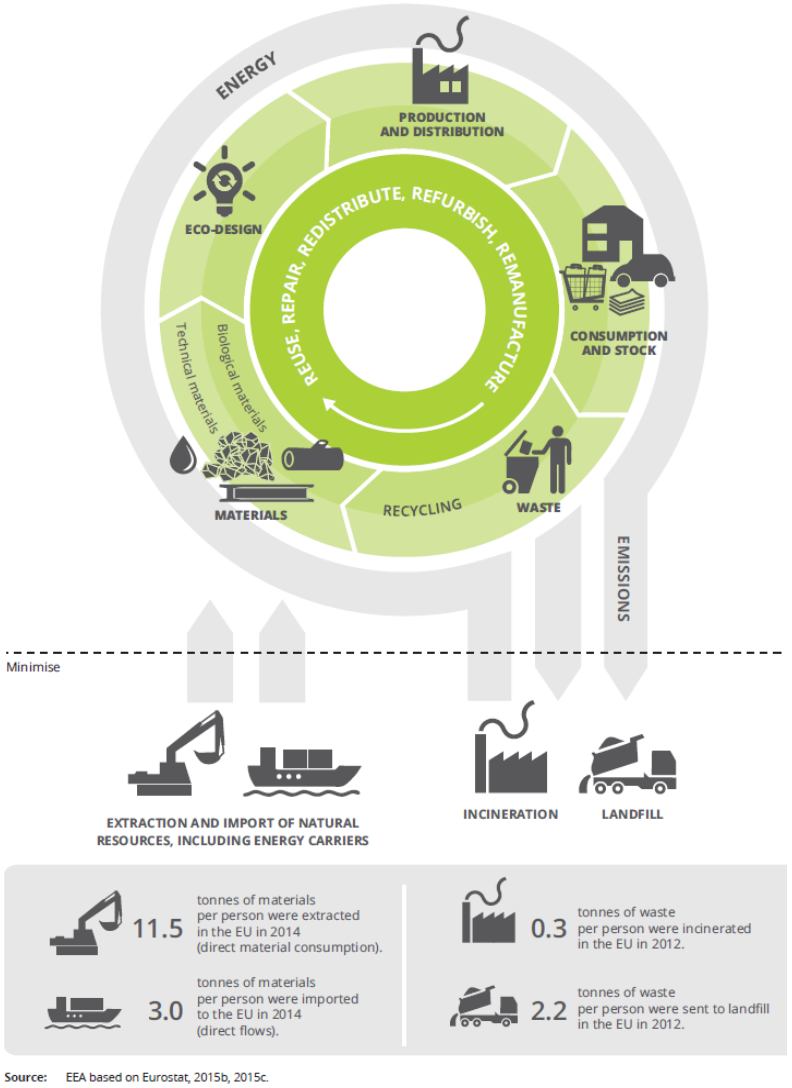
Che cosa è l'economia circolare?



Vantaggi in termini di capacità di:

- ✓ ***"rigenerare",*** ovvero proseguire l'utilità dei prodotti, dei componenti e dei materiali, mantenendo e moltiplicando il loro valore
- ✓ costituire alternativa ***al modello di economia definita "lineare"***
- ✓ ridurre della necessità di input di materiali ed energia nuovi
- ✓ Allo stesso tempo, ridurre e pressioni ambientali legate all'estrazione delle risorse, alle emissioni e alla produzione di rifiuti

ISPRA
Istituto Superiore per la Protezione e la Ricerca Ambientale

Sistema Nazionale per la Protezione dell'Ambiente

SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD

17 Obiettivi contenuti nell'Agenda 2030
approvata dall'Assemblea Generale della Nazioni Unite a settembre 2015.
160 Traguardi associati
Circa 240 indicatori (UN Statistical Commission)

SDG 12: **CONSUMO E PRODUZIONE RESPONSABILI**

Garantire modelli sostenibili di produzione e di consumo

I traguardi che L'Italia si è impegnata a raggiungere:

- 12.2 Entro il 2030, raggiungere la gestione sostenibile e l'uso efficiente delle **risorse naturali**
- 12.3 Entro il 2030, dimezzare lo spreco pro-capite globale di **rifiuti alimentari** nella vendita al dettaglio e dei consumatori e ridurre le perdite di cibo lungo le filiere di produzione e fornitura, comprese le perdite post-raccolto
- 12.4 Entro il 2020, ottenere la gestione ecocompatibile di sostanze chimiche e di **tutti i rifiuti in tutto il loro ciclo di vita**, in accordo con i quadri internazionali concordati, e ridurre significativamente il loro rilascio in aria, acqua e suolo, al fine di minimizzare i loro effetti negativi sulla salute umana e l'ambiente
- 12.5 Entro il 2030, ridurre in modo sostanziale la **produzione di rifiuti** attraverso la prevenzione, la riduzione, **il riciclaggio e il riutilizzo**
- 12.6 Incoraggiare le **imprese**, soprattutto le aziende di grandi dimensioni e transnazionali, ad adottare pratiche sostenibili e integrare le informazioni sulla sostenibilità nelle loro relazioni periodiche

UN *High Level Political Forum* 2018

Dal documento finale di sintesi:

- *Le priorità-chiave contenute nei rapporti nazionali (sullo stato di attuazione dello SDG 12) comprendono il passaggio a un'economia circolare a basse emissioni di carbonio e il miglioramento della riduzione, del riutilizzo e del riciclaggio dei rifiuti utili a creare nuovi posti di lavoro e aumentare l'efficienza delle risorse.*

Verso un modello di economia circolare per l'Italia

Documento di inquadramento e posizionamento strategico
(MISE – MATTM, novembre 2017)

- **Ripensare i modelli di produzione e consumo:**
  - Sviluppo di nuovi modelli di business
  - Trasformazione dei rifiuti in risorse ad alto valore aggiunto
  - Sviluppo di tecnologie, processi, servizi
  - Diffusione di modelli imprenditoriali creativi
  - Sostegno alla ricerca e all'innovazione

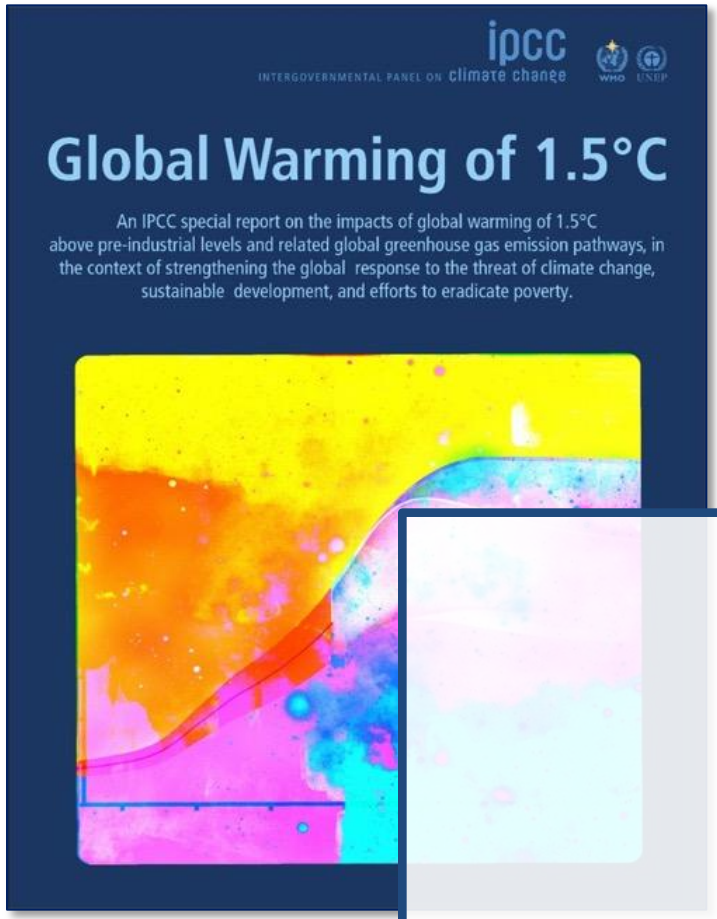
Focus sullo sviluppo di nuovi modelli di business che permettano di valorizzare al meglio il Made in Italy e il ruolo delle Piccole e Medie Imprese (PMI).

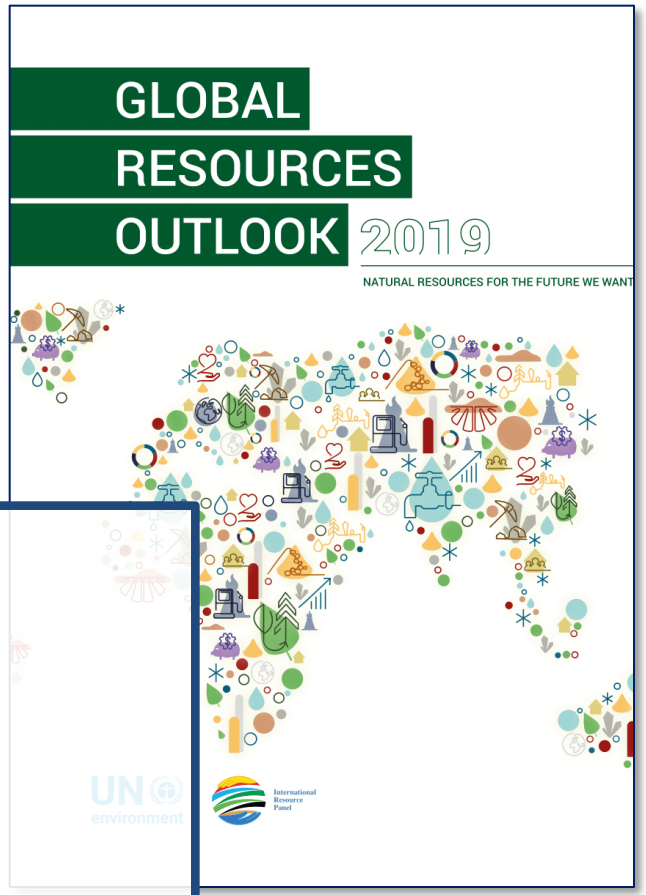
Contesto globale: sfide senza precedenti, miglior conoscenza

1. IPCC report on global warming of 1.5°C

2. IPBES global report on biodiversity and ecosystem services

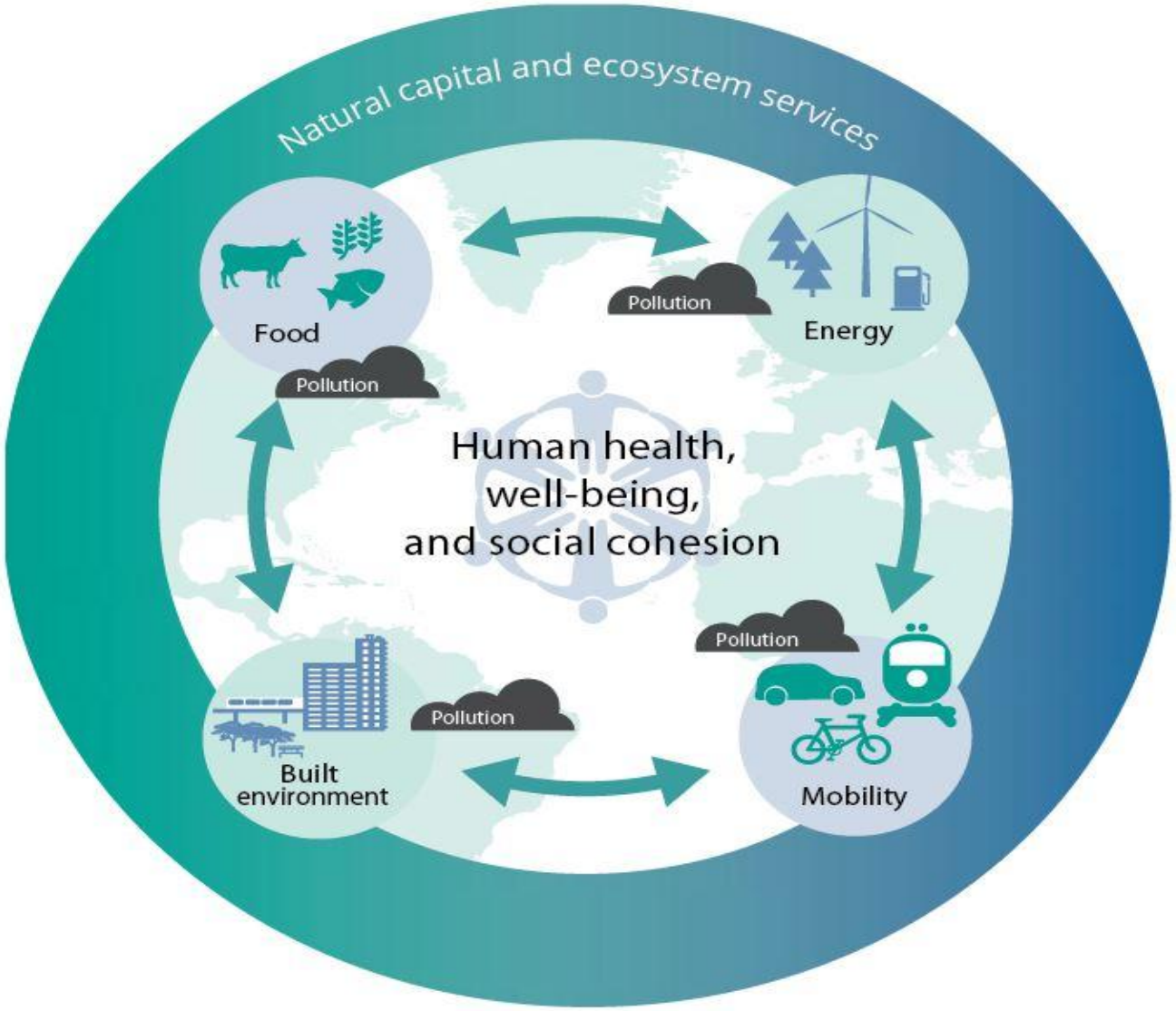
3. International Resource Panel global outlook 2019



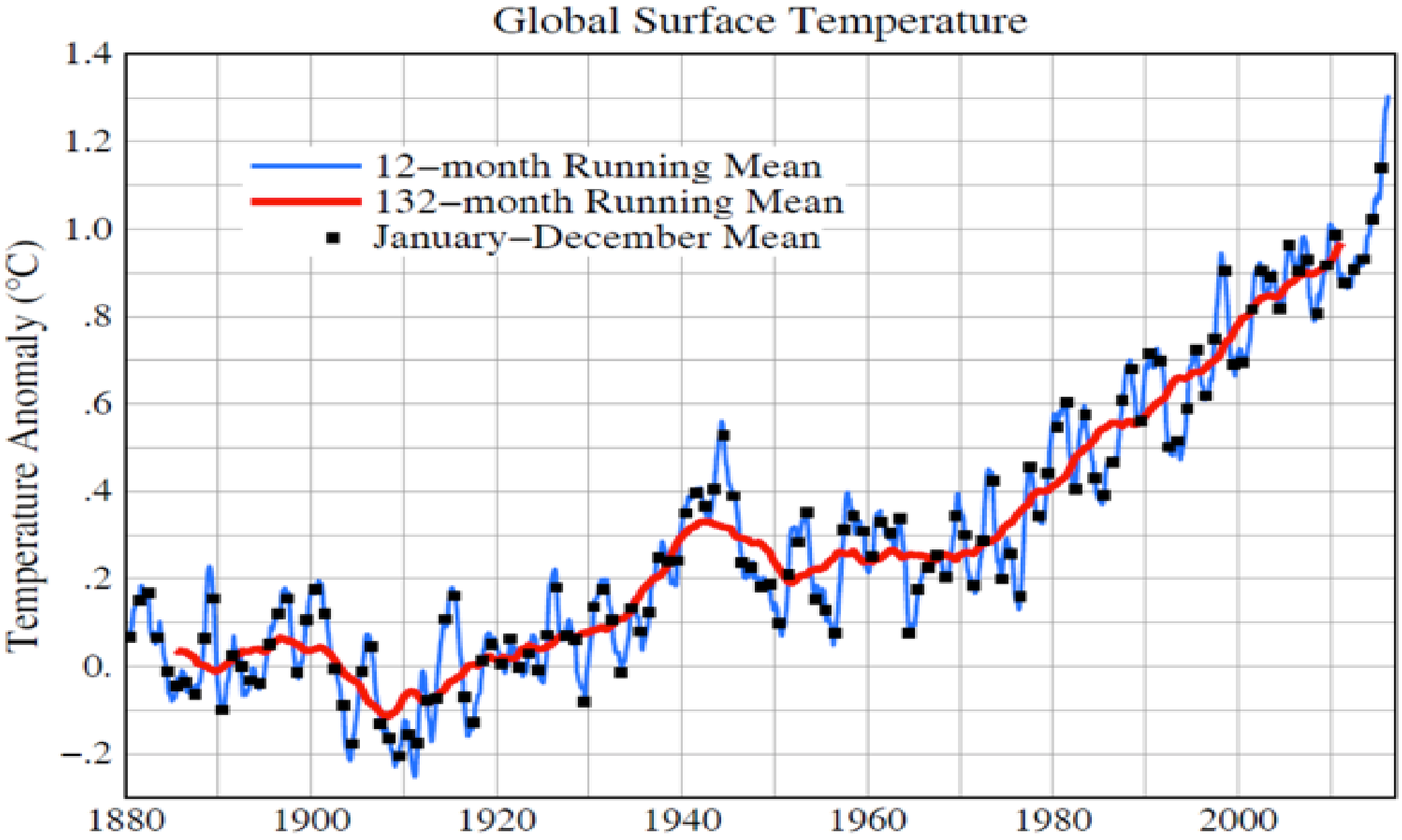


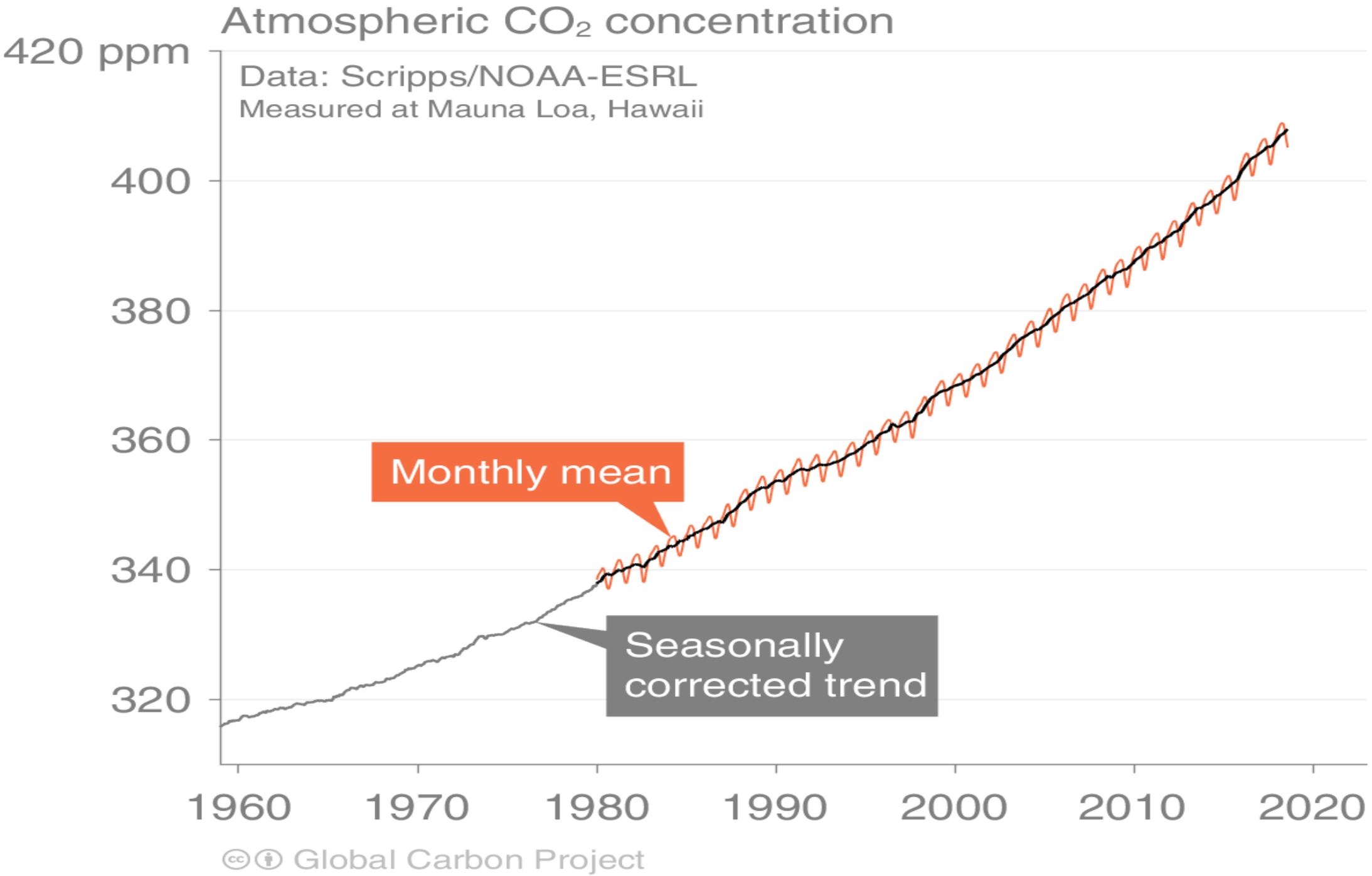
- **Necessità di azioni urgenti**
- **Irreversibilità**
- **Punti di non ritorno**
- **Interconnessione**

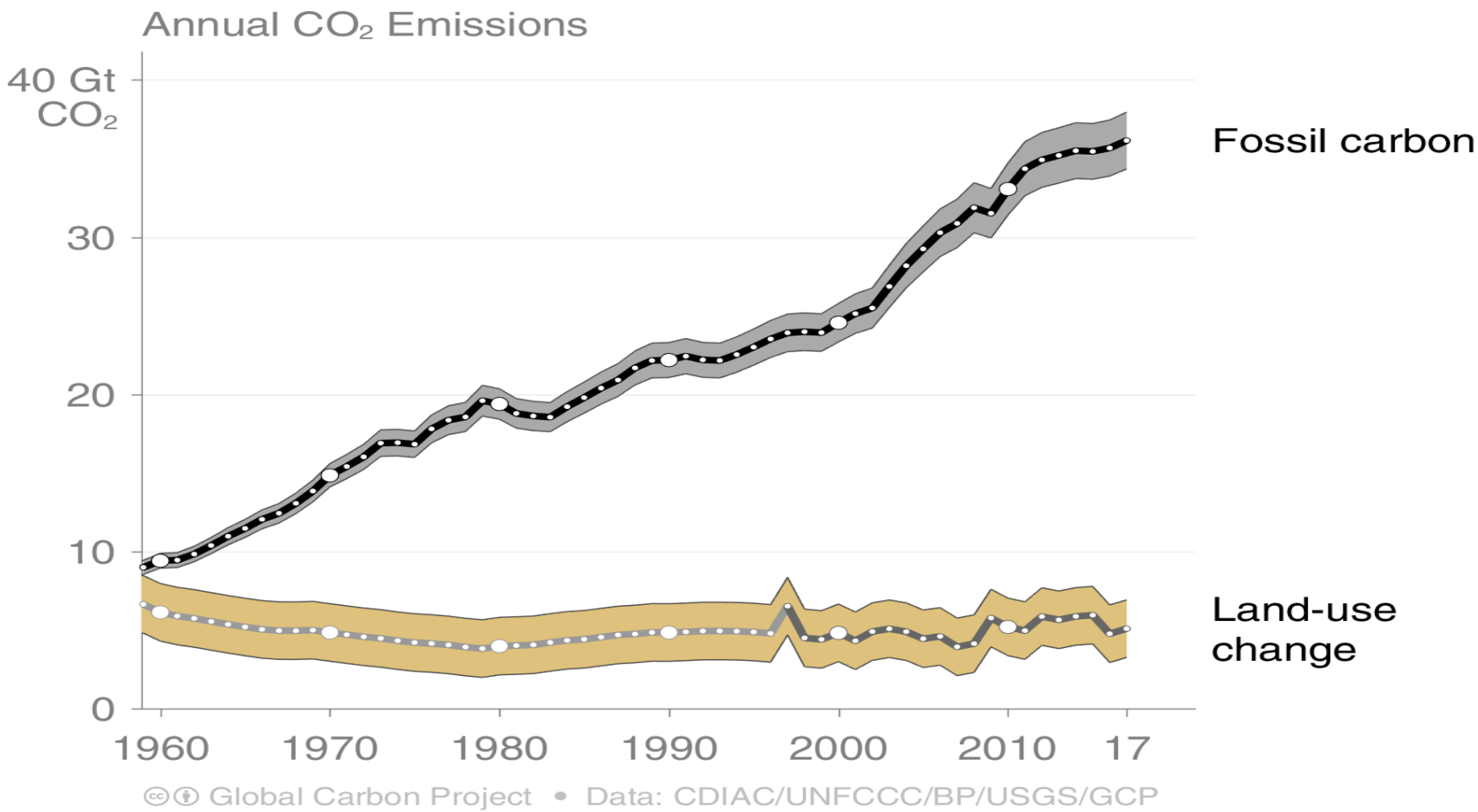
Catalizzare il cambiamento sistemico



- Riconoscere i **driver** fondamentali e le **interconnessioni** di sistema
- Adottare **quadri strategici** innovativi
- Colmare i **gap politici** cruciali:
  - Cibo
  - Terra e suolo
  - Chimica
- Fare leva sulle città, industrie e comunità per una society-wide action

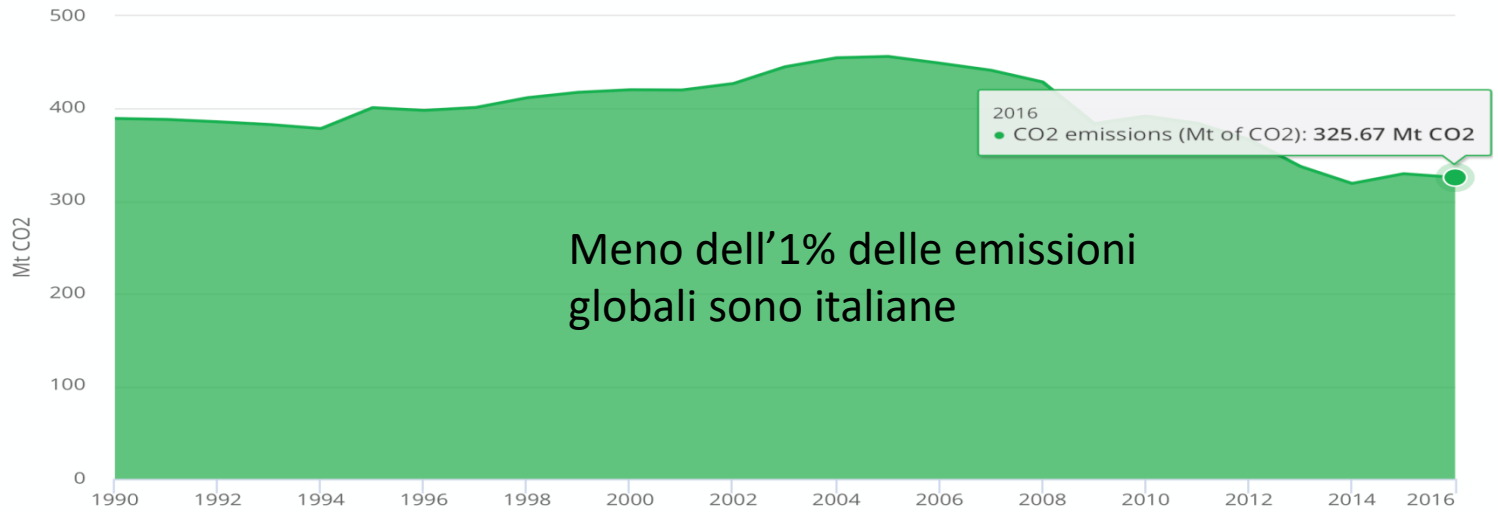

Global Surface Temperature
12–month Running Mean
132–month Running Mean
January–December Mean
Temperature Anomaly (°C)
1.4
1.2
1.0
.8
.6
.4
.2
0.
–.2
1880
1900
1920
1940
1960
1980
2000


Atmospheric CO_2 concentration
Data: Scripps/NOAA-ESRL
Measured at Mauna Loa, Hawaii
420 ppm
400
380
360
340
320
Monthly mean
Seasonally corrected trend
1960
1970
1980
1990
2000
2010
2020
Global Carbon Project


Annual CO_2 Emissions
40 Gt CO_2
30
20
10
0
1960
1970
1980
1990
2000
2010
17
Fossil carbon
Land-use change
Global Carbon Project • Data: CDIAC/UNFCCC/BP/USGS/GCP

CO2 emissions*

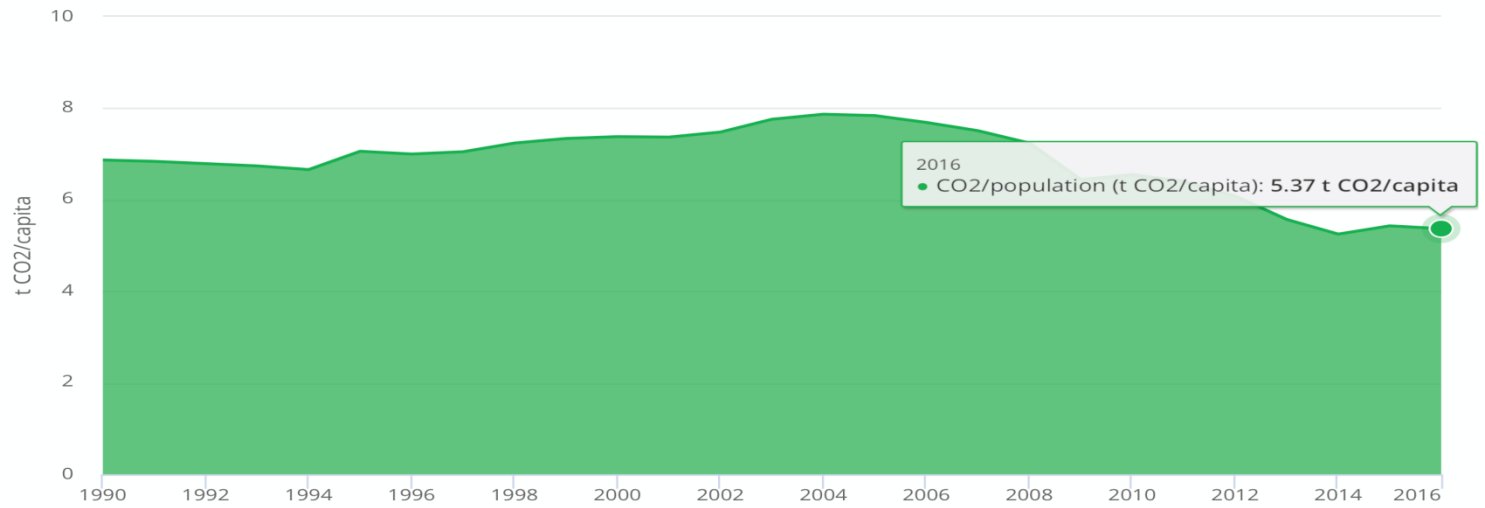
Italy 1990 - 2016



Meno dell'1% delle emissioni globali sono italiane

CO2 emissions per capita*

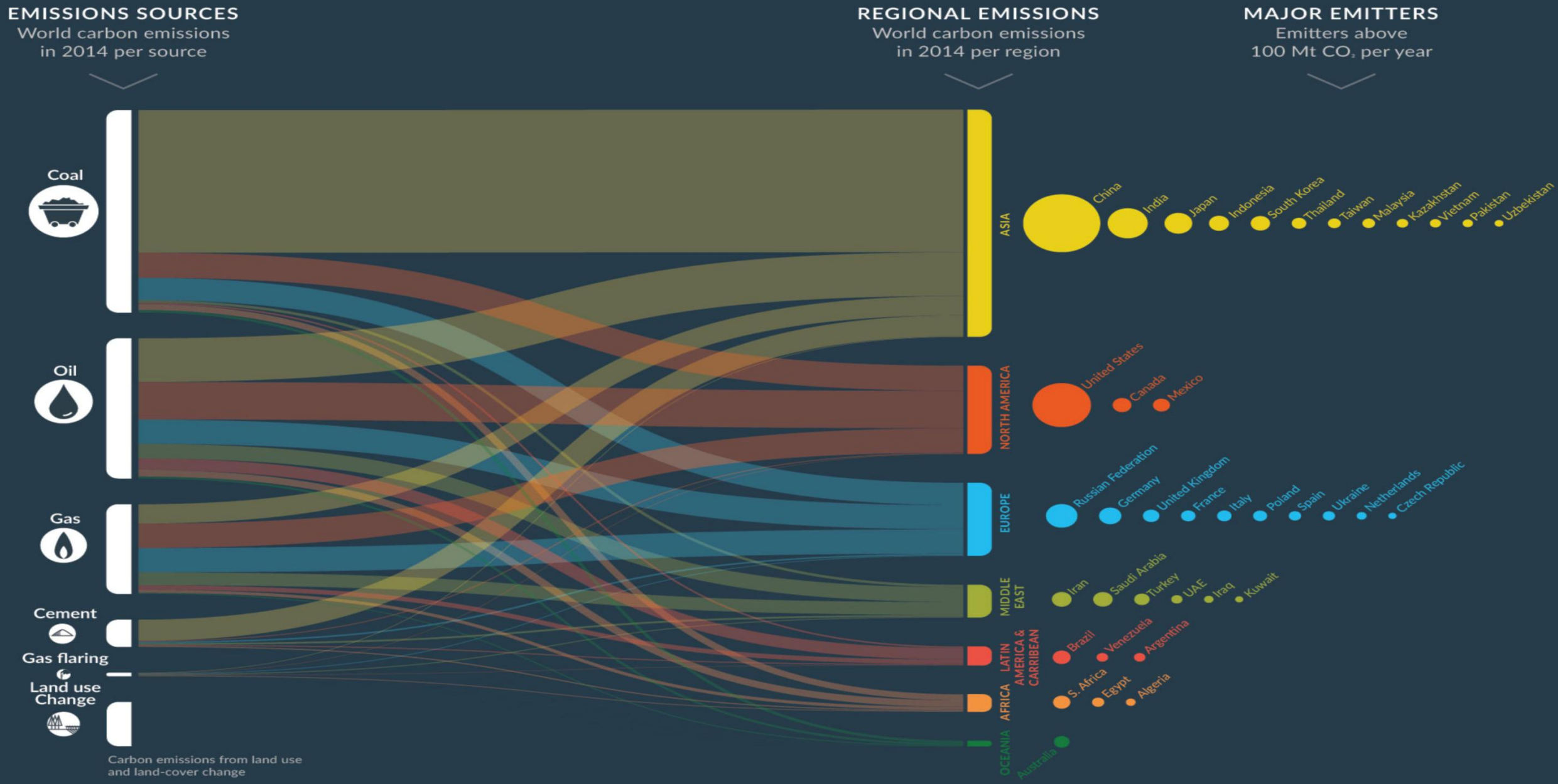
Italy 1990 - 2016



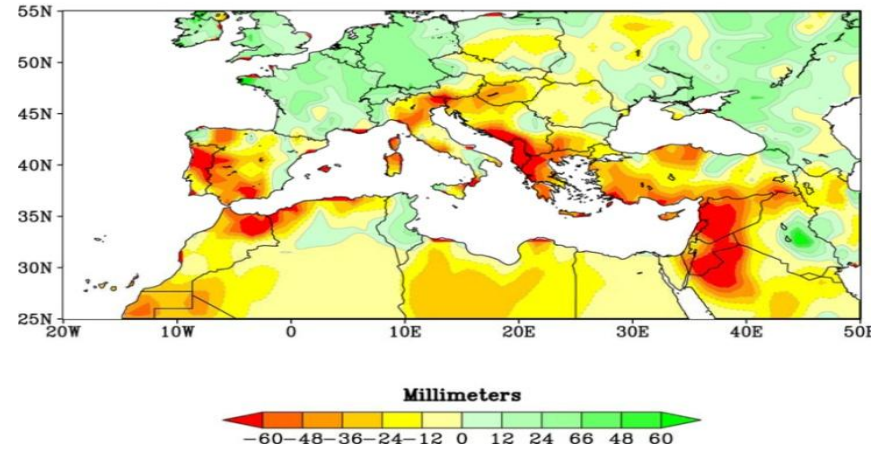
IEA World Energy Balances 2018

** CO2 Emissions from fuel combustion only. Emissions are calculated using IEA's energy balances and the 2006 IPCC Guidelines.*

WHERE DO CARBON EMISSIONS COME FROM?



Evoluzione delle precipitazioni nella regione mediterranea (1902 – 2010)



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SUMMER TRIPS

Climate Change Helped Spark Syrian War, Study Says

Research provides first deep look at how global warming may already influence armed conflict.

A sand tornado passes through as thousands of Kurds stream into Dikmetas, Turkey, from Syria in September 2014. Years after rural residents fleeing drought poured into Syria's cities, helping to spark a civil war, the region remains in turmoil.

PHOTOGRAPH BY JOHN STANMEYER, NATIONAL GEOGRAPHIC

RELATED CONTENT

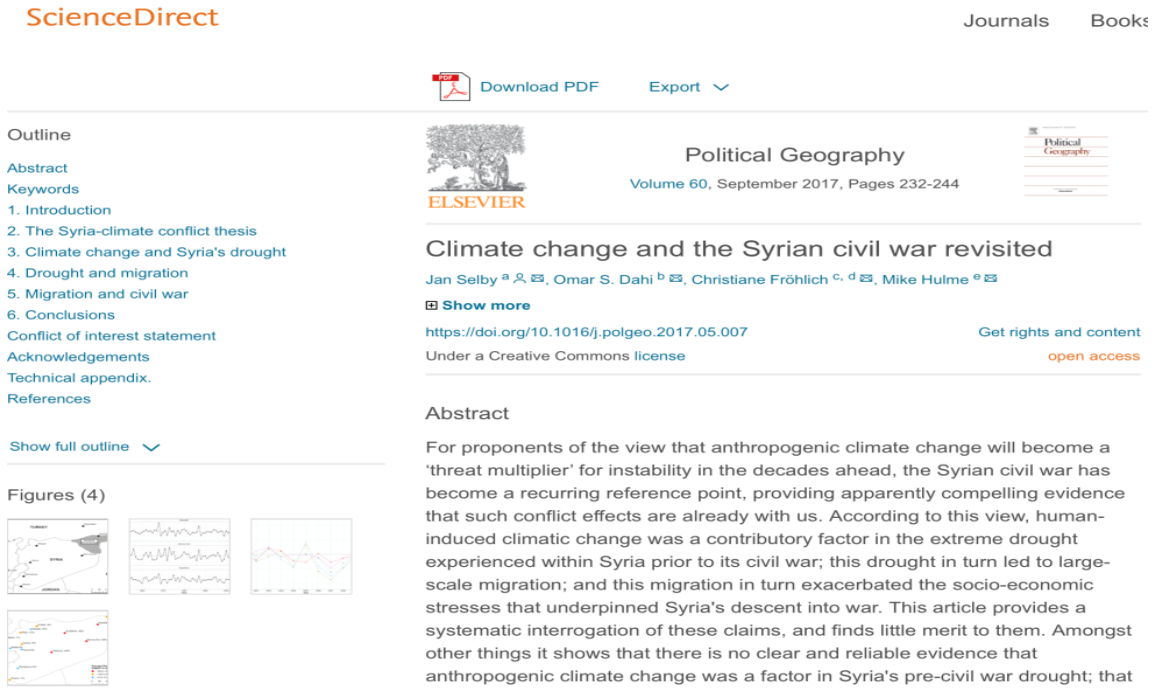
A Running List of How Trump Is Changing the Environment

Rare Saltwater Lakes Filled with Jellyfish Found in Indonesia

Some of the World's Biggest Lakes Are Drying Up. Here's Why.

By **Craig Welch**, for National Geographic

PUBLISHED MARCH 2, 2015



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Outline

Abstract
Keywords
1. Introduction
2. The Syria-climate conflict thesis
3. Climate change and Syria's drought
4. Drought and migration
5. Migration and civil war
6. Conclusions
Conflict of interest statement
Acknowledgements
Technical appendix.
References

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Figures (4)

ELSEVIER

Political Geography

Volume 60, September 2017, Pages 232-244

Climate change and the Syrian civil war revisited

Jan Selby [a], Omar S. Dahi [b], Christiane Fröhlich [c, d], Mike Hulme [e]

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Abstract

For proponents of the view that anthropogenic climate change will become a 'threat multiplier' for instability in the decades ahead, the Syrian civil war has become a recurring reference point, providing apparently compelling evidence that such conflict effects are already with us. According to this view, human-induced climatic change was a contributory factor in the extreme drought experienced within Syria prior to its civil war; this drought in turn led to large-scale migration; and this migration in turn exacerbated the socio-economic stresses that underpinned Syria's descent into war. This article provides a systematic interrogation of these claims, and finds little merit to them. Amongst other things it shows that there is no clear and reliable evidence that anthropogenic climate change was a factor in Syria's pre-civil war drought; that this drought did not cause anywhere near the scale of migration that is often alleged; and that there exists no solid evidence that drought migration pressures in Syria contributed to civil war onset. The Syria case, the article finds, does not support 'threat multiplier' views of the impacts of climate change; to the contrary, we conclude, policymakers, commentators and scholars alike should exercise far greater caution when drawing such linkages or when securitising climate change.

The Paris climate agreement: key points

The historic pact, approved by 195 countries, will take effect from 2020

Temperatures

2100

- *Keep warming **"well below 2 degrees Celsius".** Continue all efforts to limit the rise in temperatures **to 1.5 degrees Celsius"***

Finance

2020-2025

- *Rich countries must provide **100 billion dollars from** 2020, as a "floor"*
- *Amount to be updated by 2025*

Differenciation

- *Developed countries **must continue to "take the lead"** in the reduction of greenhouse gases*
- *Developing nations are encouraged to "enhance their efforts" and move over time to cuts*

Emissions objectives

2050

- *Aim for greenhouse gases emissions to peak **"as soon as possible"***
- *From 2050: **rapid reductions to achieve a balance between emissions** from human activity and the amount that can be captured by "sinks"*

Burden-sharing

- ***Developed countries** must provide financial resources to help developing countries*
- *Other countries are invited to provide support **on a voluntary basis***

Review mechanism

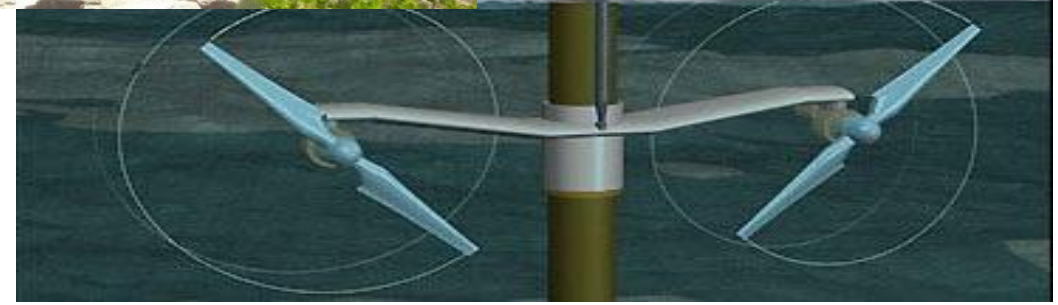
2023

- ***A review every five years** First world review: **2023***
- *Each review will inform countries in "updating and enhancing" their pledges*

Climate damage

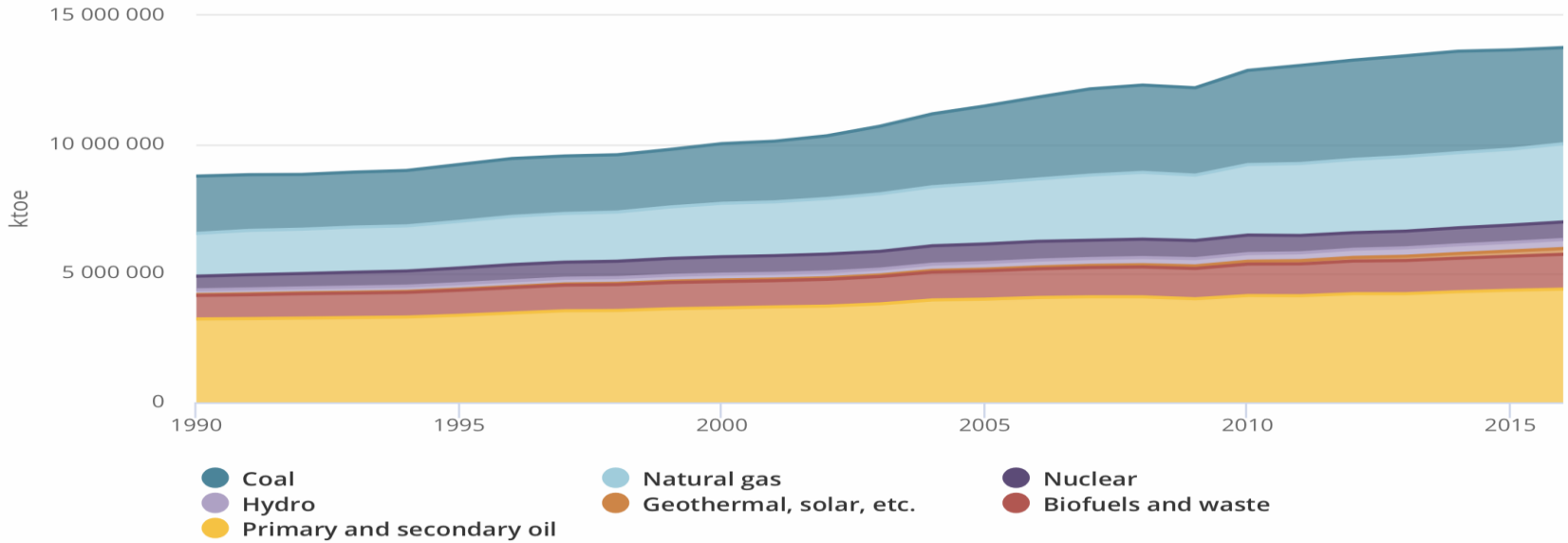
- *Vulnerable countries have won recognition of the need for "averting, minimising and addressing" losses suffered due to climate change*

AFP



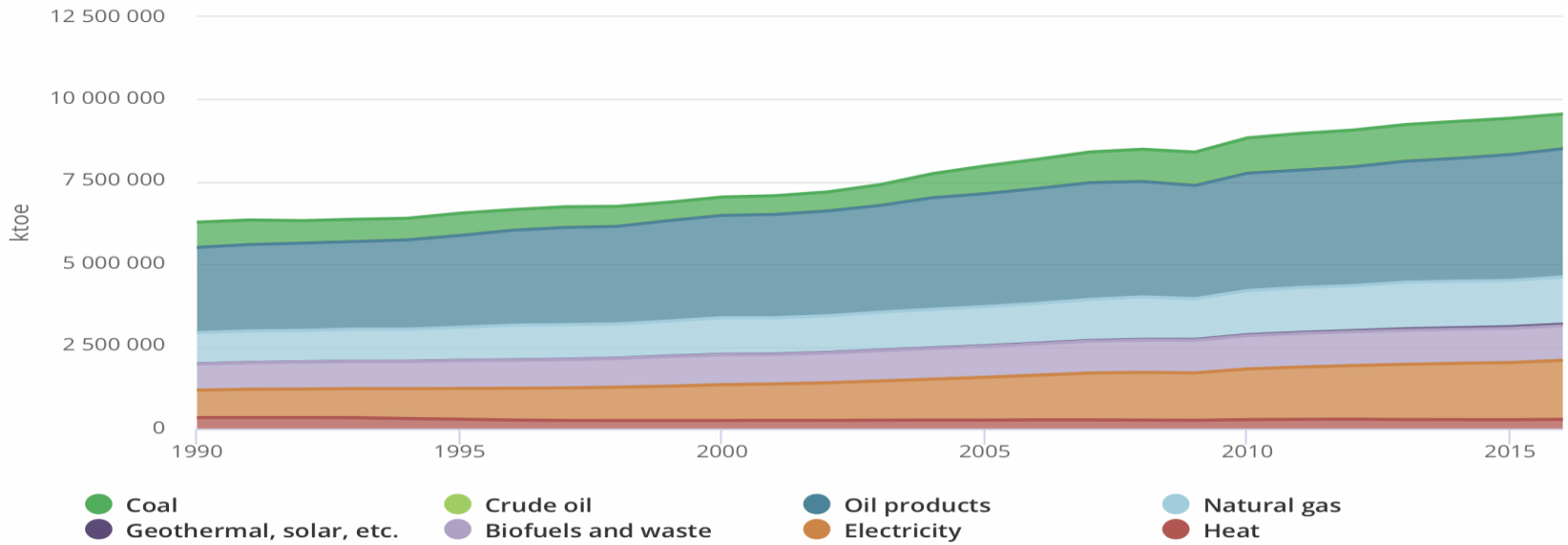
Total Primary Energy Supply (TPES) by source*

World 1990 - 2016



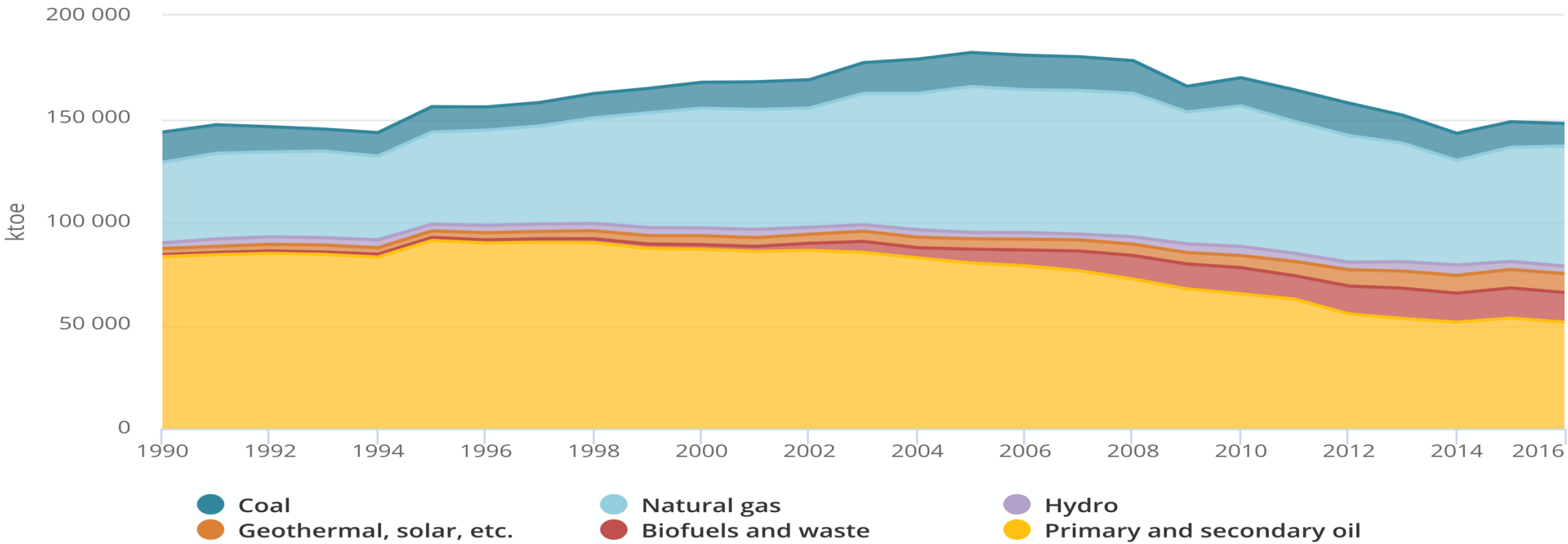
Total Final Consumption (TFC) by source

World 1990 - 2016



Total Primary Energy Supply (TPES) by source*

Italy 1990 - 2016

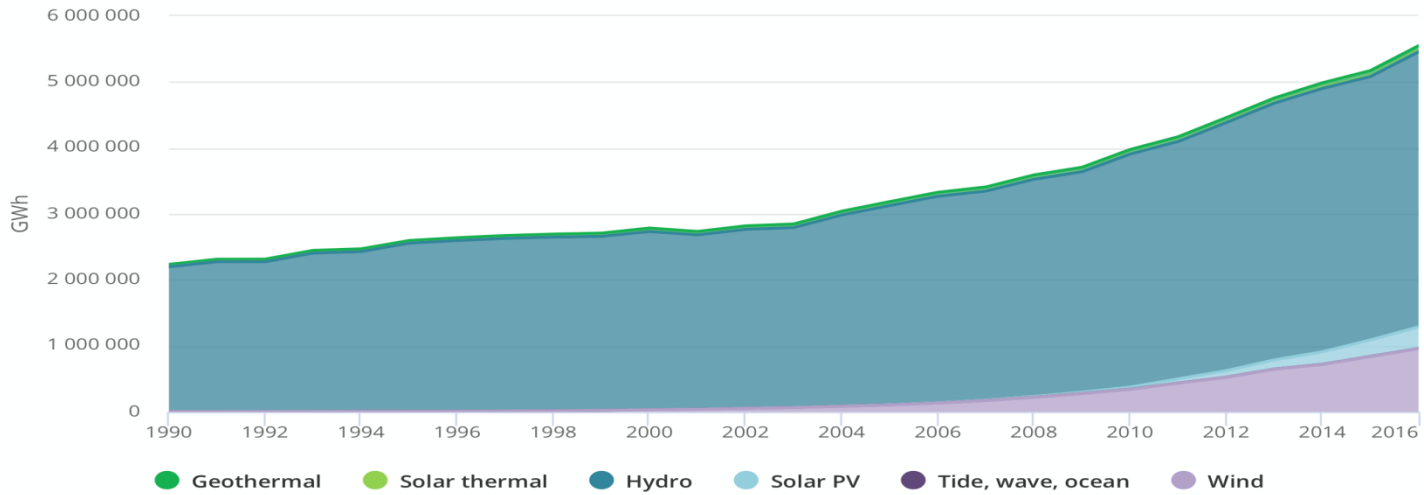


IEA World Energy Balances 2018

** TPES here excludes electricity and heat trade*

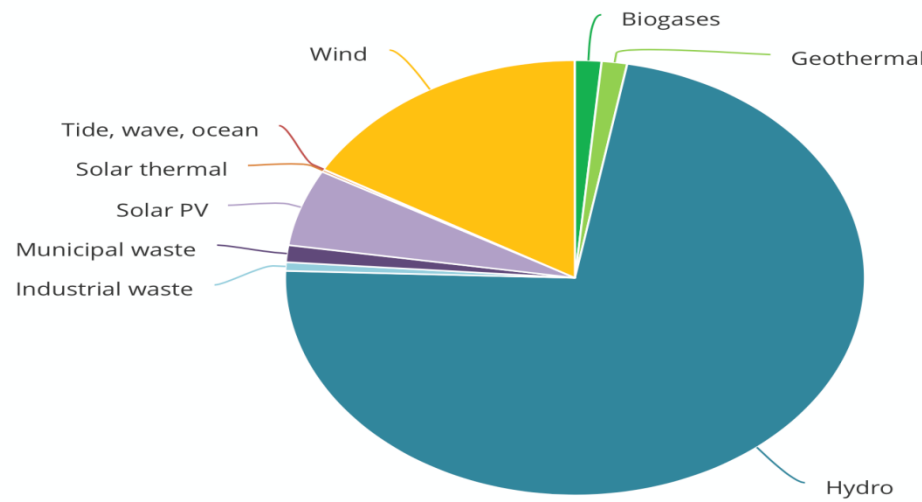
Electricity generation from renewables by source

World 1990 - 2016



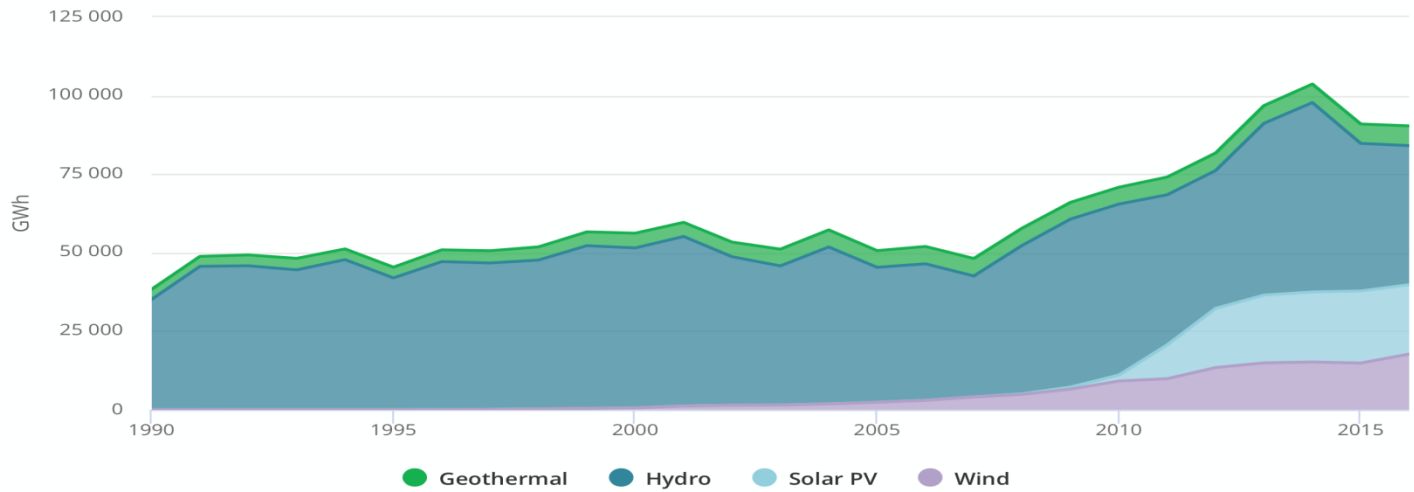
Share of sources in renewable electricity generation

World 2016



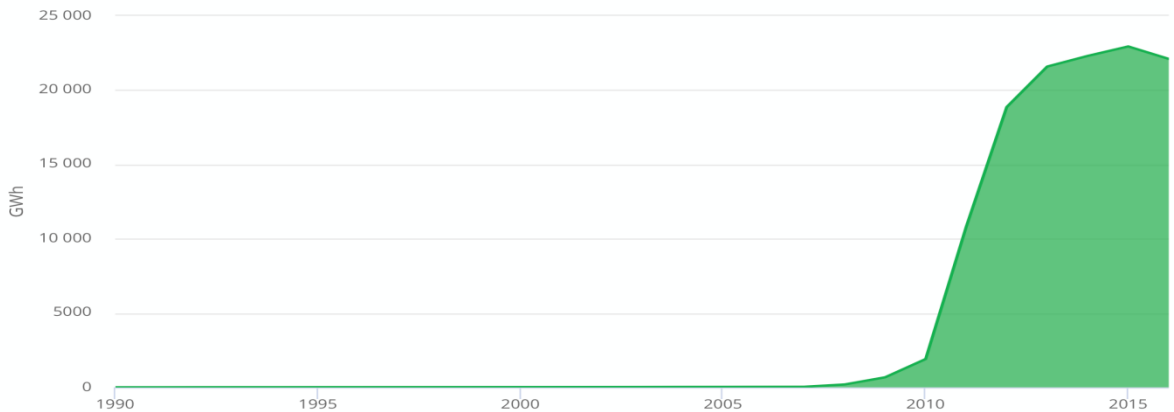
Electricity generation from renewables by source

Italy 1990 - 2016



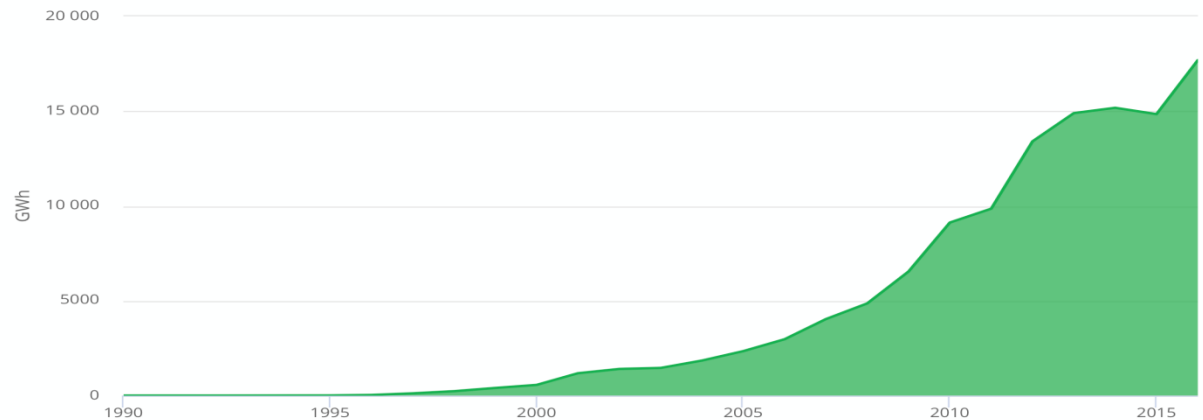
Solar PV electricity generation

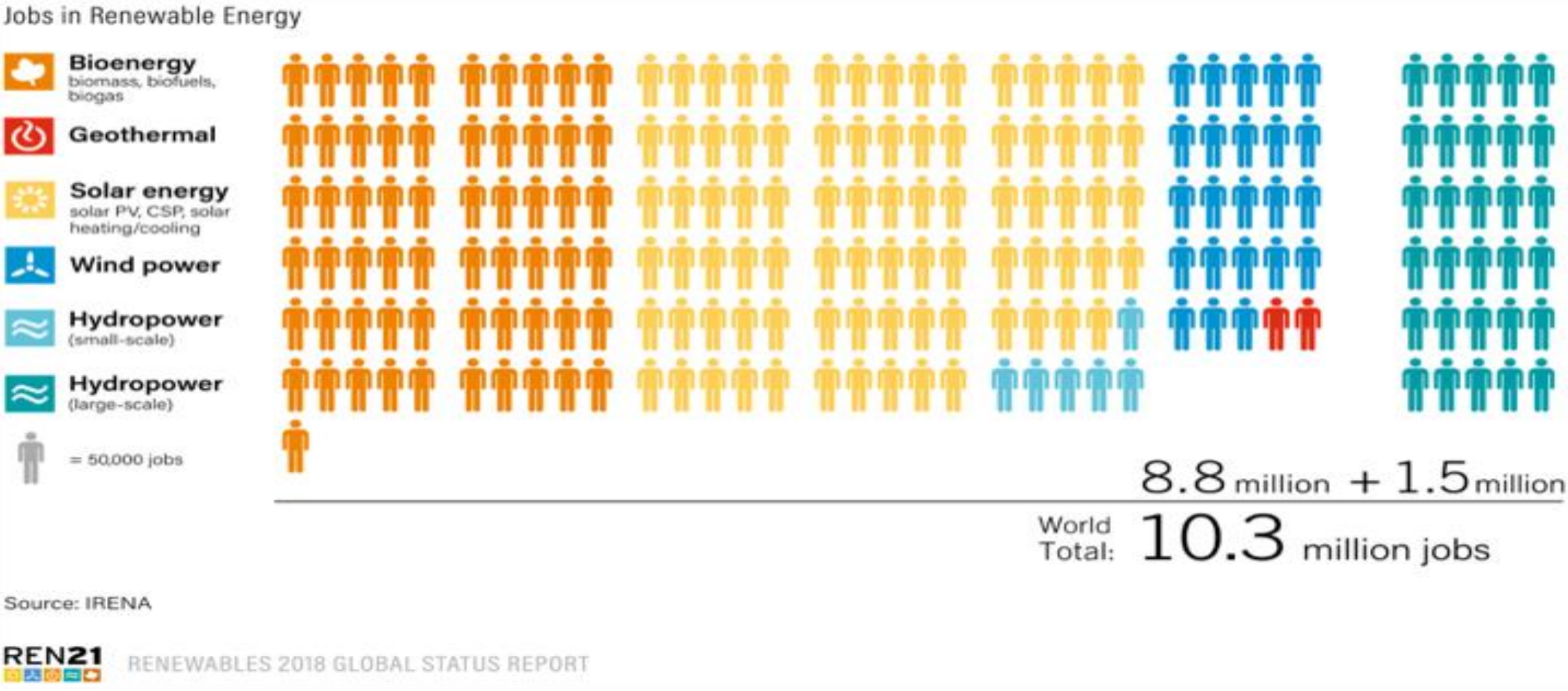
Italy 1990 - 2016



Wind electricity generation

Italy 1990 - 2016




Jobs in Renewable Energy
Bioenergy
biomass, biofuels, biogas
Geothermal
Solar energy
solar PV, CSP, solar heating/cooling
Wind power
Hydropower
(small-scale)
Hydropower
(large-scale)
= 50,000 jobs
8.8 million + 1.5 million
World Total: 10.3 million jobs
Source: IRENA
REN21
RENEWABLES 2018 GLOBAL STATUS REPORT

Solar power

This article is more than 1 year old

Donald Trump's tariffs on panels will cost US solar industry thousands of jobs

Trump's decision to impose a 30% tariff will cost the US around 23,000 jobs and risks slowing the growth of clean energy, advocates warn

▲ Donald Trump has imposed a 30% tariff on foreign-made solar cells and modules. Photograph: Susan Montoya Bryan/AP

Oliver Milman

@olliemilman

Wed 24 Jan 2018 07.33 GMT

Donald Trump's decision to impose a tariff on imported solar panels will cost the US solar industry about 23,000 jobs this year and risks slowing the growth of clean energy that would help address climate change, renewable energy advocates warned.

Trump has imposed a 30% tariff on foreign-made solar cells and modules, with the White House expressing alarm at a huge rise in imported components "spurred on by artificially low-priced solar cells and modules from China".

Trump imposes steep tariffs on imported solar panels and washing machines

But solar installers warned that the tariff, which will reduce to 15% within four years, will cost US jobs rather than protect them.

The Solar Energy Industries Association said 23,000 jobs would be lost in 2018, pointing out that most solar manufacturing in the US revolves around making parts for cheaper imported panels, rather than the cells and panels

Solar power

This article is more than 1 year old

Trump imposes steep tariffs on imported solar panels and washing machines

Restrictions aim to boost US manufacturing, but critics warn they will slow shift to renewable energy and increase consumer costs

▲ A residential solar installation in Albuquerque, New Mexico. Trump will impose a 30% tariff on imported solar cells and modules in the first year. Photograph: Sergio Flores/Getty Images

Reuters

FOUR FUTURES

Geopolitics in the next decade (hashed regions) will dictate whether or how fast energy from renewable sources will outpace that from fossil fuels, as these four scenarios depict.