

# *Climate Change Mitigation, Organic Agriculture and Human Health: Status Quo and New Data*

Wednesday, 23 May 2018 – European Parliament, Brussels

Room A5E1- 14:30 – 17:30

## Global land and ocean temperature anomalies, 1880 to 2016

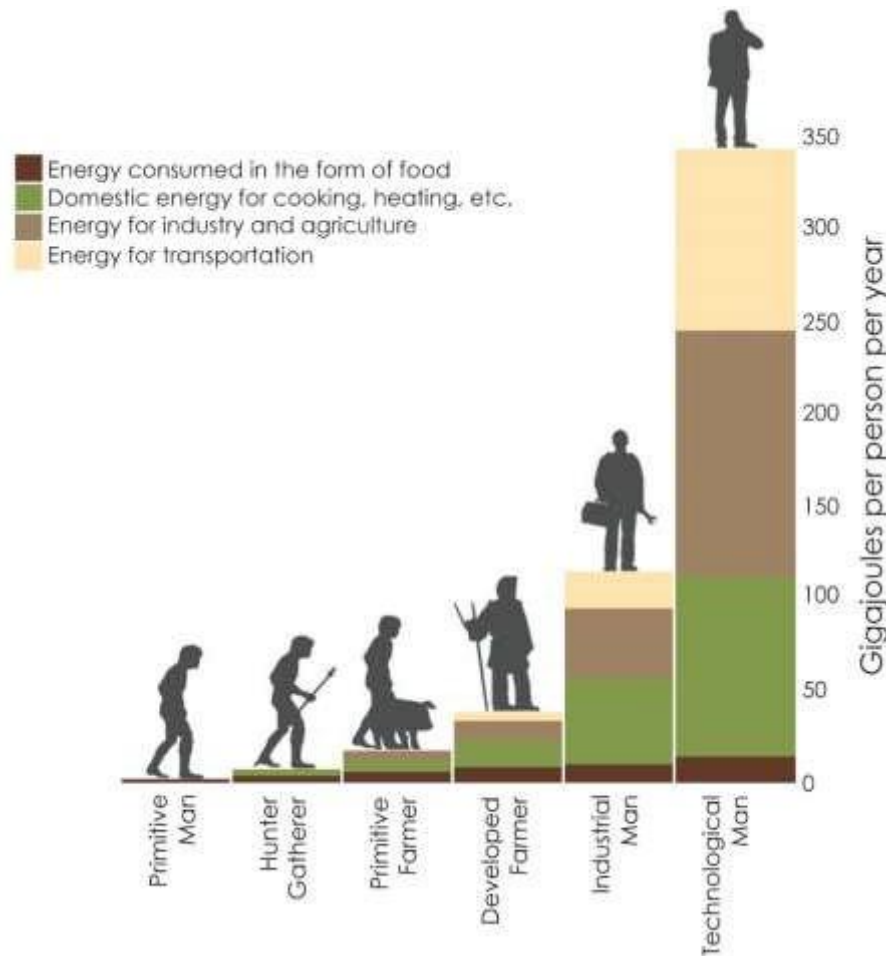
Degrees Celsius, based on average temperature for the 20th century



*Climate change mitigation in the Mediterranean,  
the Interreg MED COMPOSE project and IPCC*

Prof. Lučka Kajfež Bogataj  
University of Ljubljana, Slovenia

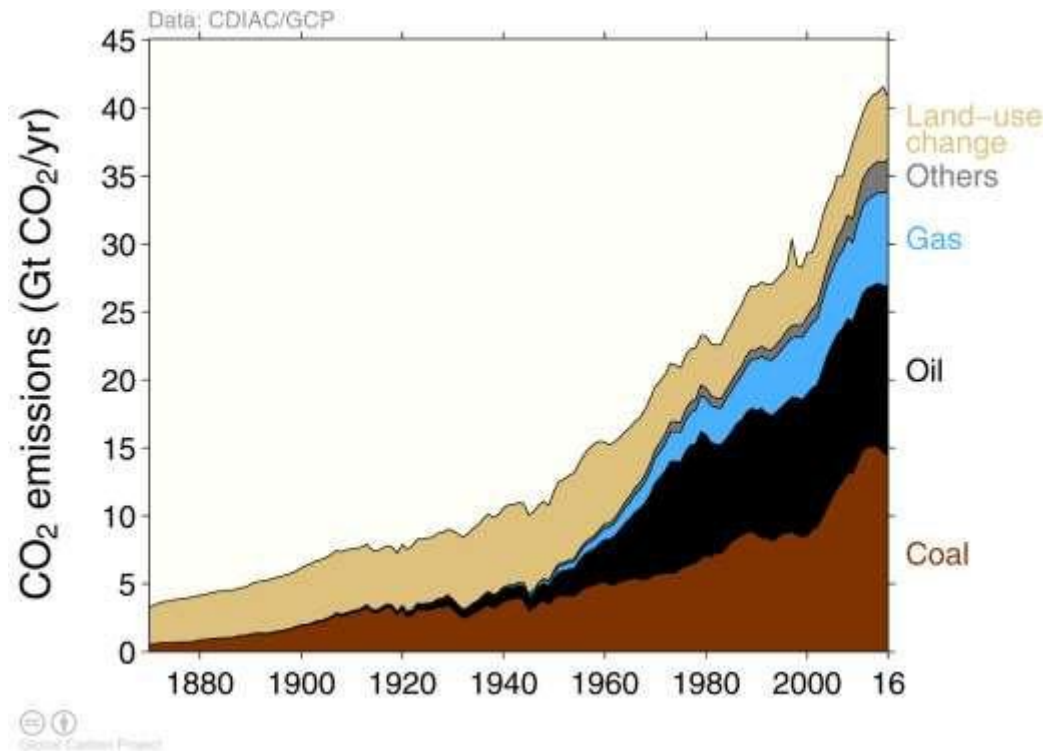
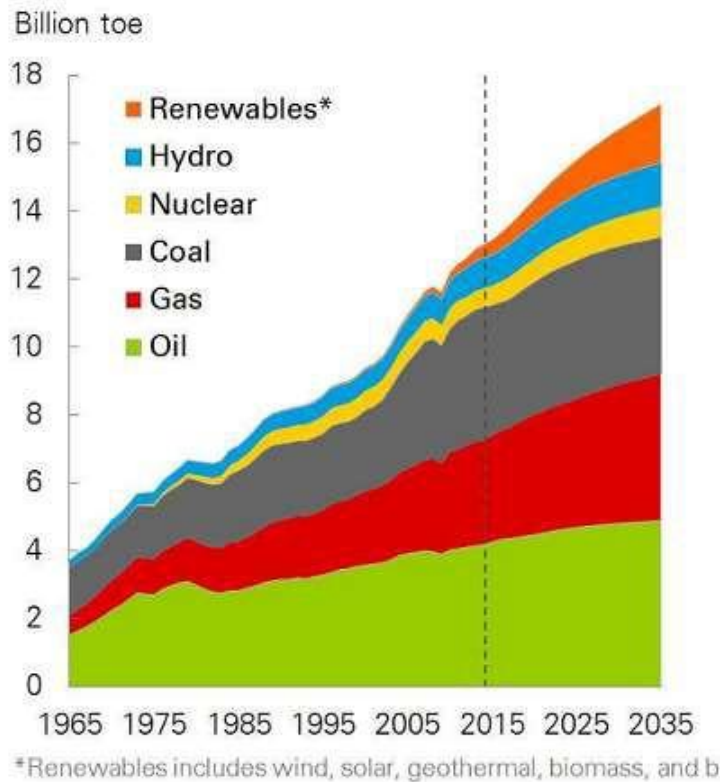
# LIFESTYLE TODAY IS HIGHLY ENERGY CONSUMING

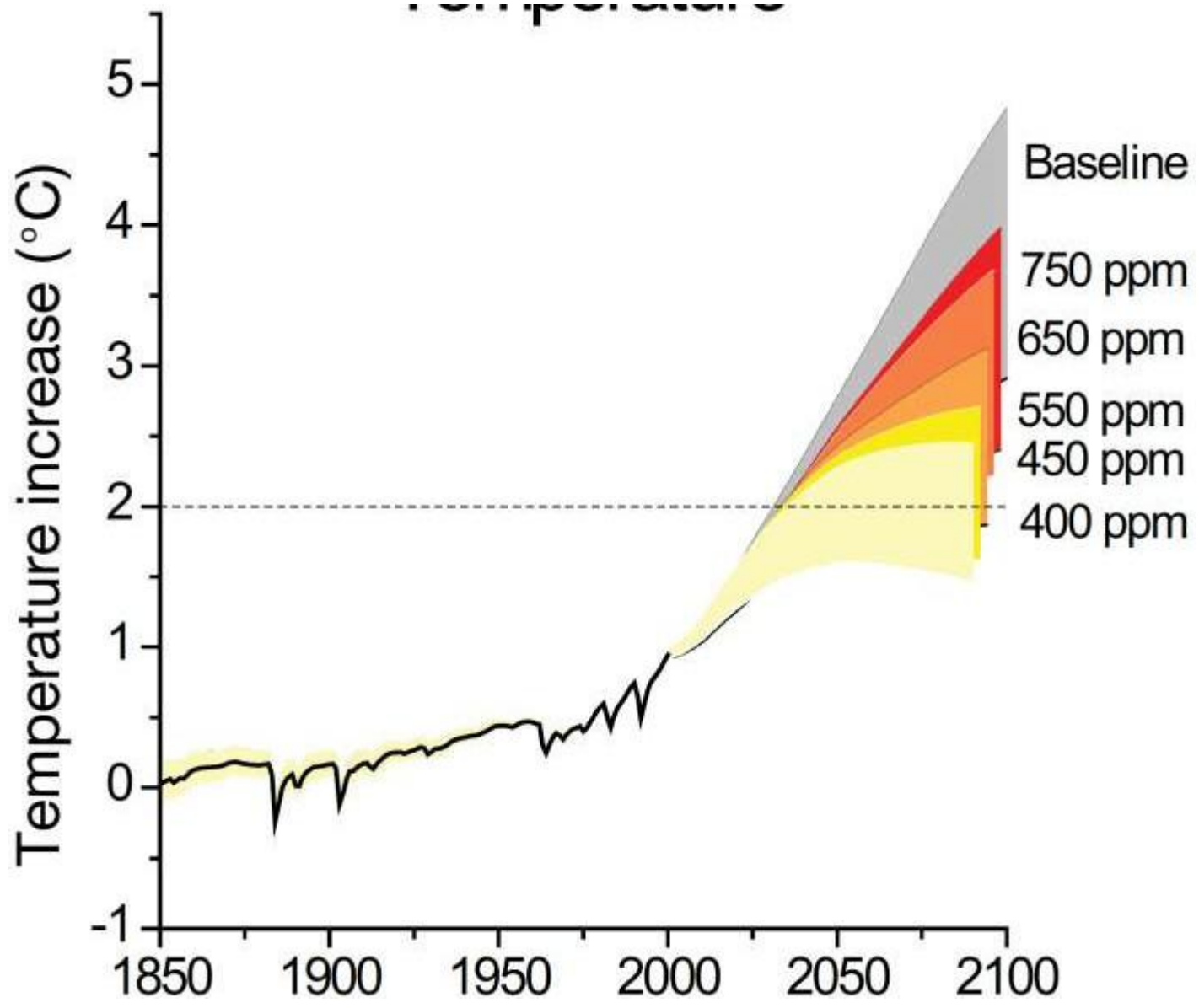


One person  
energy need

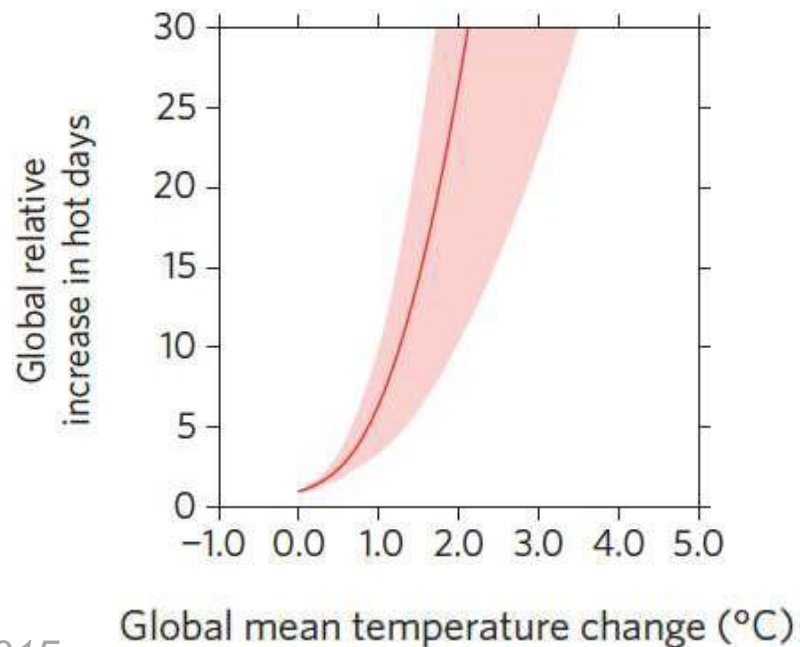
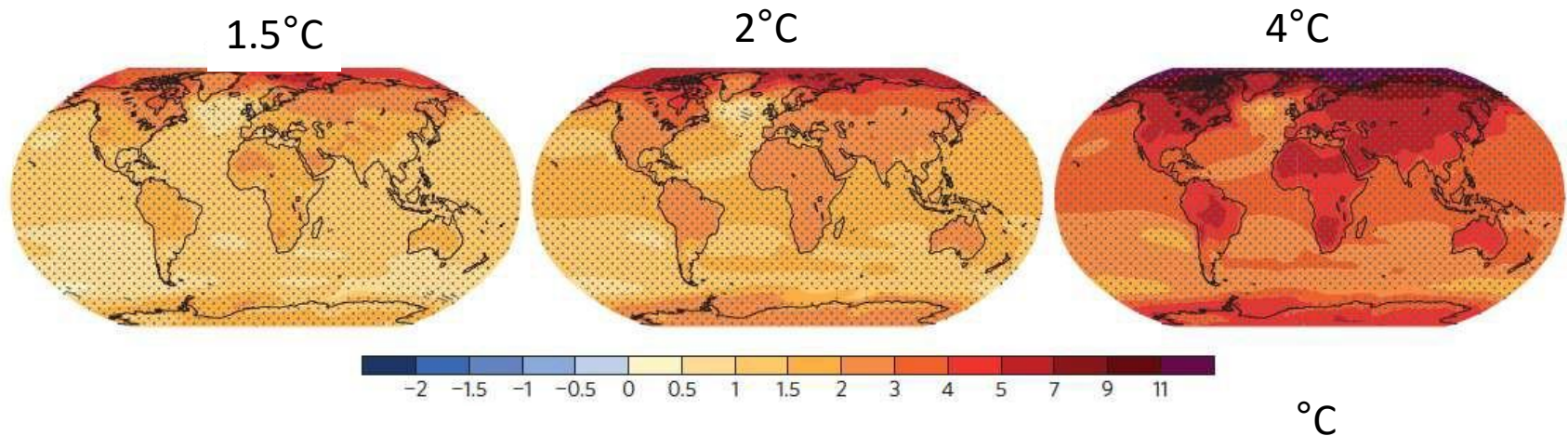
≈ 1GigaJ per day

# Primary energy consumption and total global emissions are increasing



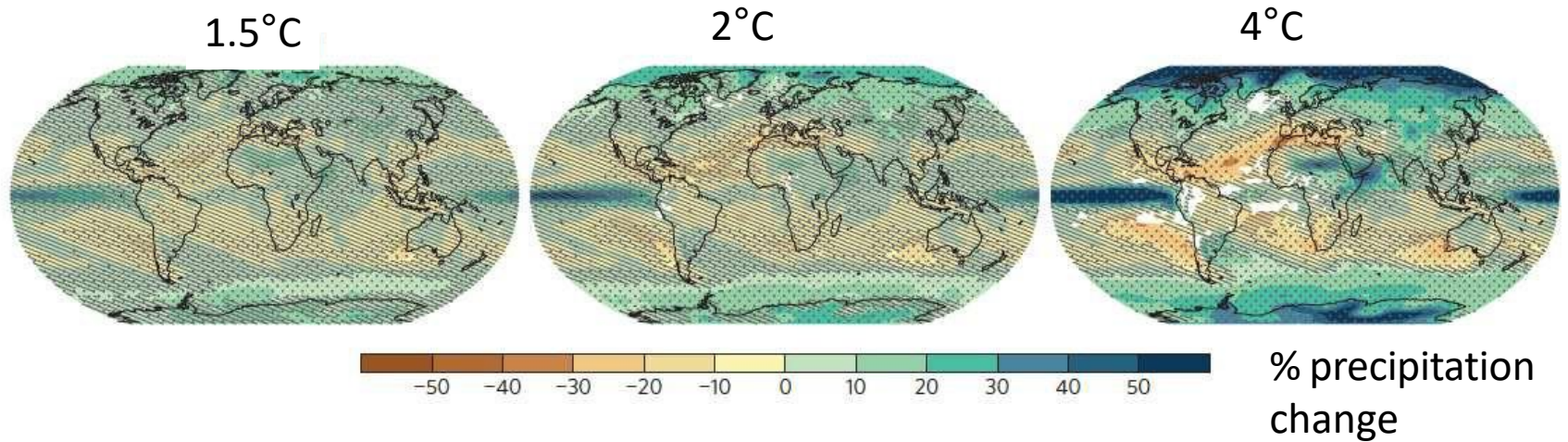


# Regional aspects of surface warming



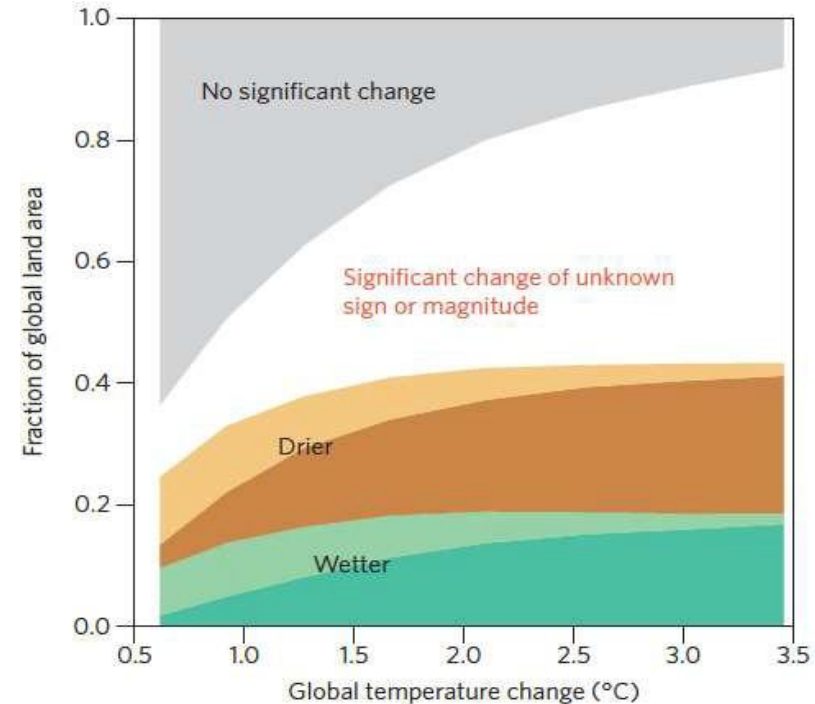


# Regional aspects of precipitation change



Water cycle change :

- for 50% of world's population at +2°C
- for 40% of land surface at +3°C



# Projections Europe (RCP4.5)

## 2081-2100 versus 1986-2005

### Temperature (°C)

### Precipitation (%)

Temperature change RCP4.5 in 2081-2100: December-February

Temperature change RCP4.5 in 2081-2100: June-August

Precipitation change RCP4.5 in 2081-2100: October-March

Precipitation change RCP4.5 in 2081-2100: April-September

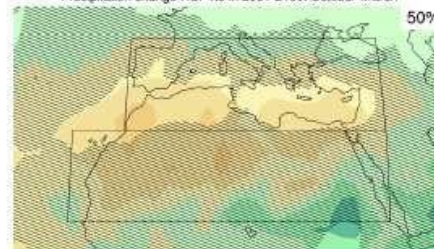
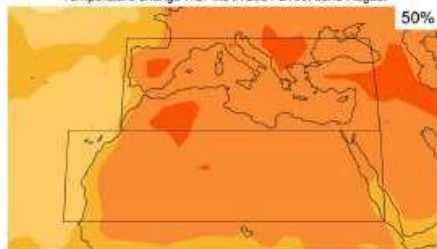


Temperature change RCP4.5 in 2081-2100: December-February

Temperature change RCP4.5 in 2081-2100: June-August

Precipitation change RCP4.5 in 2081-2100: October-March

Precipitation change RCP4.5 in 2081-2100: April-September



-2 -1.5 -1 -0.5 0 0.5 1 1.5 2 3 4 5 7 9 11

winter

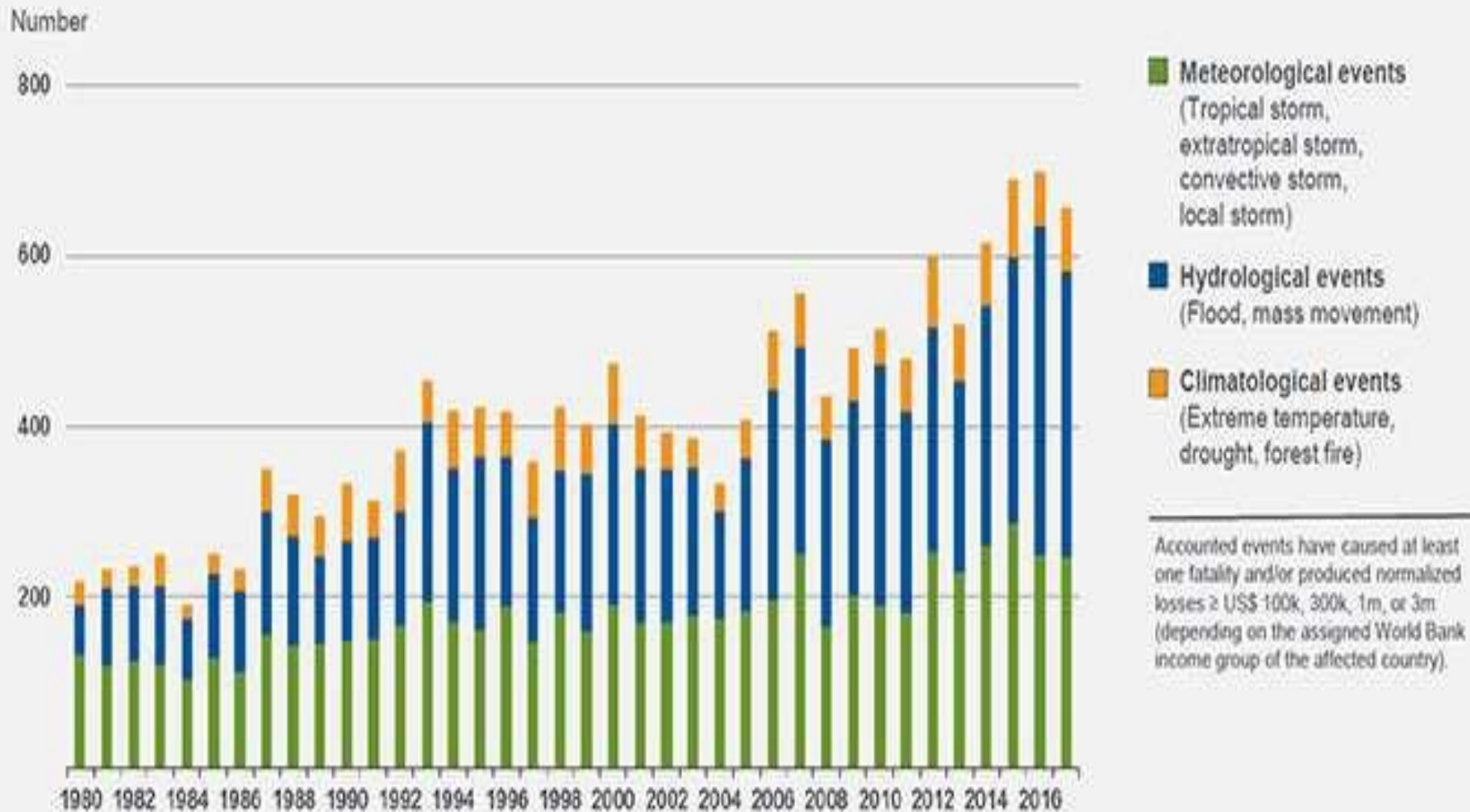
summer

-50 -40 -30 -20 -10 0 10 20 30 40 50

winter half

summer half

# Number of world natural catastrophes 1980-2017



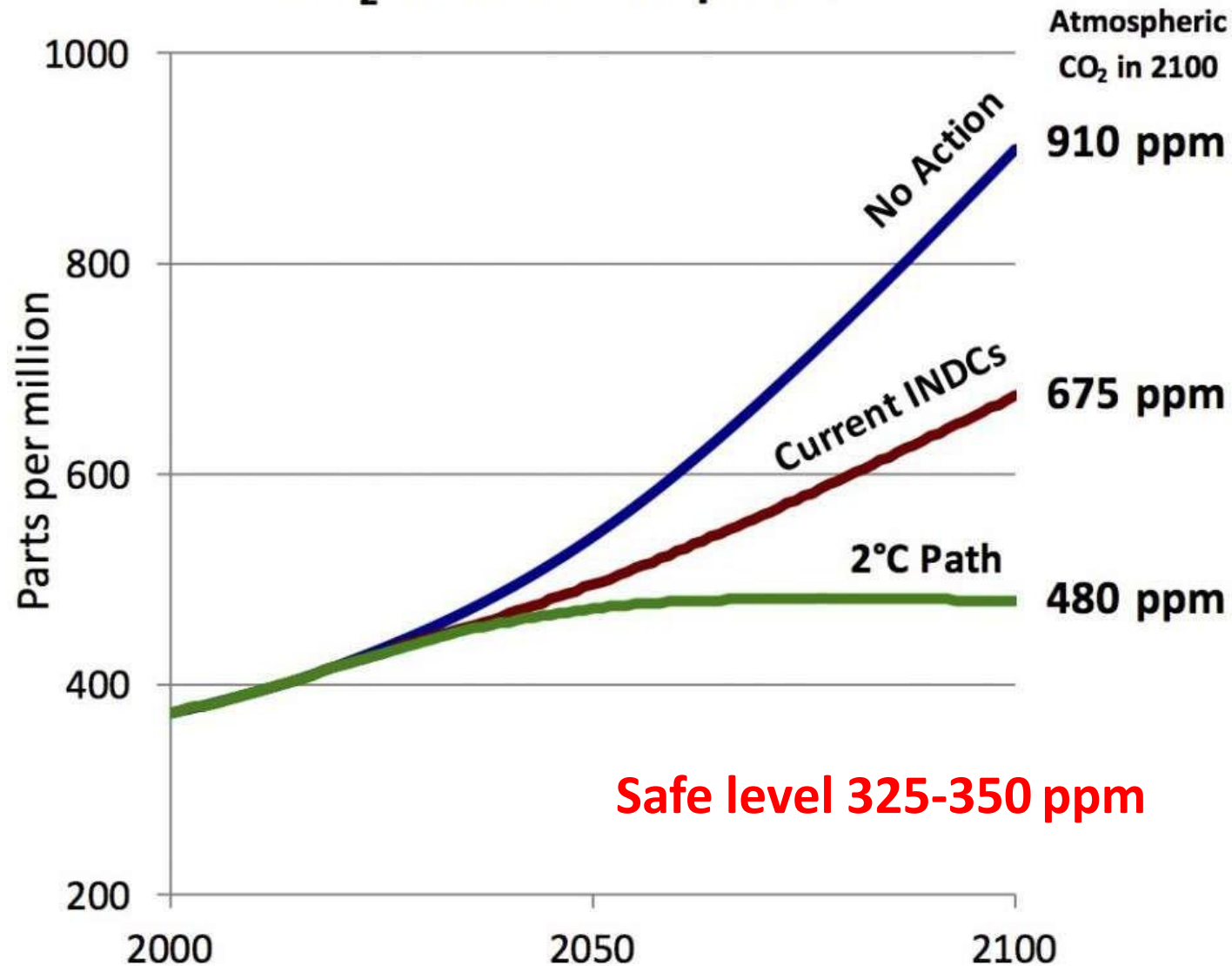


# Paris agreement takes effect in 2020

But the world IS NOT on track

- Intended Nationally Determined Contributions (INDCs) would lead to will lead to a warming of 2.8 °C, current government policies still lead to a warming of **3.6°C**
- INDCs are totaly incompatible with 2°C objective
- 1.5°C temperature increase could be reached even before 2025

# CO<sub>2</sub> in the Atmosphere



# 1.5°C in the Paris Agreement

- Paris Agreement included the aim to hold the increase in the global temperature to well below 2 °C and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels.
- New science outlines how the risks and impacts of climate change increase between 1.5°C and 2°C .

- 1.5 has become a big number in the climate change discourse. It is the goal we want to achieve.
- This year, the IPCC will publish the latest research on a world that is 1.5 degrees warmer.
- what we know about what will happen to our planet when it reaches 1.5 degrees of warming





# Risks and impacts of climate change increase between 1.5°C and 2°C

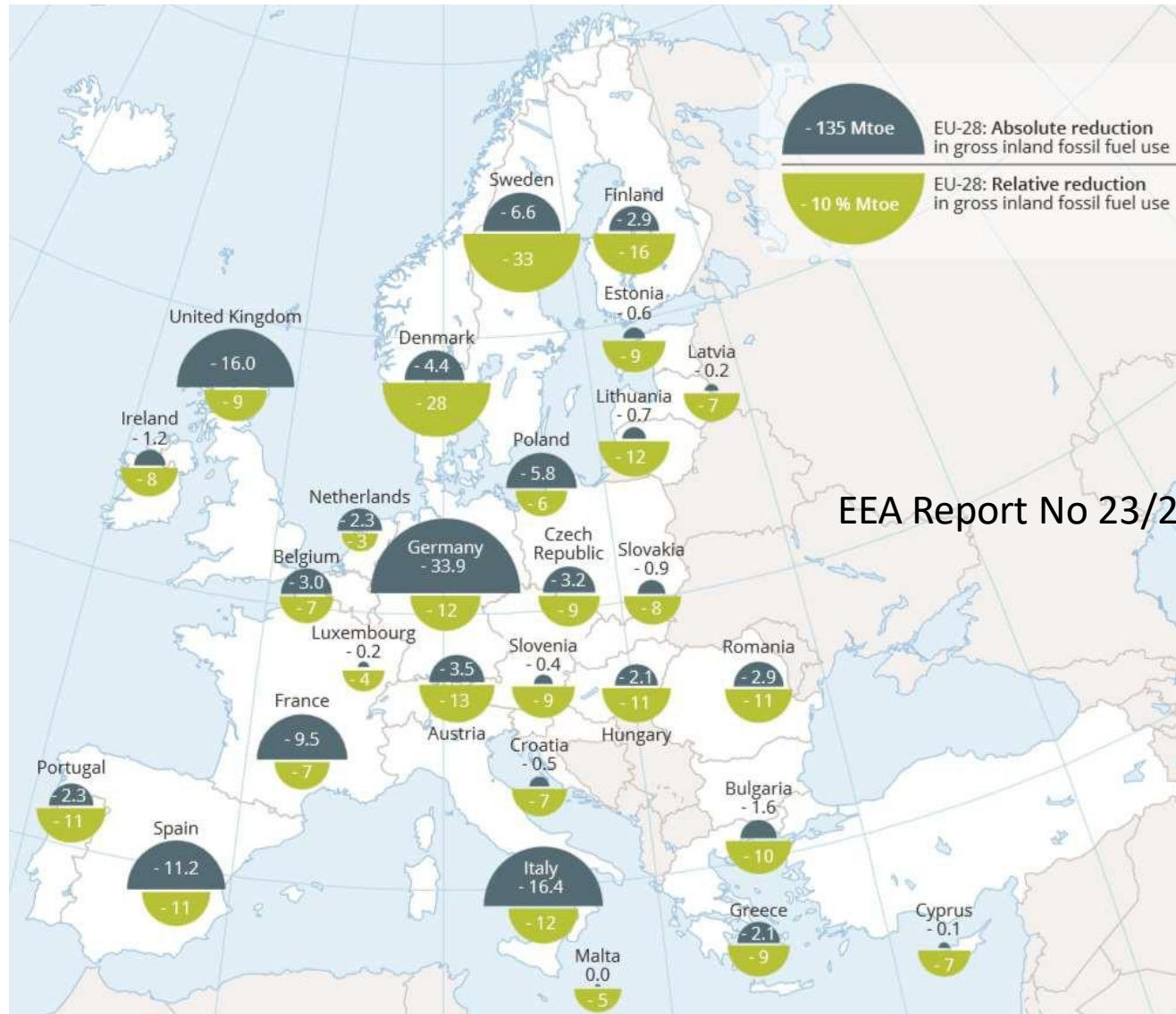
- For a global average T rise of 1.5 °C, 16% of the world's population in 2050 (1.5 billion people) will have moderate-to-high levels of risk in two or more of the water, energy, and food and environment sectors.
- At 2 °C this figure nearly doubles to 29% of global population,
- whilst at 3 °C of warming it rises to half the population, or 4.6 billion people.

# How we can limit global warming to 1.5°C

The most important things to do in the next 5 to 10 years

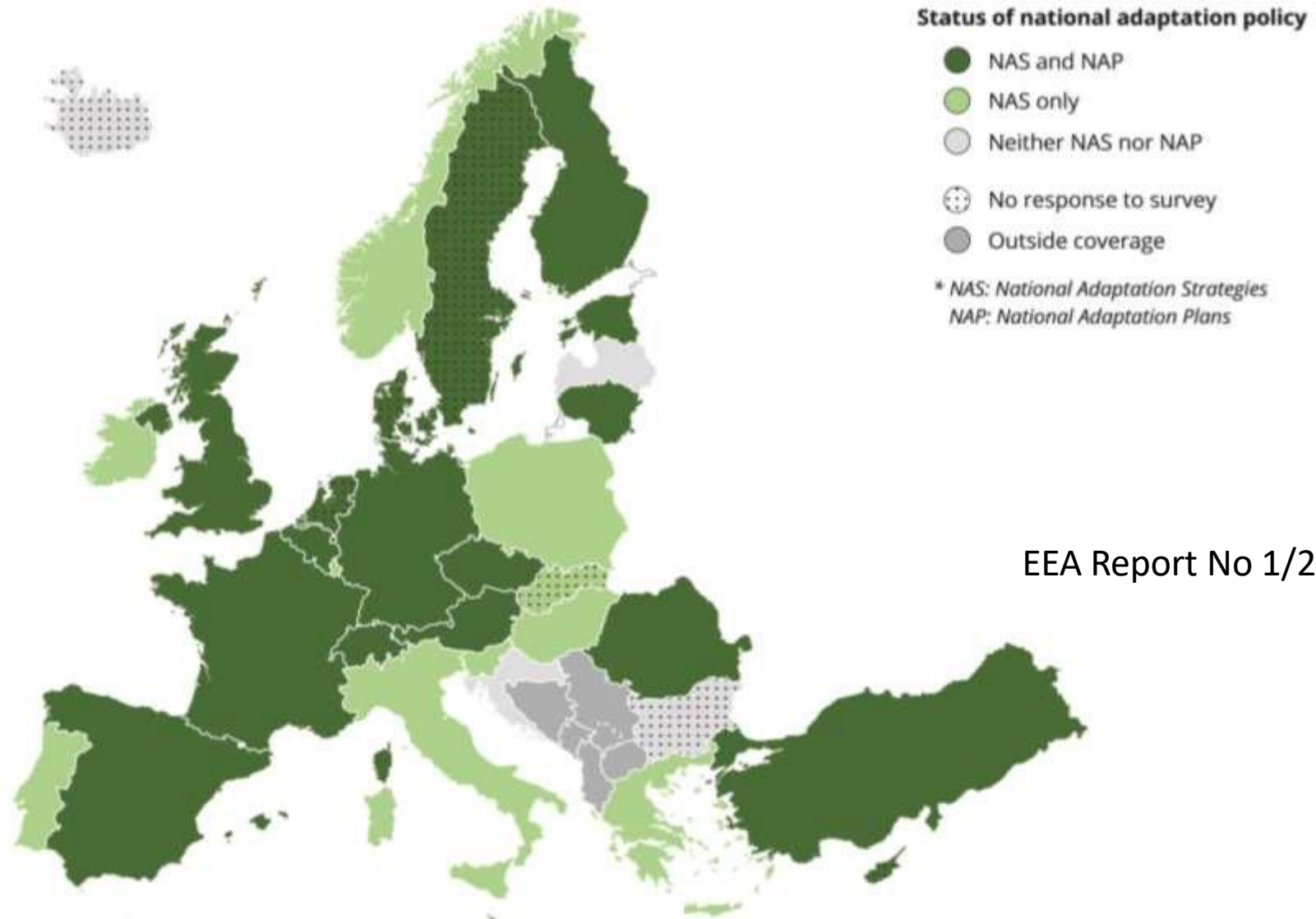


# Total and relative reduction in gross inland fossil fuel use (per year, in 2015)



EEA Report No 23/2017

# Status of national adaptation policy



EEA Report No 1/2018



# Adaptation + Mitigation Synergies



If we are serious about “saving the planet”, then this will require a fundamental rethinking in economy model

- Reduction of resource consumption
- Management that emphasize optimization, not maximization
- Behavioural changes

# A good practise example

## *COMPOSE, Rural COMMunities engaged with POSitive Energy*

### COMPOSE PARTNERS



TECHNICAL UNIVERSITY OF CRETE (TUC)  
SCHOOL OF ENVIRONMENTAL ENGINEERING  
RENEWABLE AND SUSTAINABLE ENERGY  
SYSTEMS LABORATORY



INSTITUTE FOR STRATEGIC STUDIES AND PROGNOSSES



Ajuntament de Granollers

COMPOSE is coordinated by:



**KEEP CALM AND CHOOSE NEGAWATT!**

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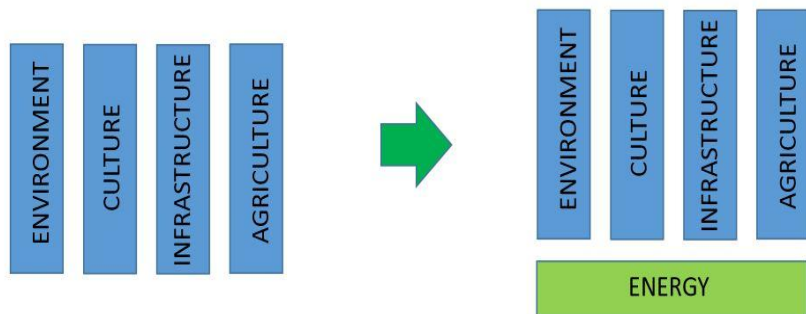


Project co-financed by the European  
Regional Development Fund

# Purpose and objectives

**PURPOSE** of the COMPOSE project is to contribute to more RES and EE measures being used in development planning by awareness raising, education, capacity building and demonstration, contributing to the **shift from perceiving energy management not as sector but rather as an horizontal principle every project should be tested for.**

**From energy sector and energy policies to energy consciousness.**



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## Key activities and linkages

### WP3 TESTING

- Integrating existing know-how how, best practices, approaches on RES and EE planning
- Soft skills and support tools (IT)
- Reviving Local Actions Groups
- Implementing pilot actions

### WP4 TRANSFERING

- Develop training/capacity building materias for experts and decision makers
- Implementation of workshops and capacity building materials
- Close cooperation also with WP Communication
- Input for policy recommendations

### WP5 CAPITALISING

- Finalizing the COMPOSE model tool
- Mainstreaming results through MED area with support of partner network and ASP
- Mainstreaming results to EU level
- Policy recommendations and Memorandum of understanding



1. COMPOSE planning tool – holistic&simple development planning support tool for experts in development planning (irrespective of the sector)
2. TRANSFERABILITY PLAN – approach on how to best transfer project results to MED area and beyond
3. MEMORANDUM OF UNDERSTANDING – signed by stakeholders at decision making level, demonstrating viability and use value of the COMPOSE approach

