



# Energy Smart Mediterranean Schools Network (ESMES)

Strategic overview and general objectives

First National Energy Hub Meeting  
June 23<sup>rd</sup> 2020

Sofia Rossi



# ICU – Istituto per la Cooperazione Universitaria



ICU, non-profit organization since 1966, carries out development projects in countries with limited resources and promotes their self-development

The main fields are:

- rural development
- agriculture and irrigation
- renewable energies
- education and vocational training
- sanitation and healthcare
- women's promotion
- social development
- emergencies

## OUR TEAM

- Sofia Rossi  
**Project Coordinator**
- Daniele Bonetti  
**Financial Manager**
- Francesca Oldani  
**Comunication Manager**

# The ENI CBC Med Programme



 **14** participating countries

 **209** Million Euro

 **41** projects

 **282** Organizations involved

Promote economic and social development

Address common challenges in the environment

# The ENI CBC Med Programme



Promote economic and  
social development

Address common challenges in  
the environment



**Energy efficiency and  
renewable energy**

Priority B.4.3 - Support cost-effective and innovative energy renovations relevant to building types and climatic zones, with a focus on public buildings



ESMES

# Energy Smart Mediterranean Schools Network

## PROJECT IN NUMBERS



6

Partners



5

Countries



6

Technical outputs

## PROJECT DURATION

Start date

01 September 2019

End date

31 August 2022

# Partners

The project objectives are achieved through Cross Border Cooperation, since partners' roles are based on their specific competences and complement each other's expertise at basin level.



GJU: direct experience in monitoring-driven smart system design



CRiB: direct experience in policy development



LCEC: direct experience in implementation of REEE rehabilitations



Alcamo: direct experience in schools energy management



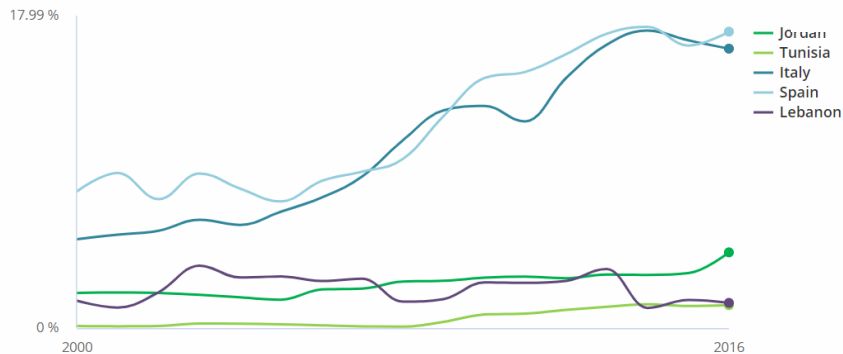
ANME: direct experience in rehabilitation planning policy

# Our challenge

## GROWING ENERGY DEMAND:

Energy consumption worldwide grew by 2.3% in 2018, nearly twice the average rate of growth since 2010

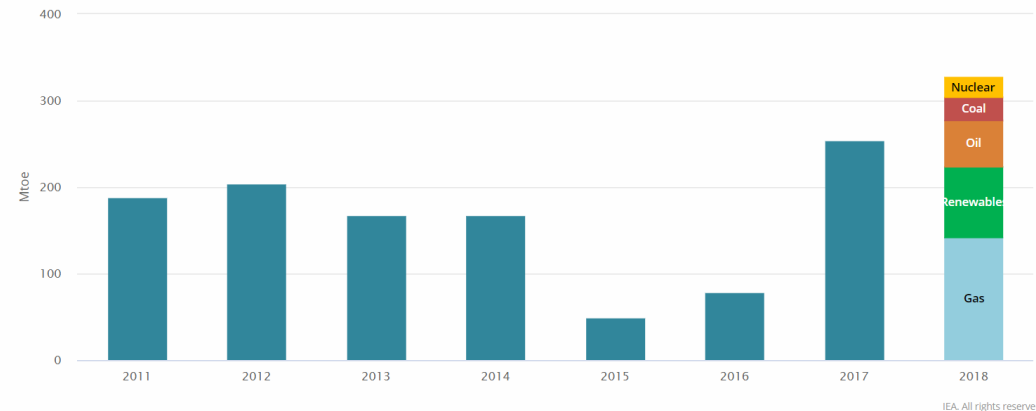
Modern renewable share in total final energy consumption, 2016



## HIGH CO2 EMISSIONS

global energy-related CO2 emissions rose 1.7% to a historic high of 33.1 Giga Tons CO2. CO2 emissions increased in the MPCs at a rapid pace (+18.7%, over the period 2005-2010)

Annual change in global primary energy demand, 2011-18



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## FOSSIL FUEL DEPENDENCE

Electricity produced with fossil fuel:

- 95% in Mediterranean Partner Countries
- 82% in EU Mediterranean Countries

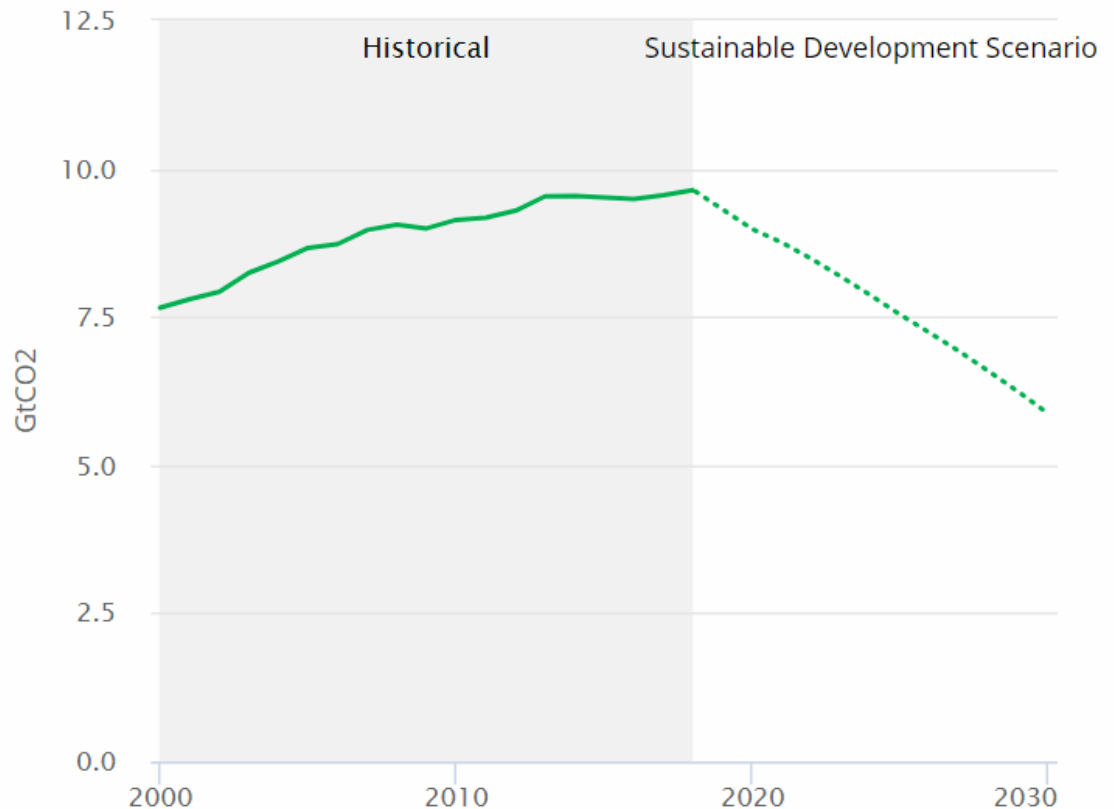
# Our challenge



Emissions from buildings appear to have risen again in 2018 for the second year in a row.

Buildings are responsible for approximately **one third of total energy consumption in MPCs** and **40% of the European Union's total energy consumption.**

Buildings sector CO2 emissions



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# Our challenge

## Renewable Energy and Energy Efficiency (REEE)



Optimise  
consumption



Increase  
energy  
availability



Decrease CO<sub>2</sub>  
emissions

REEE in buildings are difficult to achieve due to:

- lack of public institutions competences;
- limited research and best practices;
- scarce awareness on Sustainable Energy (SE) importance and opportunities.



Stakeholders involved in energy policies, buildings rehabilitation and management need to:

- acquire capacity of designing and implementing **tailored rehabilitations**;
- adopt new measures to **improve energy behaviours**
- foster energy savings

# Our objectives

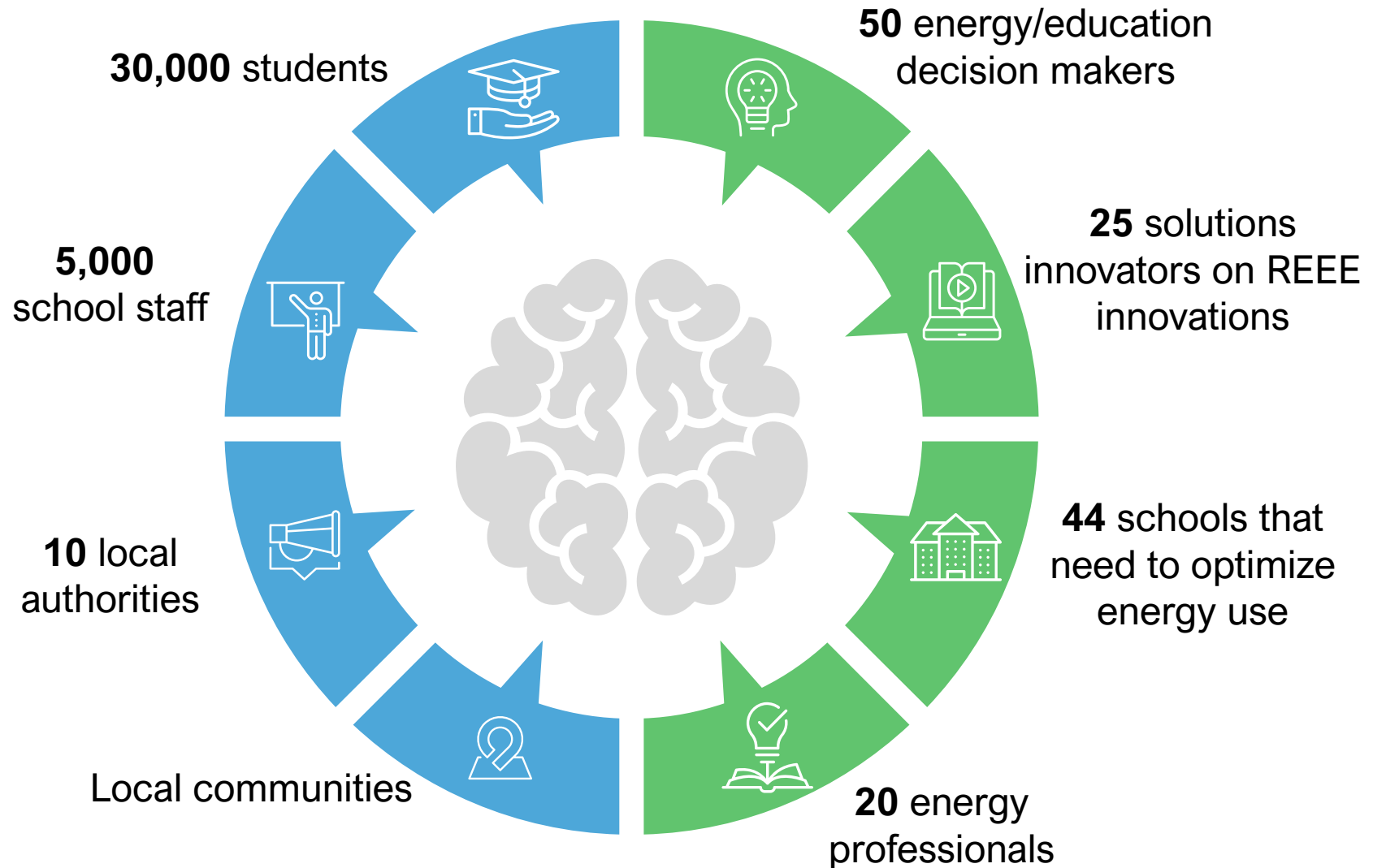
Cross-border capacity building and mutual support among PPs, associates and stakeholders, from public/private/academic sector to:

- elaborate **new strategies and tools for energy rehabilitations**;
- **reinforce capabilities** of public authorities to adopt effective and sustainable energy policies

Pilot of a new process for **monitoring-driven rehabilitations** focused on most consumption-intensive systems and parts of buildings

Training initiatives for students to **develop their skills as future energy professionals** and communication campaign to foster SE habits

# Final Beneficiaries and Target groups



# Expected change

1

Capacities of 5 public institutions to realize **innovative energy rehabilitations in public schools** are enhanced through multilevel governance and adoption of energy mix efficiency strategies

2

Energy consumption in 10 public schools is optimised through **innovative, monitoring-based REEE pilots**:

- 240 tons CO<sub>2</sub>/year saved, 270000 kWh/year from RE and 30000 kWh/year through EE
- 30.000 €/year saved from sustainable solutions

3

120.000 people **improve SE habits** through mutual influence, leading impact on broader public.  
8.000 Students are **trained** on field, getting better SE employment opportunities

# Work packages

WP4

Innovative energy diagnosis methodology and the monitoring-driven rehabilitation approach

WP5

Demonstrate the REEE portfolio solutions and SEM measures according to school rehabilitation plans, demonstrate their cost-effectiveness and replicability potential in project countries.

WP3

Develop knowledge and operational capacities of Energy and Education institutions to plan, implement and evaluate energy rehabilitations that are sustainable, cost-effective and tailored on building types & uses, energy loads and climatic zones.

# National Energy Hub

OBJECTIVE

Develop knowledge and operational capacities of Energy and Education institutions to plan, implement and evaluate energy rehabilitations that are sustainable, cost-effective and tailored on building types & uses, energy loads and climatic zones.

HOW

Cross-border and national common work among PPs, associates and external stakeholders

OUTPUT

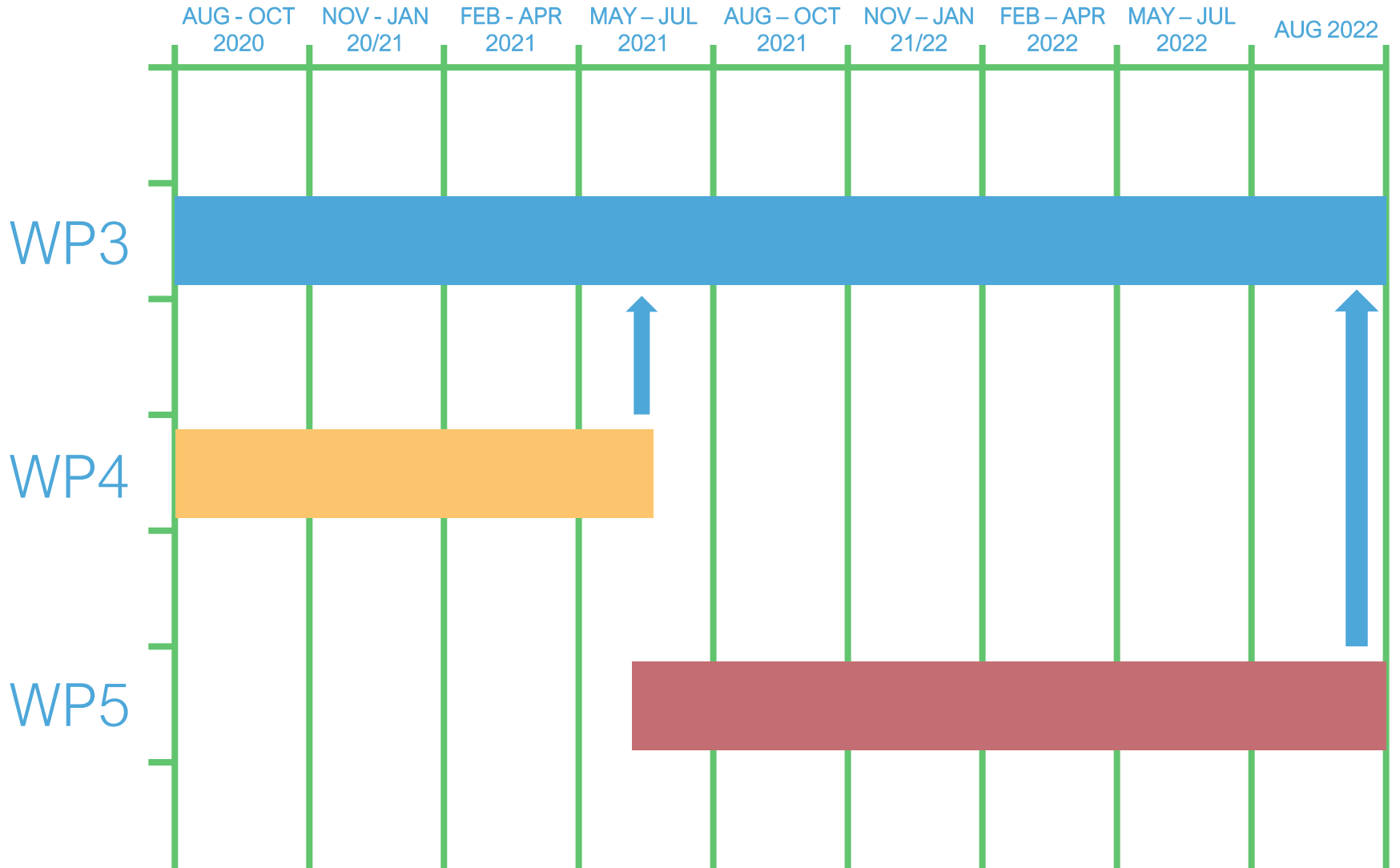
2 Approved **procedures** for smart and sustainable energy management in public school buildings

5 Approved **strategies** to support efficient and cost-effective energy mix in public schools' buildings

6 **Case studies** on REEE project portfolio solutions for enhanced energy rehabilitation of schools' buildings

3 **Tools** for implementing REEE project portfolio solutions and SEM measures in schools' buildings

# Timeline





# Thank you for your attention

Sofia Rossi

