
- **Dynamic graphs** for trend visualisation

3. Presentation of the sectoral tabs : architecture of the data entry area

comments
(web link, note on the series, calculation methods/ estimate....)

code series Series titles country code **Units** (pre-defined) **Source** (acronym or abbreviation)

Data (1990-2017)

Country / Pays

Nombre de ménages / Number of households Logements / Dwellings Equipements / Appliances
 Cons. énergétique / Energy consumption Précarité énergétique / Energy poverty
 Contrôle des données / Data control Principaux indicateurs / Main indicators Graphiques / Charts

Code	Title	Pays/Country	Unité/Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Source	Commentaires publics / Public comments	Commentaires internes / Private comments
1. Data																		
1.1. Number of households																		
men	Number of households		k													Source		
1.2. Dwellings																		
Stock of dwellings																		
nbrlog	Stock of all dwellings		k													Source		
nbrlpr	Stock of permanently occupied dwellings		k													Source		
nbrlpr	of which flats		k													Source		
nbrlpr	of which single family houses		k													Source		
Annual construction of new dwellings																		
nbrlpr	Annual construction of new dwellings (construction permit)		k													Source		
nbrlpr	Annual construction of new single family houses (construction permit)		k													Source		
nbrlpr	Annual construction of new flats (construction permit)		k													Source		
Dwellings by type and use																		
podvele	Share of permanently occupied dwellings with electricity		%													Source		

4. Presentation of the sectoral tabs: Transport

Transport

- Vehicle stocks and sales by type
- Average annual distance travelled by vehicle type
- Passenger and freight traffic (in pass., pass.km, t and t.km)
- Consumption by mode and vehicle type
- Specific consumption

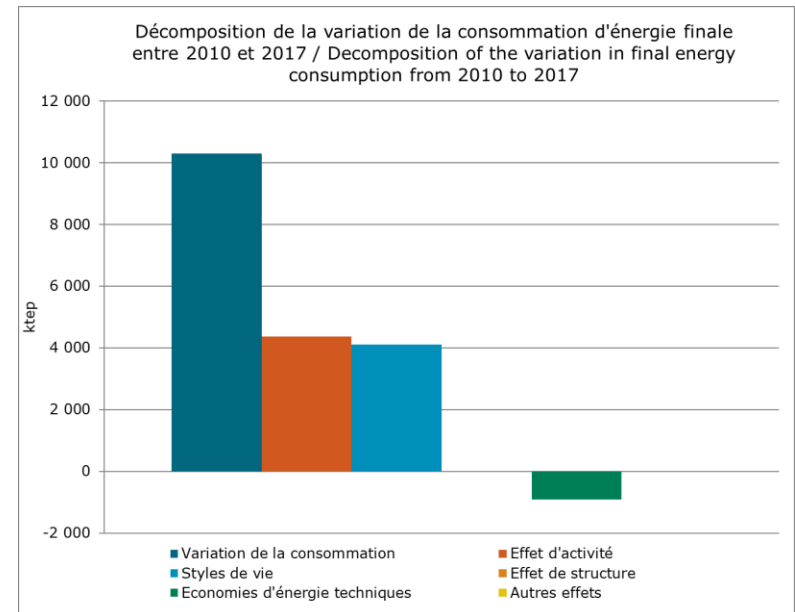
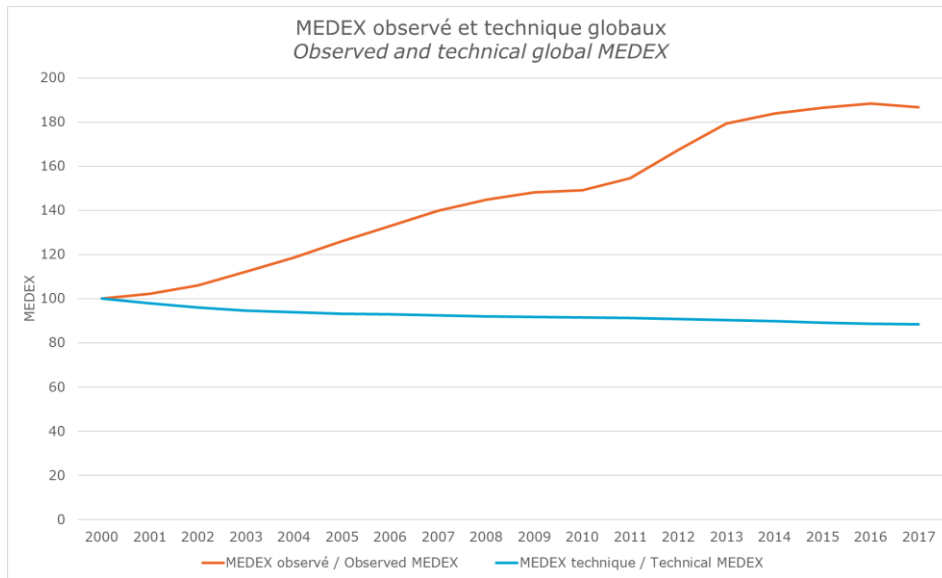
Data

Indicators

- Energy intensity by mode
- Unit consumption
- Share of public, rail and waterway transport

5. Example of advanced indicator: MEDEX and Decomposition

- Graphs are automatically calculated as far as the data collection is performed
- For each sector and overall





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Activity Leader : Didier Bosseboeuf - ADEME
with the collaboration of Hossam Alherafi - RCREEE

Specific energy efficiency indicators in buildings and appliances New Indicators

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Involved Countries



Algeria



Egypt



Jordan



Lebanon



Morocco



Palestine



Tunisia



New commers



Egypt



Jordan



Palestine



Previous indicators in the Households Sector

Data

- Number of households;
- Annual construction;
- Characteristics of dwellings: number by fuel and end-use; floor area;
- Electrical appliances*: stock, sales; specific consumption;
- Efficient equipment (lighting, solar water heaters, refrigerators, heat pumps, air conditioners): number, sales (inc. by energy label);
- Energy consumption of households by end-use (space heating, water heating, cooking, electrical appliances, lighting, air conditioning)

*Electrical appliances :
Refrigerators
Washing machines
TVs
Microwaves
Electric water heating
Air conditioners
Fans

Indicator

- Energy/electricity intensity;
- Energy/electricity consumption per dwelling (actual and climate corrected);
- Energy consumption per dwelling by end-use :
 - Space heating,
 - Space cooling,
 - Water heating
 - Cooking
 - Electrical appliances
 - Lighting;
- Equipment rate and heat production of SWH;
- Efficient equipment: lighting (LED and CFL), heat pumps, electrical appliances*

Note: For electrical appliances, we ask for sales by energy label (A or better, B) for refrigerators, washing machines and air conditioners.



New indicators in the Households Sector

Data

Electrical appliances*: stock, sales;
specific consumption.

*New Electrical Appliance :

- Freezers
- Dishwashers
- Electric hot and cold-water dispenser

Indicator

- Energy consumption per dwelling by end-use
 - Electrical appliances
 - Lighting;
- Efficient equipment: electrical appliances*

Note: For electrical appliances, we ask for sales by energy label (A or better, B) for Freezers and C for air conditioners.



New indicators in the Households Sector

Freezers	Dishwashers	Electric hot and cold-water dispenser	A/C
Number of dwellings with freezers	Number of dwellings with dishwashers	Number of dwellings with electric hot and cold-water dispenser	
% of dwellings with freezers	% of dwellings with dishwashers	% of dwellings with electric hot and cold-water dispenser	
% of households with at least one freezers	% of households with at least one dishwashers	% of households with at least one electric hot and cold-water dispenser	
Annual sales of freezers	Annual sales of dishwashers	Annual sales of electric hot and cold-water dispenser	
% of new freezer in label class A (or most efficient label) % of new freezer in label class B (or most efficient label)			% of new AC in label class C (or second most efficient label)
Specific consumption of freezers	Specific consumption of dishwashers	Specific consumption of electric hot and cold-water dispenser	
Specific consumption of new freezers	Specific consumption of new dishwashers	Specific consumption of new electric hot and cold-water dispenser	



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