

Climate change, the Paris agreement and the Mediterranean basin: challenges and future perspectives

**THE CARBON BUDGET METHODOLOGY AND
INDC ANALYSIS: MEDITERRANEAN CASE
STUDIES AND PROPOSALS FOR THE NEXT NDCs**

SIDE EVENT

NOVEMBER 12 - MARRAKESH - COP 22

GGCC UPC CONTRIBUTION

Contents

Introduction

- The global 2°C references:
 - The RCP2.6 scenario and the Global Carbon Budget
- The aggregate effect of the INDCs (UNFCCC analysis)

The proposal of a “Mediterranean 2°C reference scenario”

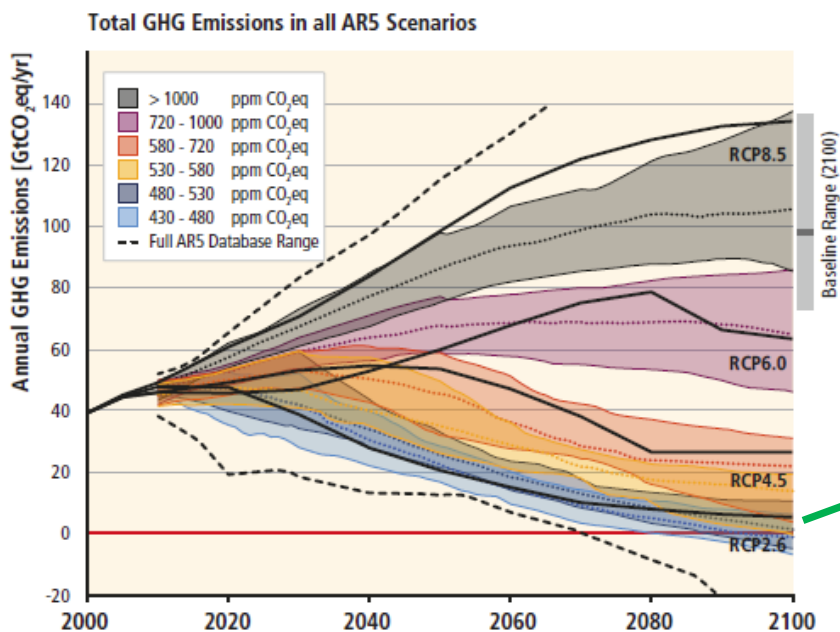
- Equity and “Climate Justice” (Paris Agreement)

The analysis of the Mediterranean INDCs using the framework of the “Mediterranean 2°C reference scenario”

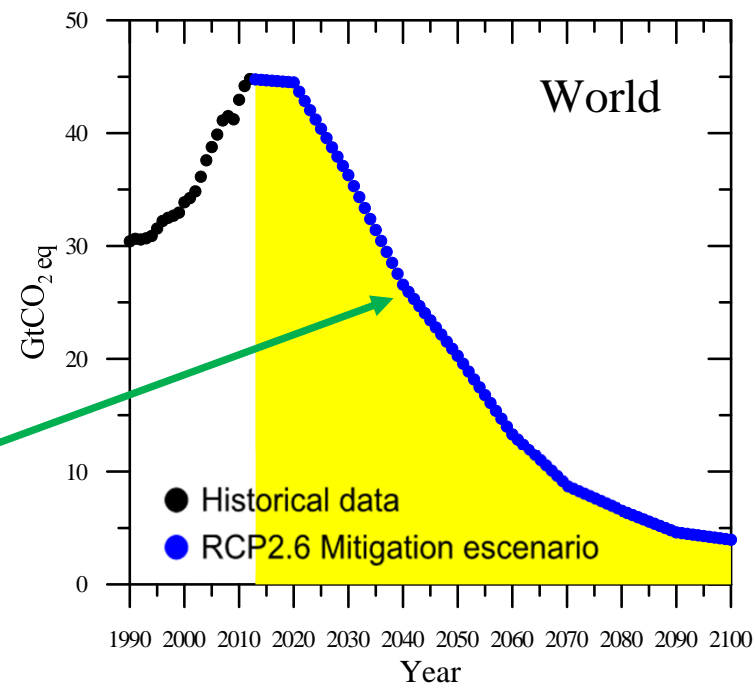
Conclusions as proposals for the next NDCs

THE GLOBAL 2°C REFERENCES

1. The World 2°C emissions scenario for all GHG: the RCP 2.6 scenario



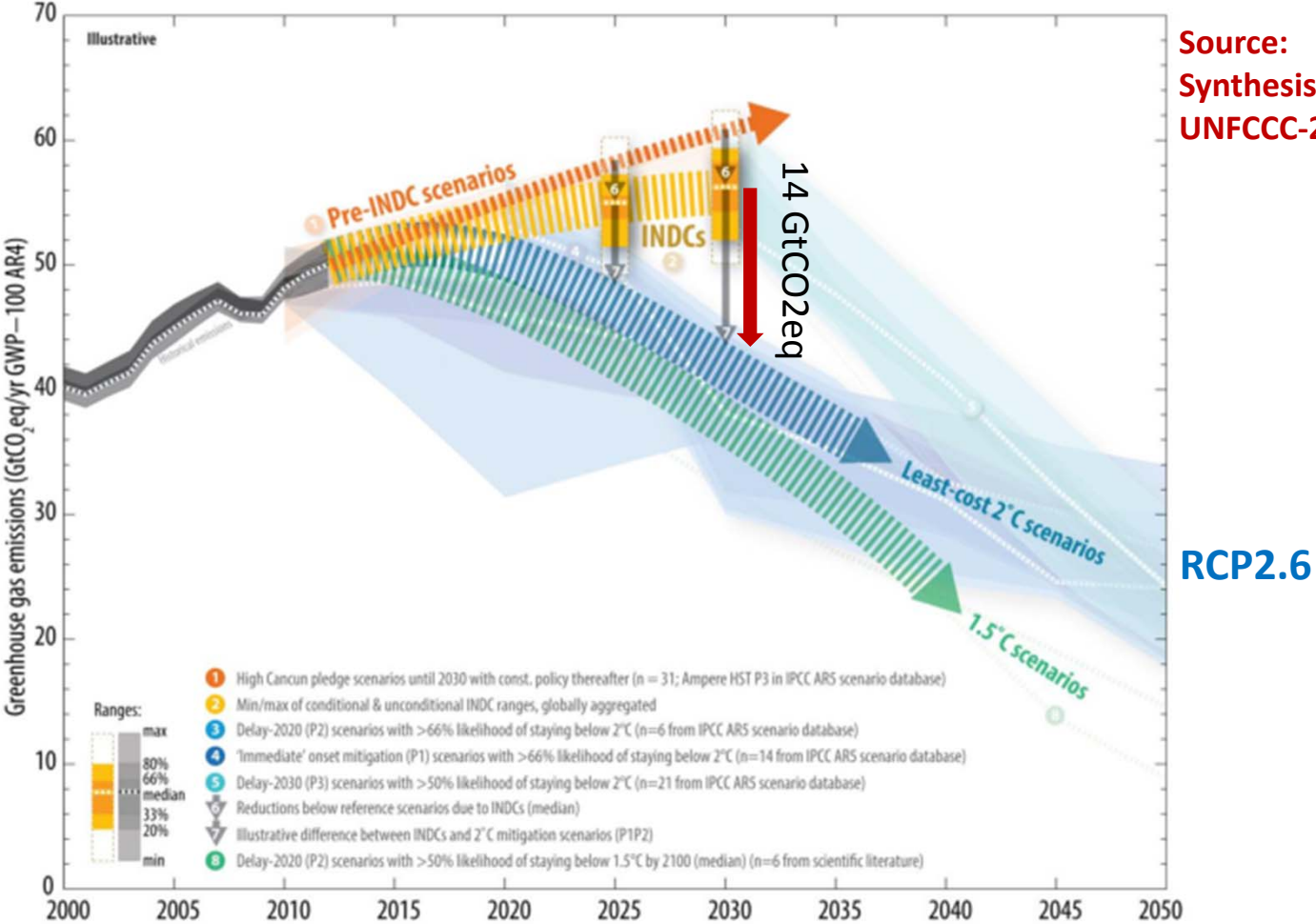
Source: AR5-IPCC



2. The Global Carbon Budget: Cumulative CO₂ emissions consistent with the goal of keeping the global average temperature rise below 2°C with > 66% probability

According to AR5-IPCC, from 2011 to 2100 → **1000GtCO₂**

The current INDCs – Aggregate effect

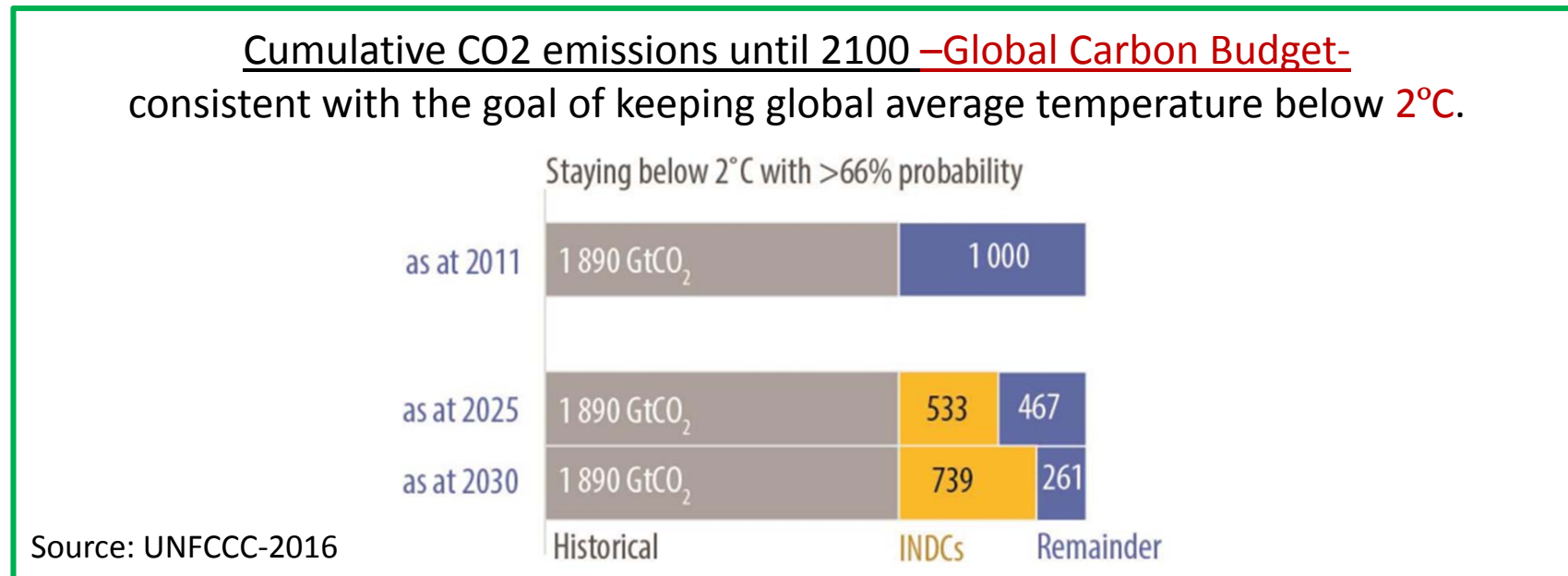


There is a big gap (14 GtCO₂eq) between the aggregate effect of the current INDCs and the level of compromises required to achieve the temperature objectives (2°C) set out in the Paris Agreement!

The current INDCs – Aggregate effect

Until now 190 parties have communicated their intended nationally determined contributions (INDCs). On May 2nd, the Climate Convention published the latest update of its synthesis report on the aggregate effect of the INDCs (the 1st NDCs in the Paris Agreement context).

The Climate Convention uses the cumulative emissions concept – the Global Carbon Budget concept, in other words- to make its analysis.



Contents

Introduction

- The global 2°C references:
 - The RCP2.6 scenario and the Global Carbon Budget
- The aggregate effect of the INDCs

The proposal of a “Mediterranean 2°C reference scenario”

- Equity and “Climate Justice” (Paris Agreement)

The analysis of the Mediterranean INDCs using the framework of the “Mediterranean 2°C reference scenario”

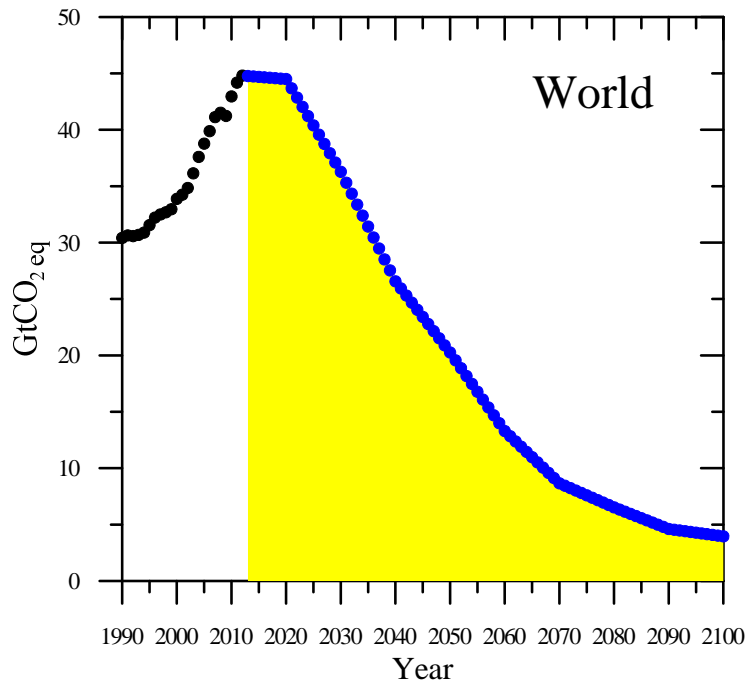
Conclusions as proposals for the next NDCs

The need to translate the World 2°C references to regional and country levels

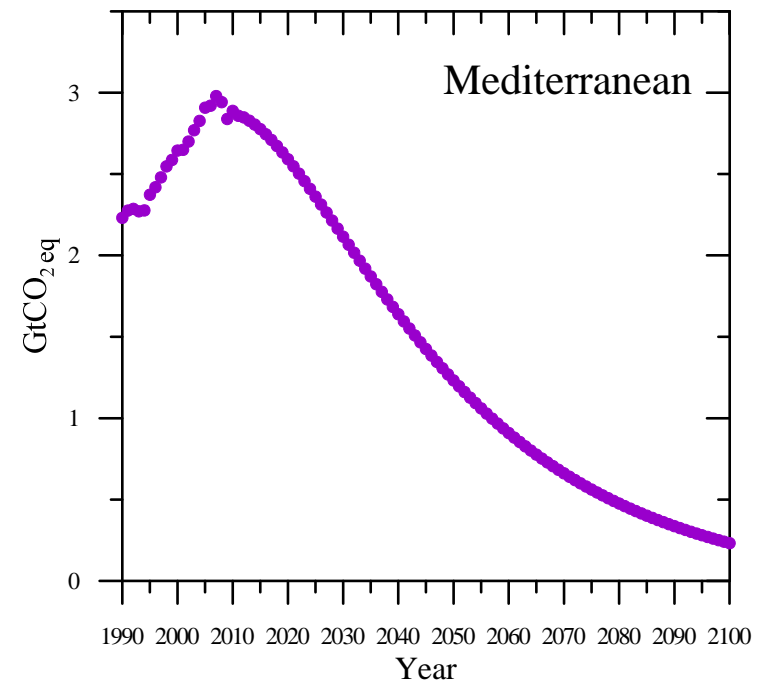
- The RCP2.6 scenario and the Global Carbon Budget are the World references that we have to follow in order to achieve the 2°C goal.
- **It's necessary to translate, to specify, these two references for different regions and/or countries.**
- These “**country specific 2°C reference scenarios**” have to be available before countries produce their second NDCs (2020) because they could be used as a common reference for everyone.
- These references have been designed using a **model based on equity and Climate Justice**. This model treats all inhabitants of the planet equally and taking into account the different historical responsibilities of each country, insofar as emissions are concerned.

The “Mediterranean 2°C reference scenario” developed according to equity criteria (MCJ)

The World 2°C emissions scenario for all GHG



The Mediterranean 2°C emissions scenario for all GHG

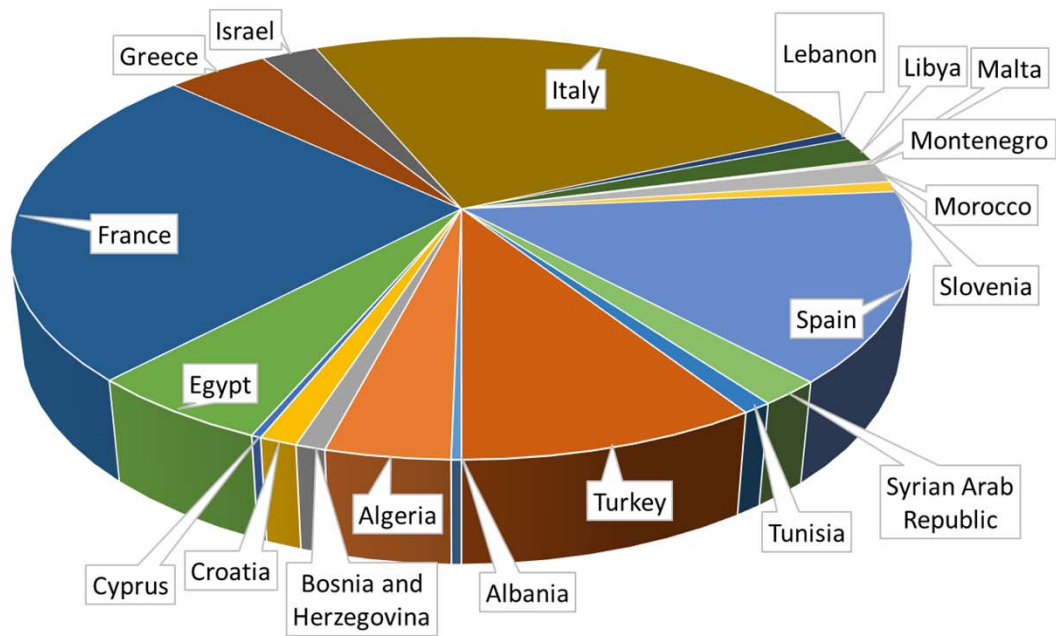


The Global Carbon Budget

from 2011 to 2100 → **1000GtCO₂**

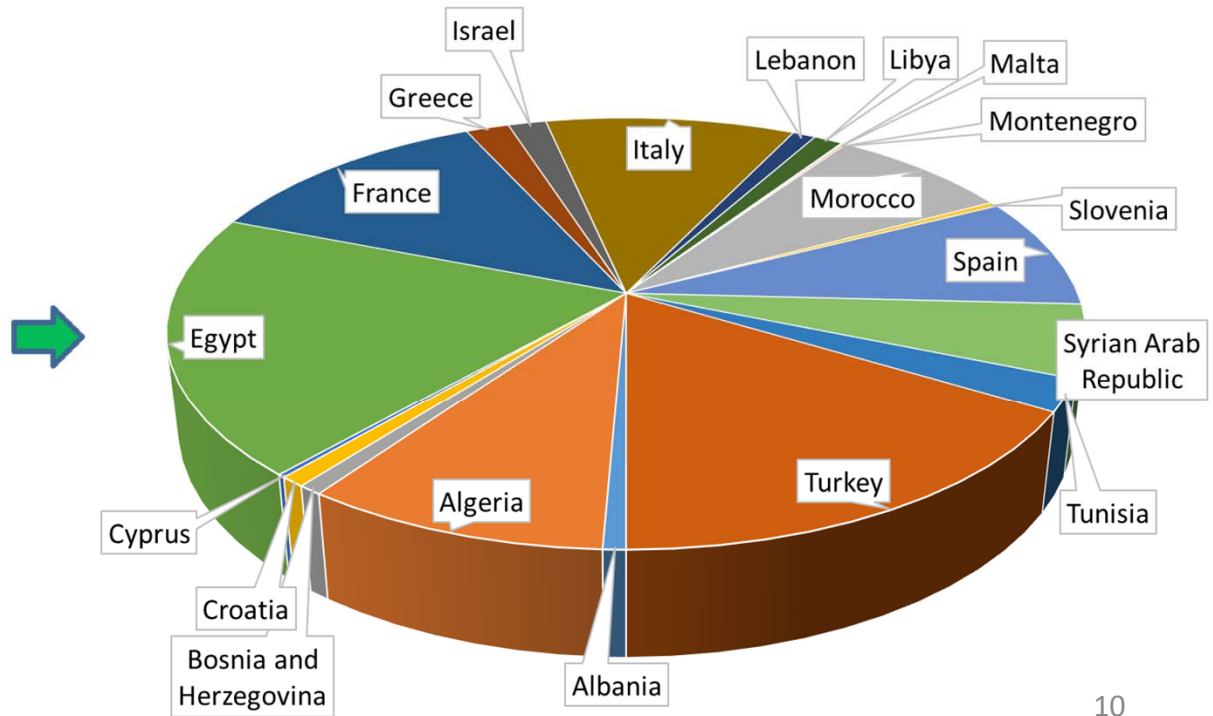
The Mediterranean Carbon Budget

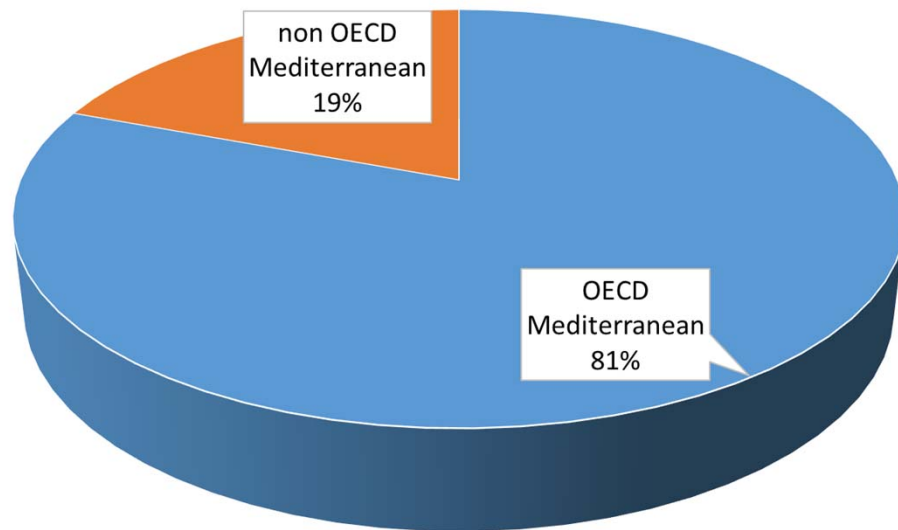
68 GtCO₂



**Historical distribution
of accumulated
emissions (1971-2010)
67 GtCO₂**

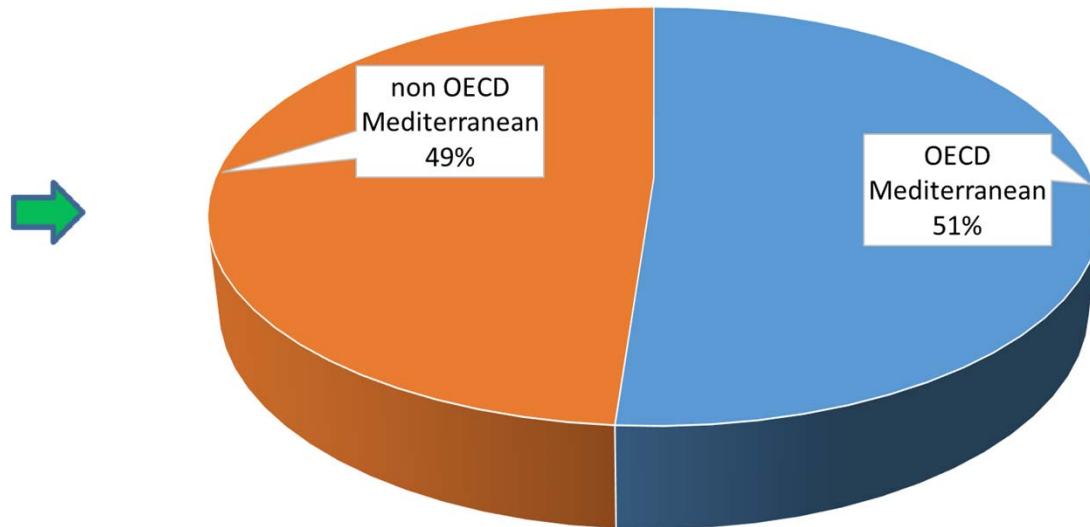
**Carbon Budget
distribution
according to our
Equity Model of
Climate Justice
(2011-2050)
65 GtCO₂**





**Historical distribution
of accumulated
emissions (1971-2010)
67 GtCO₂**

**Carbon Budget
distribution
according to our
Equity Model of
Climate Justice
(2011-2050)
65 GtCO₂**



Contents

Introduction

- The global 2°C references:
 - The RCP2.6 scenario and the Global Carbon Budget
- The aggregate effect of the INDCs

The proposal of a “Mediterranean 2°C reference scenario”

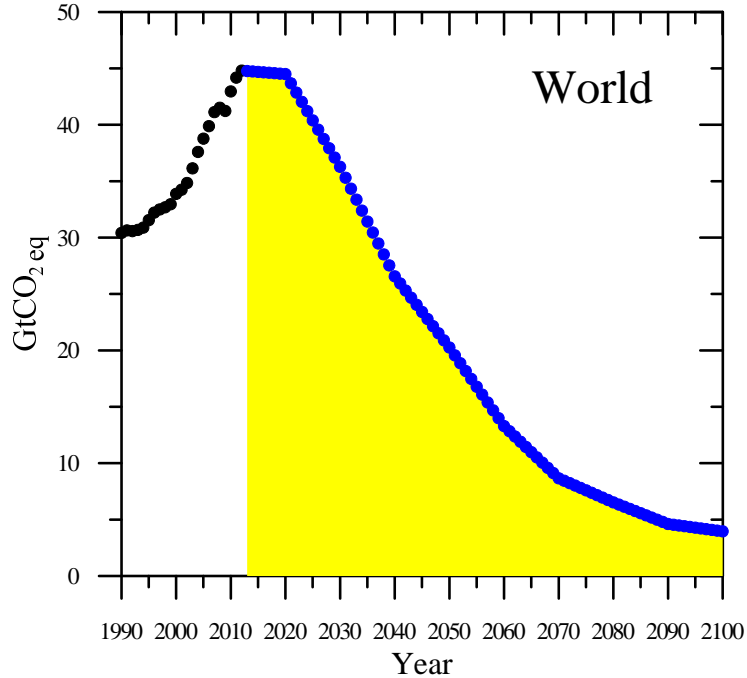
- Equity and “Climate Justice” (Paris Agreement)

The analysis of the Mediterranean INDCs using the framework of the “Mediterranean 2°C reference scenario”

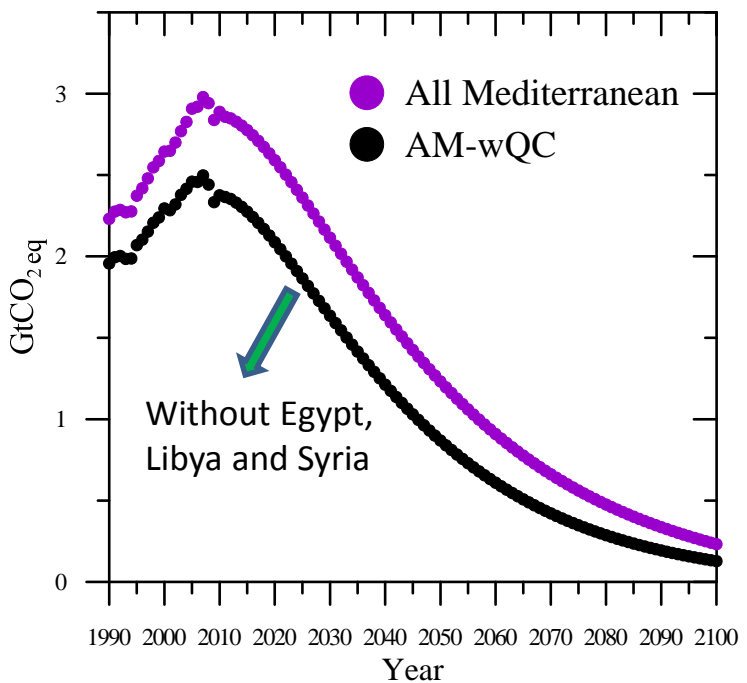
Conclusions as proposals for the next NDCs

The “Mediterranean 2°C reference scenario” for countries which submitted INDCs with Quantifiable Compromises (AM-wQC)

The World 2°C emissions scenario for all GHG



The Mediterranean 2°C emissions scenario for all GHG



The Global Carbon Budget

The AM-wQC Carbon Budget

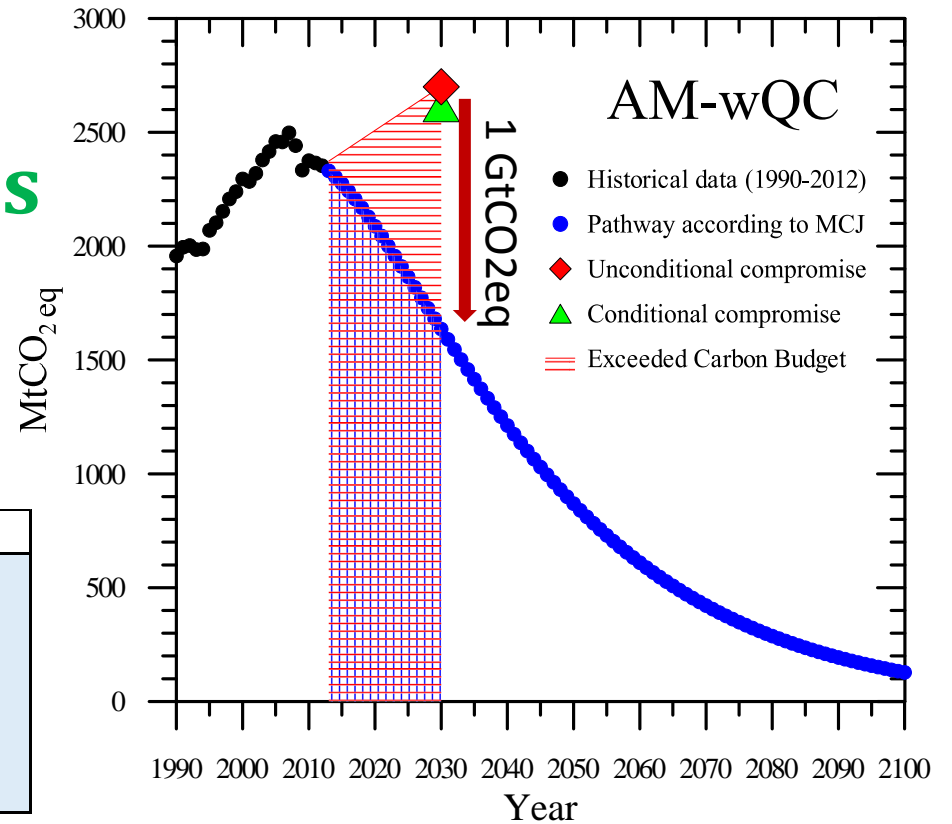
from 2011 to 2100 → **1000GtCO₂** →

50 GtCO₂

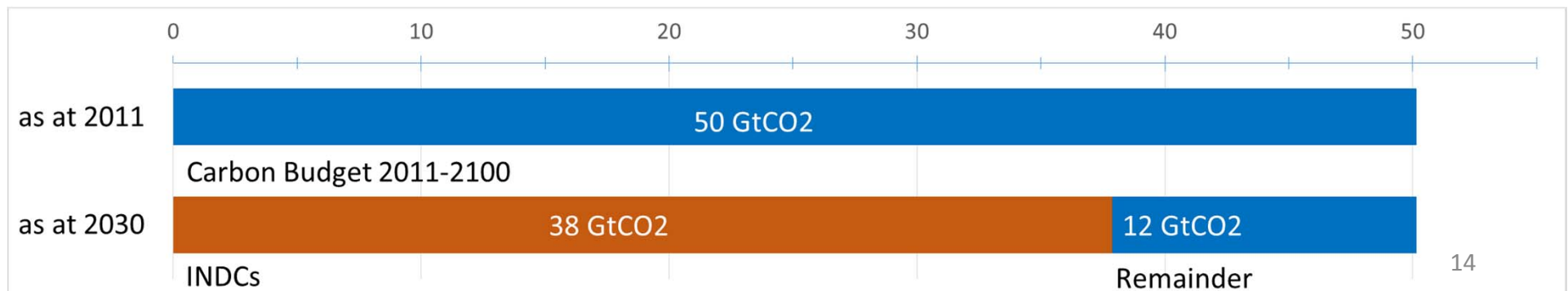
The assessment of the current INDCs for the Mediterranean countries

Aggregate of Mediterranean countries which submitted INDC with Quantifiable Compromises (AM-wQC)

AM-wQC		
Albania	Greece (EU28)	Morocco
Algeria	Israel	Slovenia (EU28)
Bosnia and Herzegovina	Italy (EU28)	Spain (EU28)
Croatia (EU28)	Lebanon	Tunisia
Cyprus (EU28)	Malta (EU28)	Turkey
France (EU28)	Montenegro	

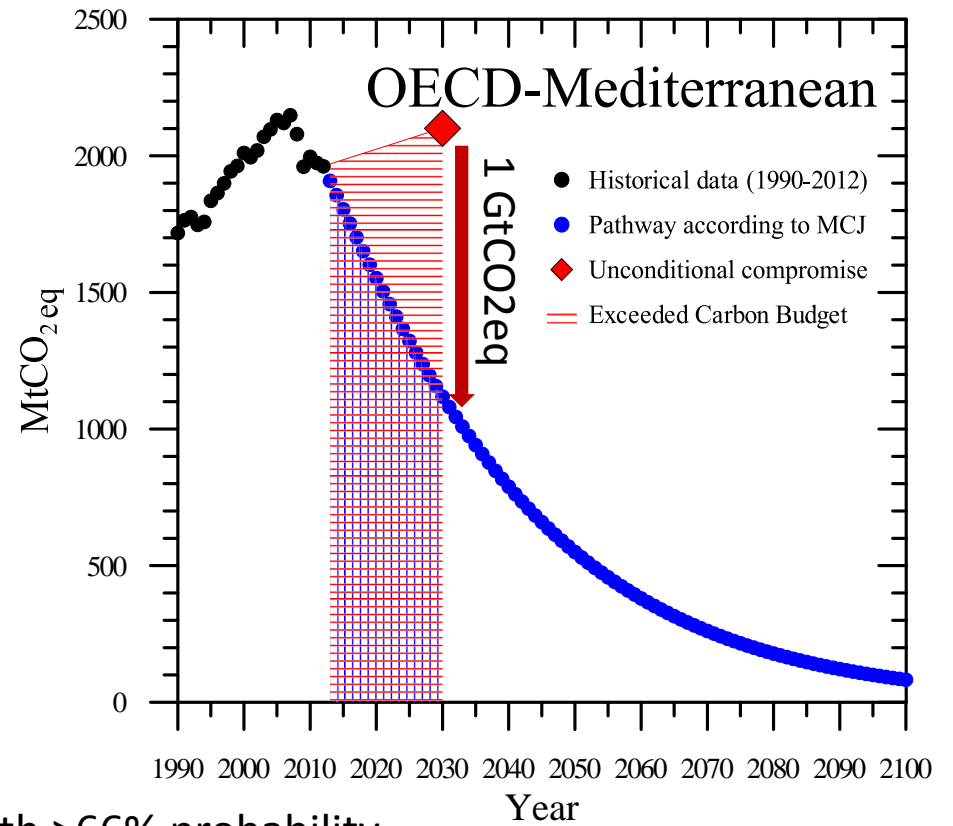


Staying below 2°C with >66% probability

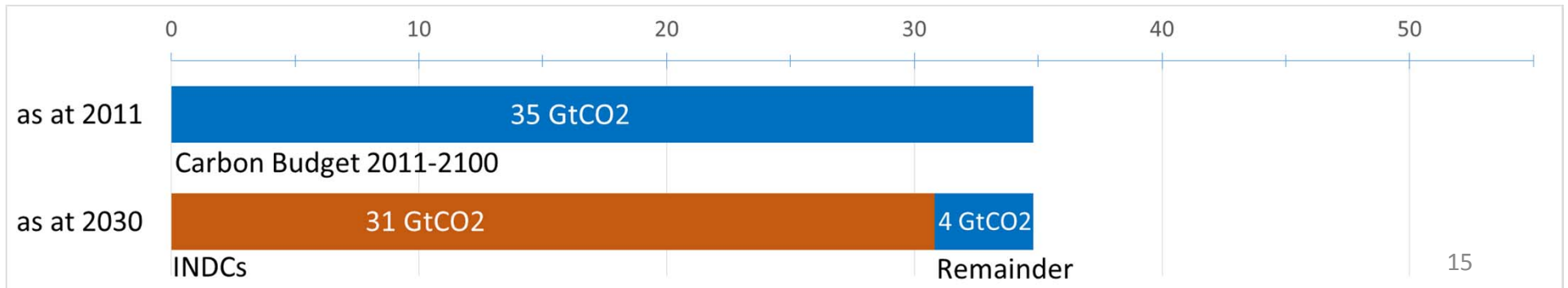


The OECD- Mediterranean countries

OCDE-Mediterranean	POPULATION - 2010 (million people)
France (EU28)	63.2
Greece (EU28)	11.1
Israel	7.4
Italy (EU28)	60.5
Slovenia (EU28)	2.1
Spain (EU28)	46.2
Turkey	72.1
Total	262.6

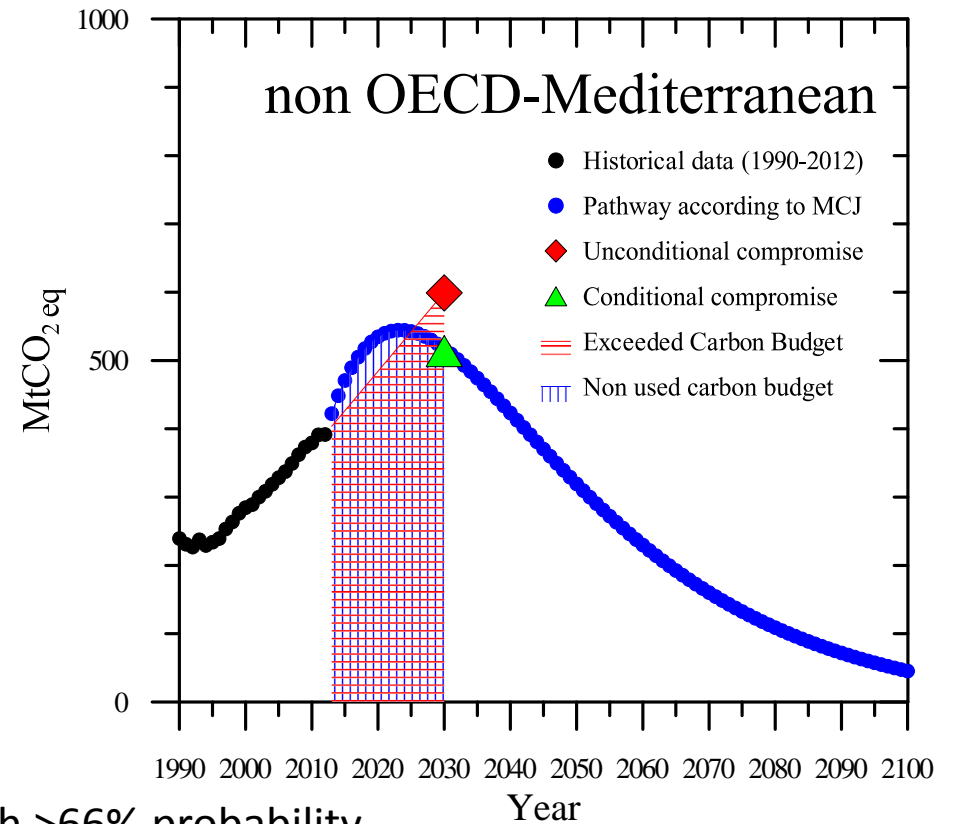


Staying below 2°C with >66% probability

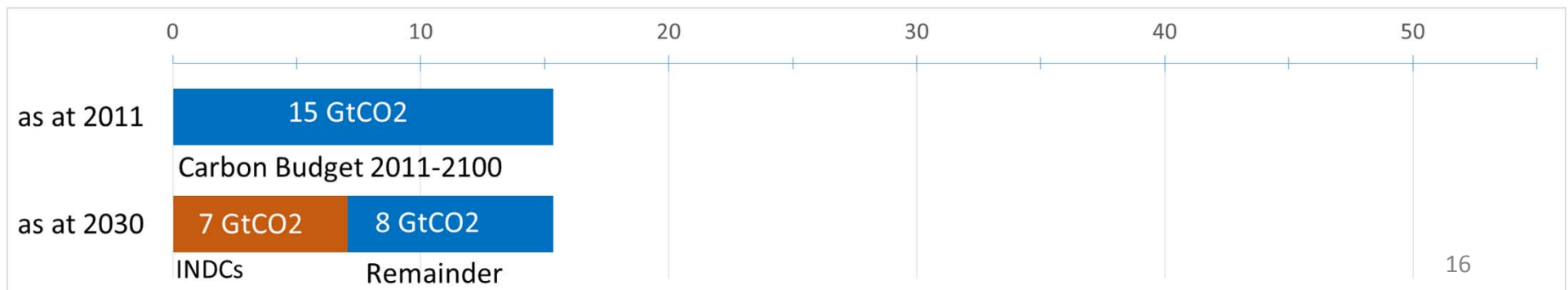


The non OECD- Mediterranean countries

non OCDE-Mediterranean	POPULATION - 2010 (million people)
Albania	3.2
Algeria	37.1
Bosnia and Herzegovina	3.8
Croatia (EU28)	4.3
Cyprus (EU28)	1.1
Lebanon	4.3
Malta (EU28)	0.4
Montenegro	0.6
Morocco	31.6
Tunisia	10.6
Total	97.2



Staying below 2°C with >66% probability



Conclusions of the INDCs analysis

- Generally speaking, the contributions of the Mediterranean countries (AM-wQC) are far away from the 2°C goal:
 - In 2030, there will be a gap of 1GtCO₂eq = 1000 MtCO₂eq between the 2°C reference scenario and the aggregate contributions of the INDCs.
 - 76% of their carbon budget (2011-2100) will be spent from now to 2030.
- There is a substantial difference when we look at the differences between developed and developing countries:
 - The OECD-members are mainly responsible for the 1GtCO₂eq = 1000 MtCO₂eq gap. 88% of their carbon budget (2011-2100) will be spent from now to 2030.
 - The Non OECD members are quite close to the 2°C track.

Contents

Introduction

- The Paris Agreement and the aggregate effect of the INDCs
- The global 2°C references:
 - The RCP2.6 scenario and the Global Carbon Budget

The proposal of a “Mediterranean 2°C reference scenario”

- Equity and “Climate Justice” (Paris Agreement)

The analysis of the Mediterranean INDCs using the framework of the “Mediterranean 2°C reference scenario”

Conclusions as proposals for the next NDCs

Conclusions as proposals for the next NDCs

- **It's extremely important to have references in order to assess if a country (or a region) is on track for the 2°C global goal.**
- Good 2°C references at a global level are **the RCP2.6 future emission scenario** and their associated **Global Carbon Budget**.
- Based on Equity and Climate Justice criteria **it's fully possible to translate these two global references to the Mediterranean region and their individual countries.**
- The **Carbon Budget for the Mediterranean Region (M-CB)** amounts to **68GtCO₂**, which has historically been and still is **unequally emitted by** the OECD and non-OECD Mediterranean countries.
- Using these approaches and methodologies **it is possible and necessary to quantitatively formulate a specific Mediterranean Policy of cooperation** in the fight against Climate Change!