The European House Ambrosetti

COMMUNITY VALORE ACQUA PER L'ITALIA

Valore Acqua: una risorsa chiave per il rilancio del Paese

Roma, martedì 22 Marzo 2022

Community Valore Acqua per l'Italia

Scenari, strategie e *policy* per la filiera dell'acqua in Italia e l'ottimizzazione del suo sviluppo

Presentazione di Luca Mercalli

Presidente, Società Metereologica Italiana

MAIN PARTNER

PARTNER

JUNIOR PARTNER

Il clima che verrà e l’acqua

Luca Mercalli – Società Meteorologica Italiana - www.nimbus.it

SOCIETÀ METEOROLOGICA ITALIANA ONLUS
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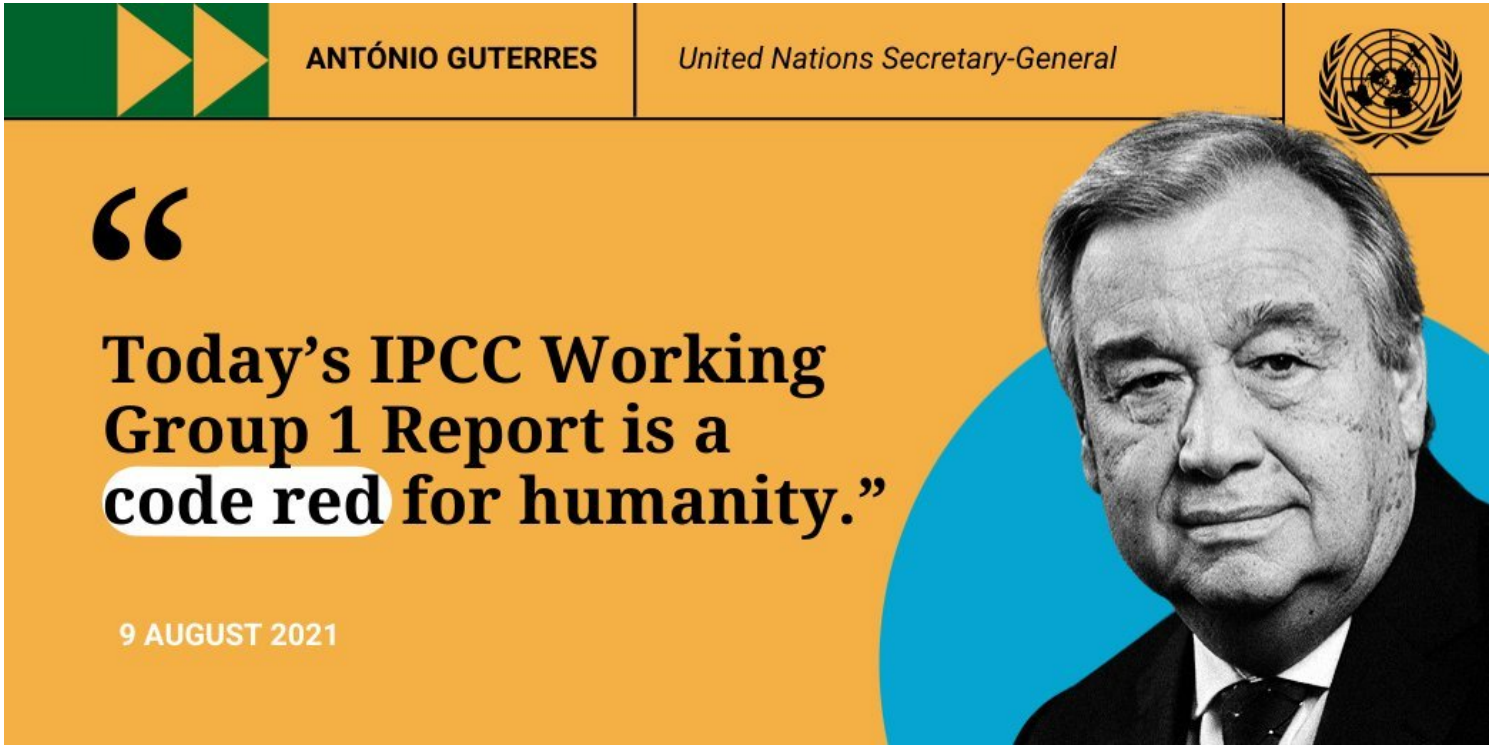
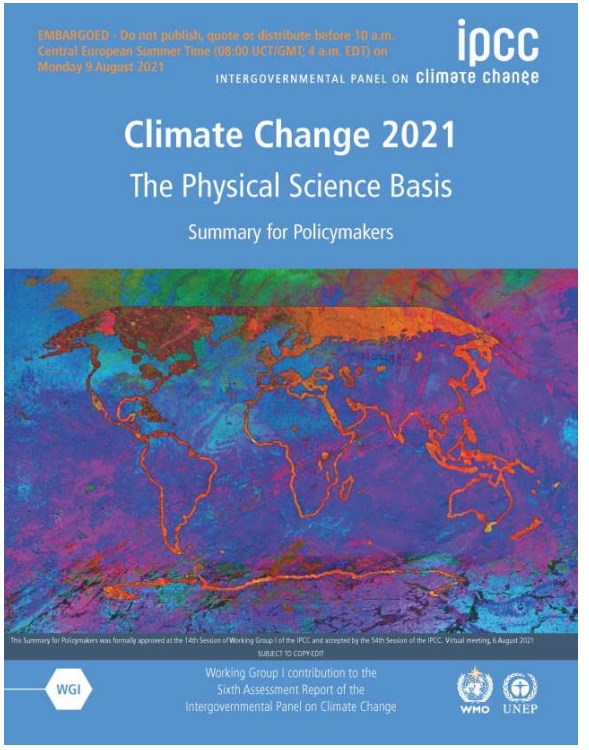
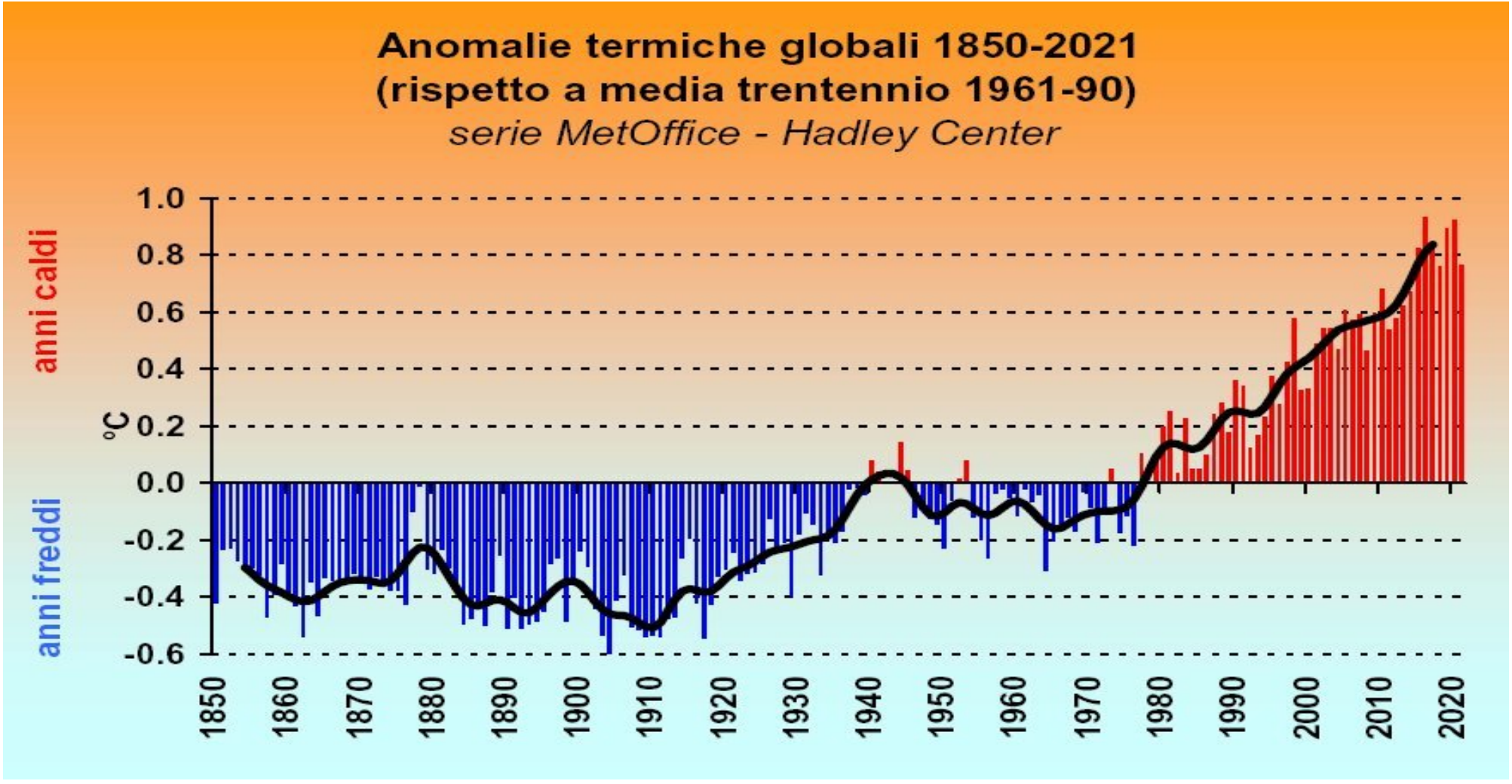
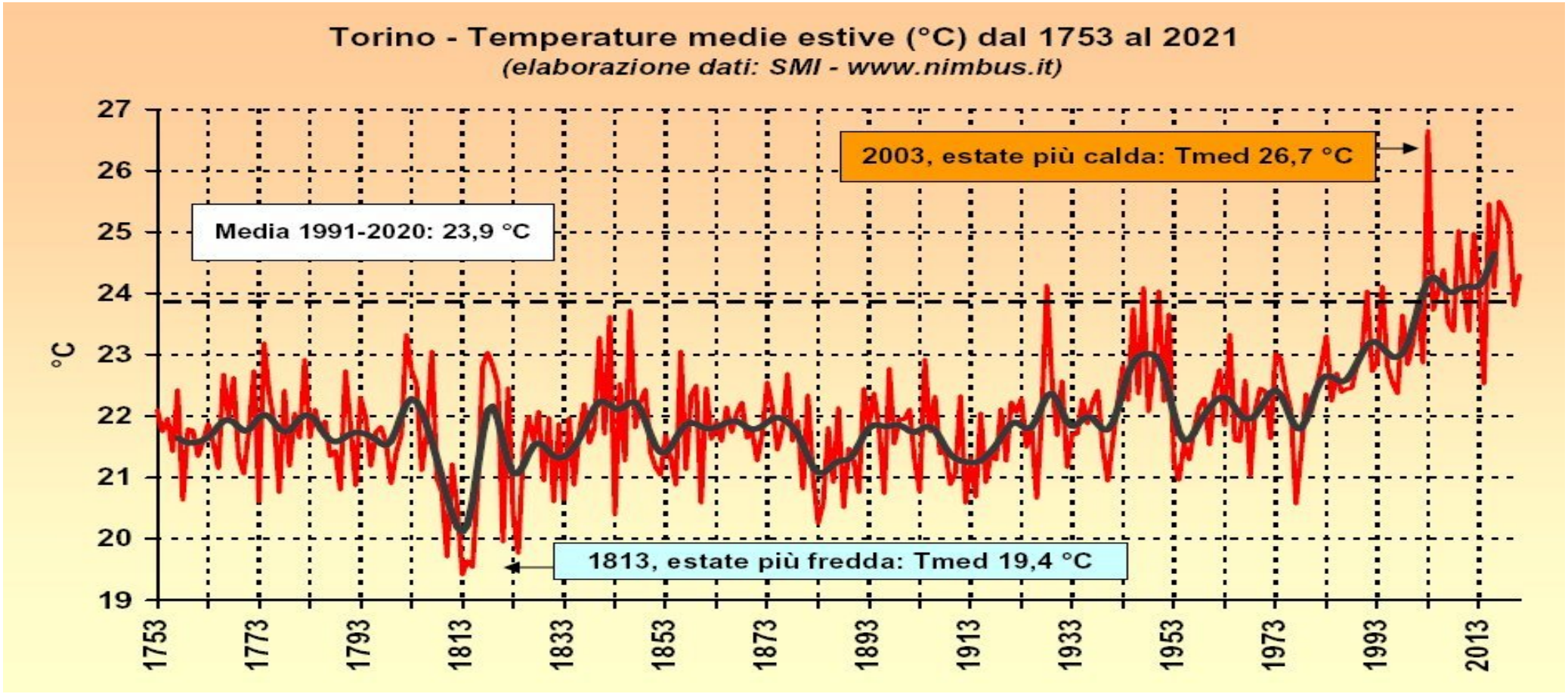

ANTÓNIO GUTERRES
United Nations Secretary-General
“
Today’s IPCC Working Group 1 Report is a code red for humanity.”
9 AUGUST 2021

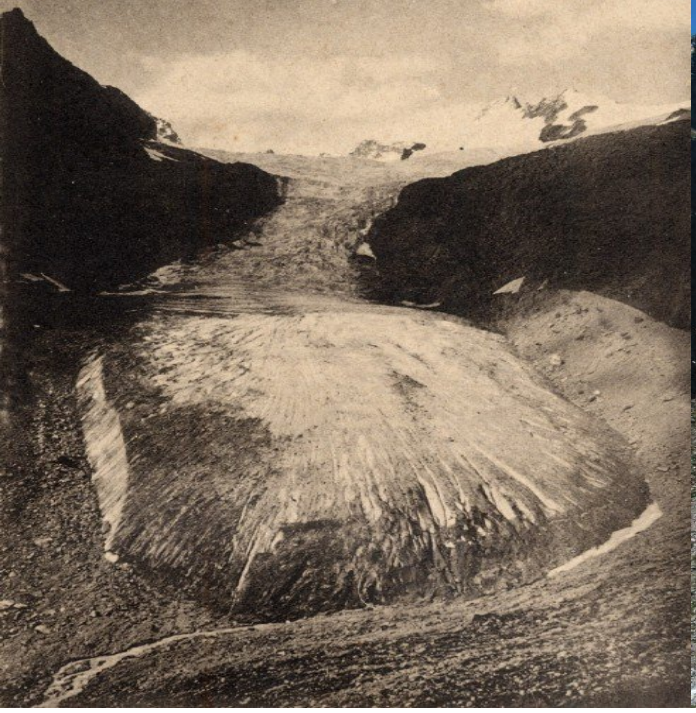

EMBARGOED - Do not publish, quote or distribute before 10 a.m. Central European Summer Time (08:00 UCT/GMT; 4 a.m. EDT) on Monday 9 August 2021
ipcc
INTERGOVERNMENTAL PANEL ON climate change
Climate Change 2021
The Physical Science Basis
Summary for Policymakers
This Summary for Policymakers was formally approved at the 14th Session of Working Group I of the IPCC and accepted by the 54th Session of the IPCC, Virtual meeting, 6 August 2021
SUBJECT TO COPY-EDIT
WGI
Working Group I contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change
WMO
UNEP

Temperatura media globale: +1,2°C in più nell'ultimo secolo



Temperature estive in aumento





1897
(f. Druetti)

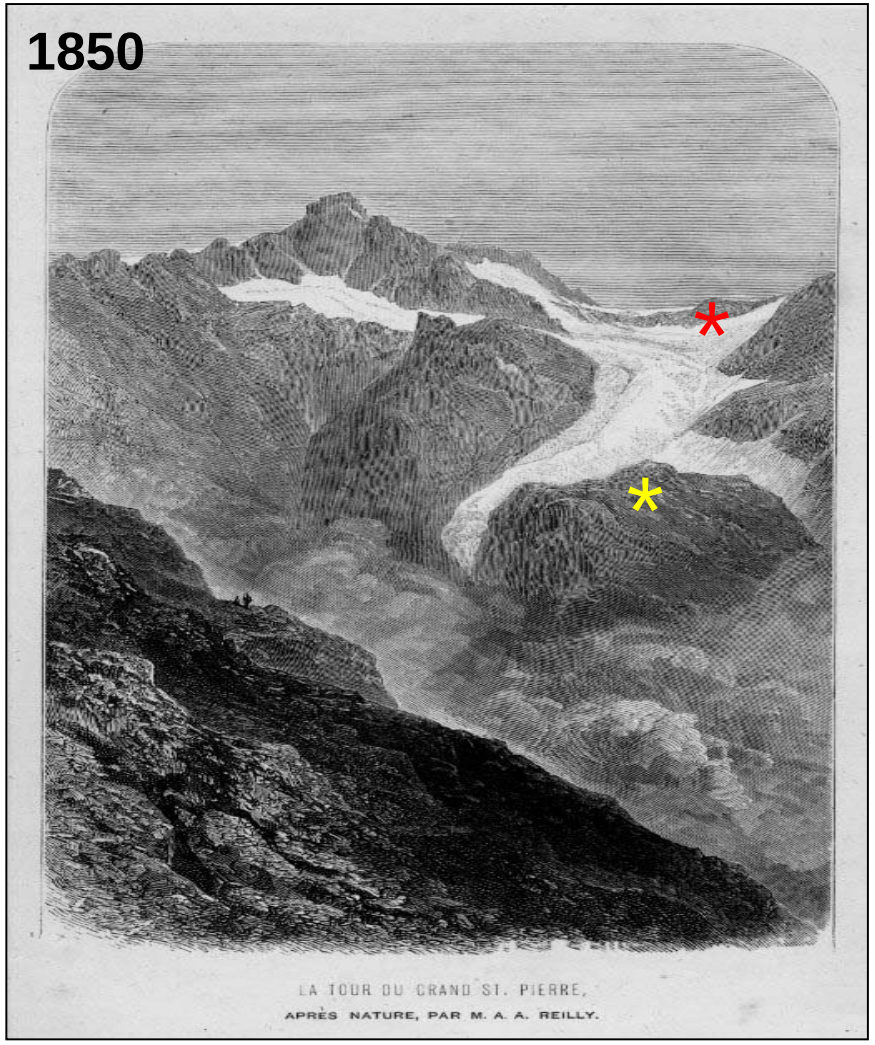
2005
(f. L. Mercalli)

2015
(f. S. Jobard)

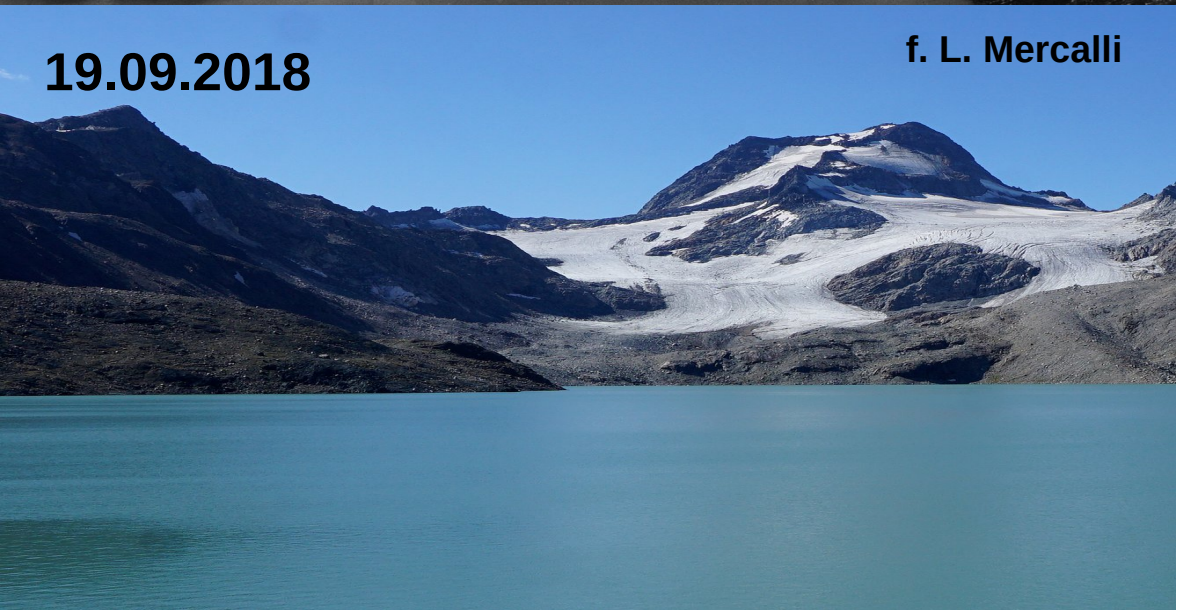
Ghiacciaio Pré de Bar (Monte Bianco):

ritiro della fronte di oltre 800 m dal 1897 al 2015

I ghiacciai alpini si sono ridotti di oltre il 50% in un secolo

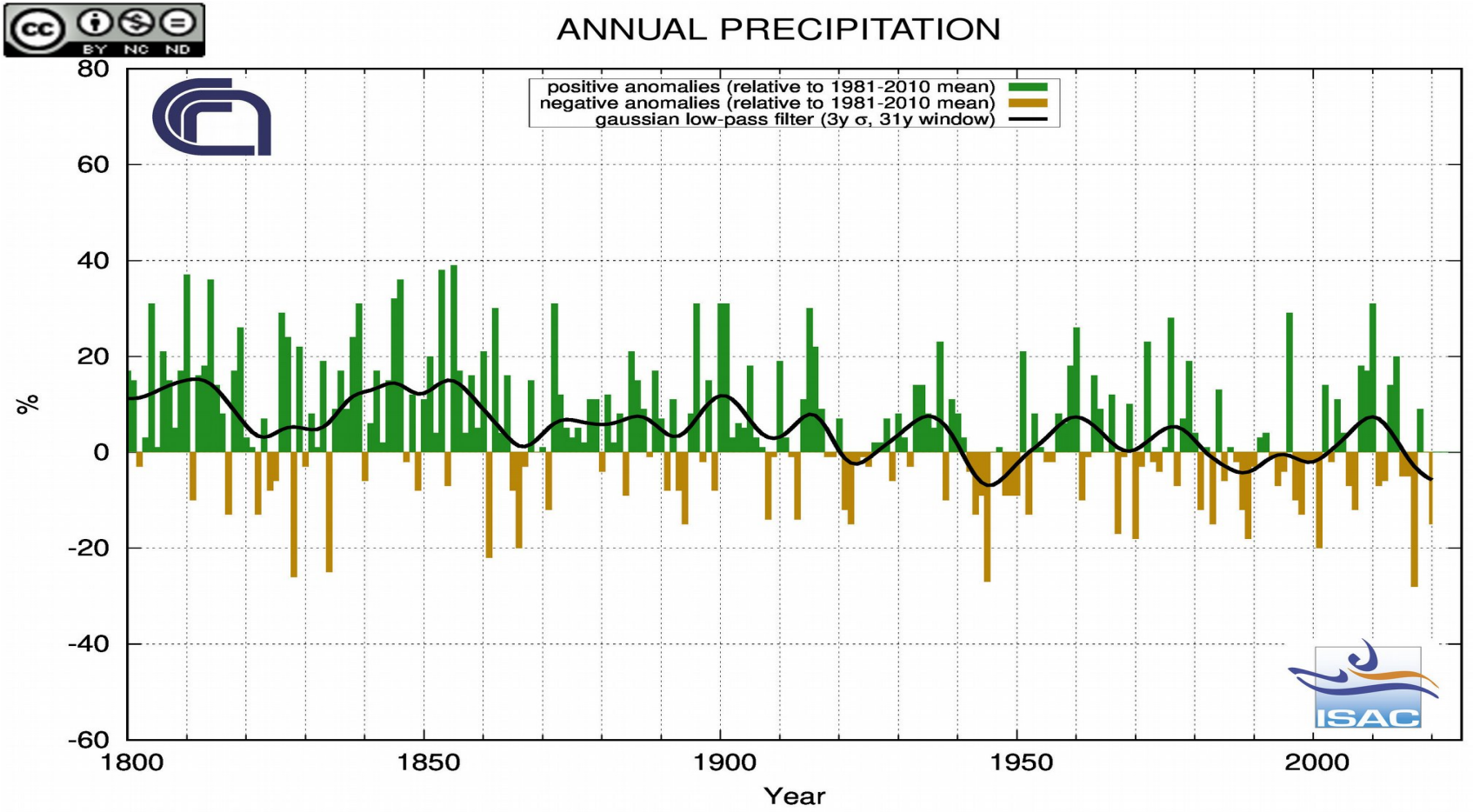


Ghiacciai piccoli estinti: Gh. di Teleccio (Gran Paradiso)

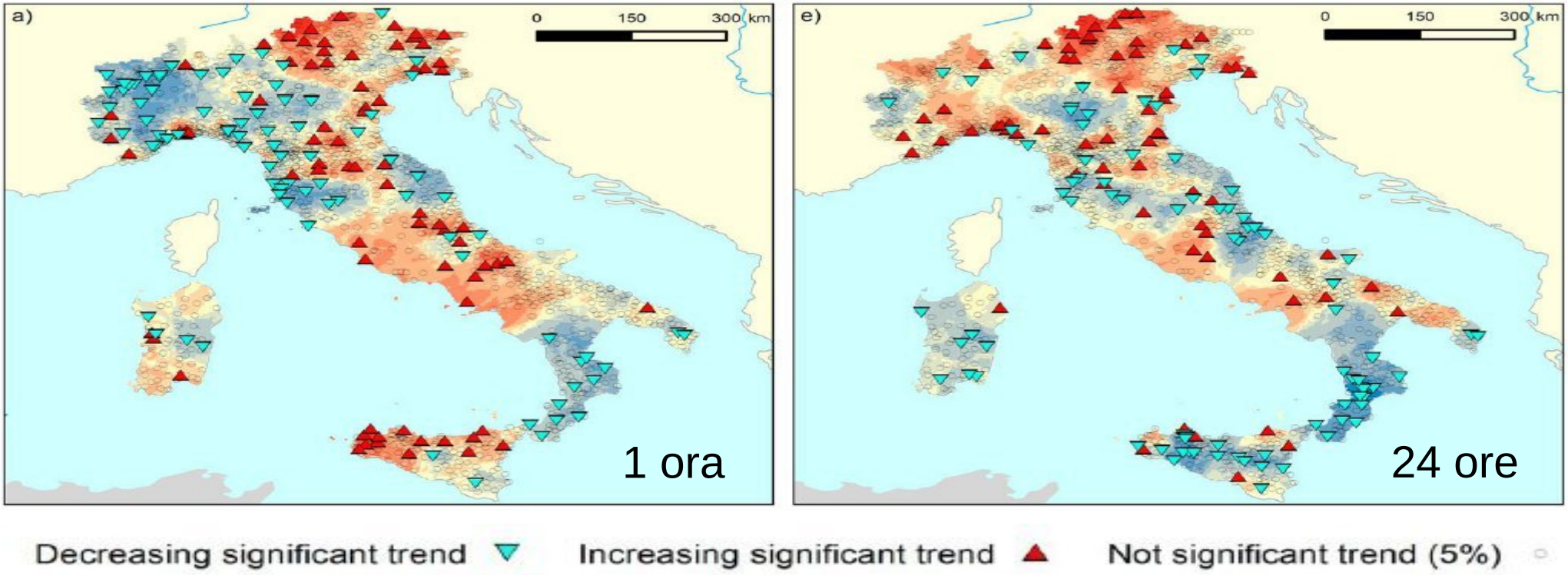


Ghiacciaio Meridionale del Sabbione (Ossola) dalla diga.

Regresso frontale circa 1200 m.



Precipitazioni annue in Italia (1800-2019): tendenze per ora poco evidenti, solo lieve calo rispetto all'Ottocento



Tratto da: Libertino et al., 2019 - *Evidence for Increasing Rainfall Extremes Remains Elusive at Large Spatial Scales: The Case of Italy*. Geophysical Research Letters, 46.

Intensità degli episodi piovosi (1915-2015):
tendenze a lungo termine ancora variegate a livello nazionale,
ma probabili primi effetti del riscaldamento globale
sulla severità e frequenza degli eventi (più energia e vapore dal mare caldo).

Siccità 2017

Limone Piemonte, impianto di risalita sepolto da una colata detritica (fonte: localteam.it).

2-3 ottobre 2020, alluvione disastrosa sulle Alpi Marittime (tempesta Alex): nubifragi eccezionali in risalita dal mare troppo caldo

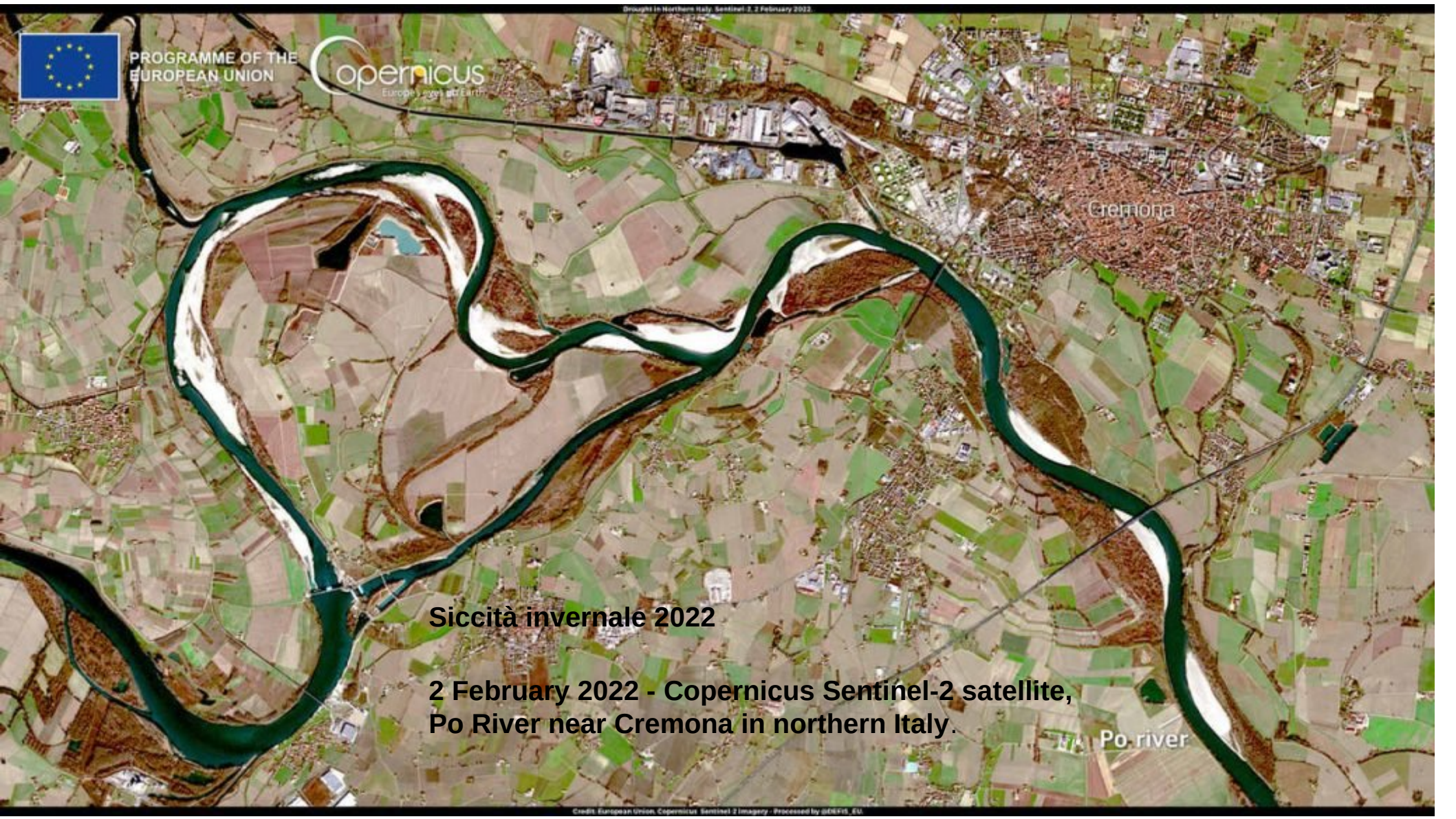
Nord-Est, Emilia e regioni tirreniche, 4-6 dicembre 2020

Rotta dell'argine destro del F. Panaro a Castelfranco Emilia (f. W. Morandi)

Precipitazione massima 786 mm a Barcis (Dolomiti friulane), quattro volte la media mensile.
Ma piene fluviali più appariscenti nel Modenese per 200-300 mm di pioggia caduti in Appennino e fusione nivale.

Alluvioni
Germania e
Belgio luglio 2021

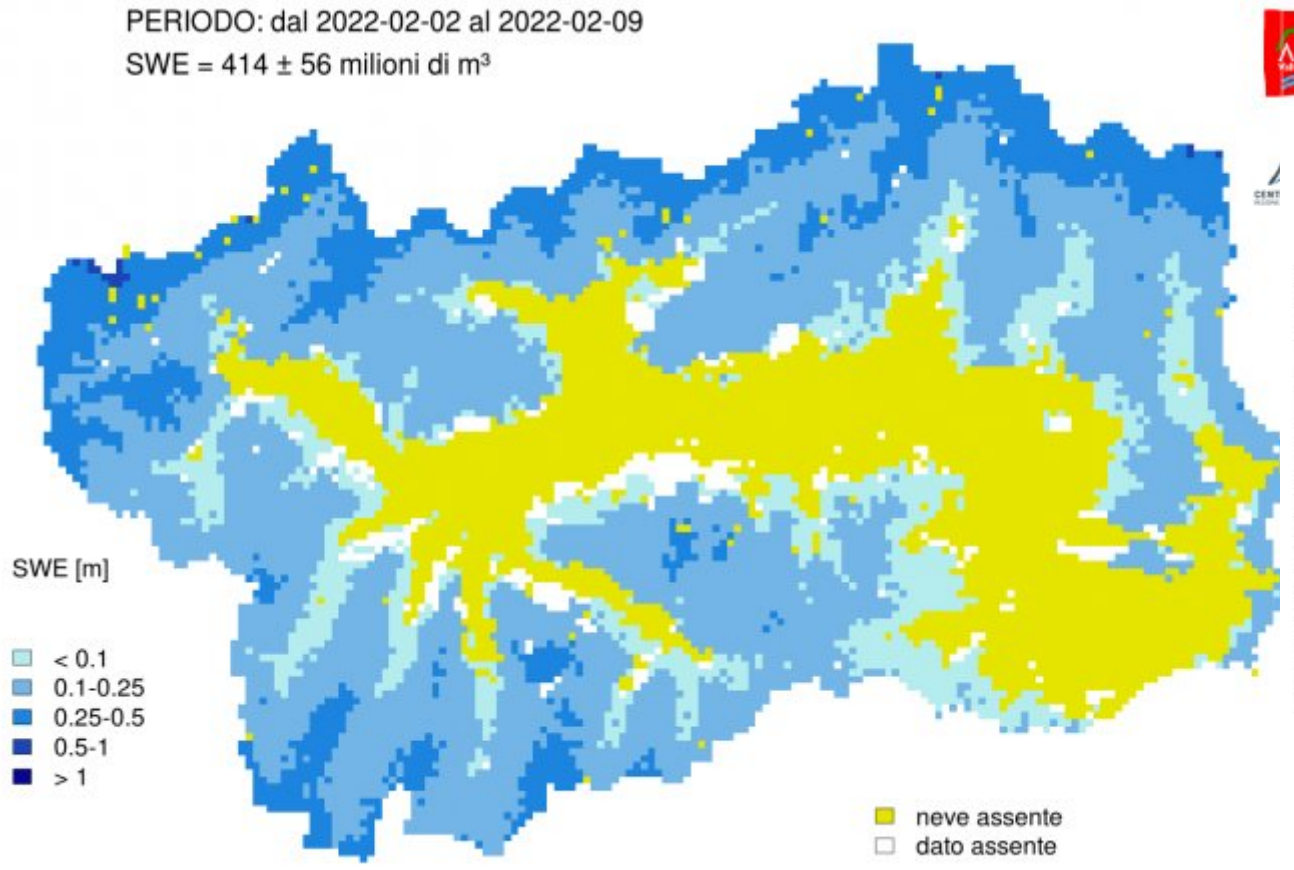
Alluvione Catania 26 ottobre 2021

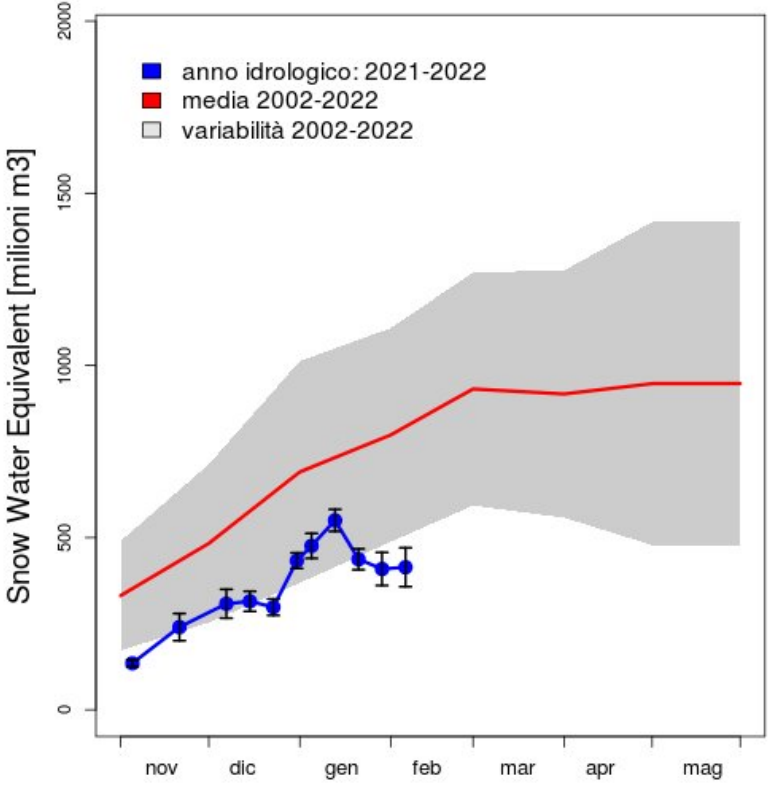


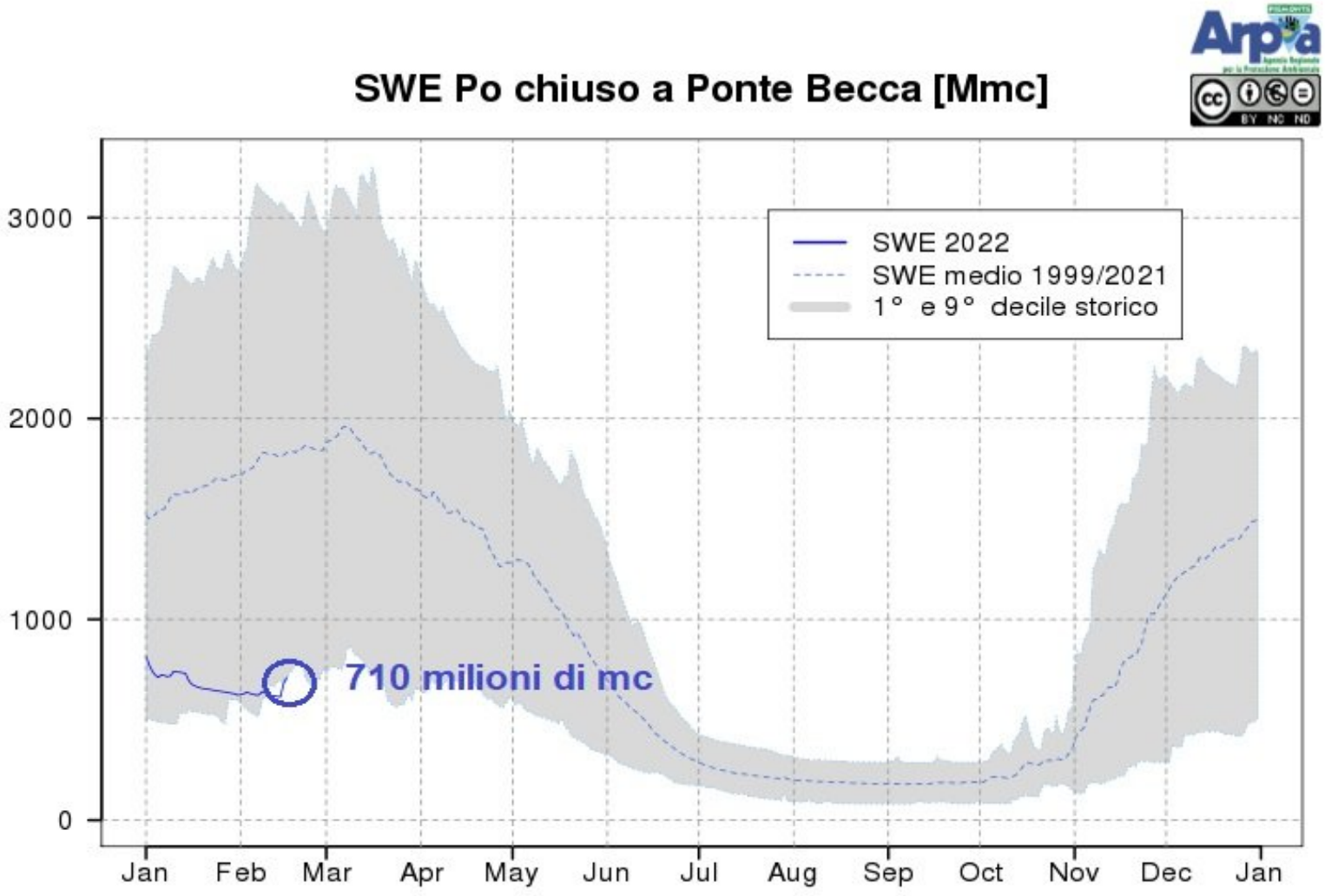
Siccità invernale 2022

2 February 2022 - Copernicus Sentinel-2 satellite, Po River near Cremona in northern Italy.

Deficit accumulo nevoso sulle Alpi inverno 2021-22

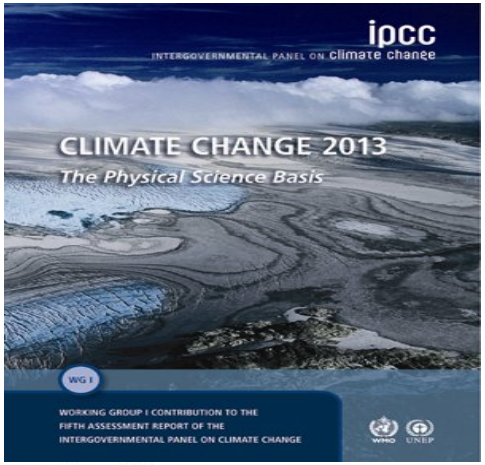






Riduzione portate Po e scarsa riserva idrica nivale sulle Alpi al febbraio 2022

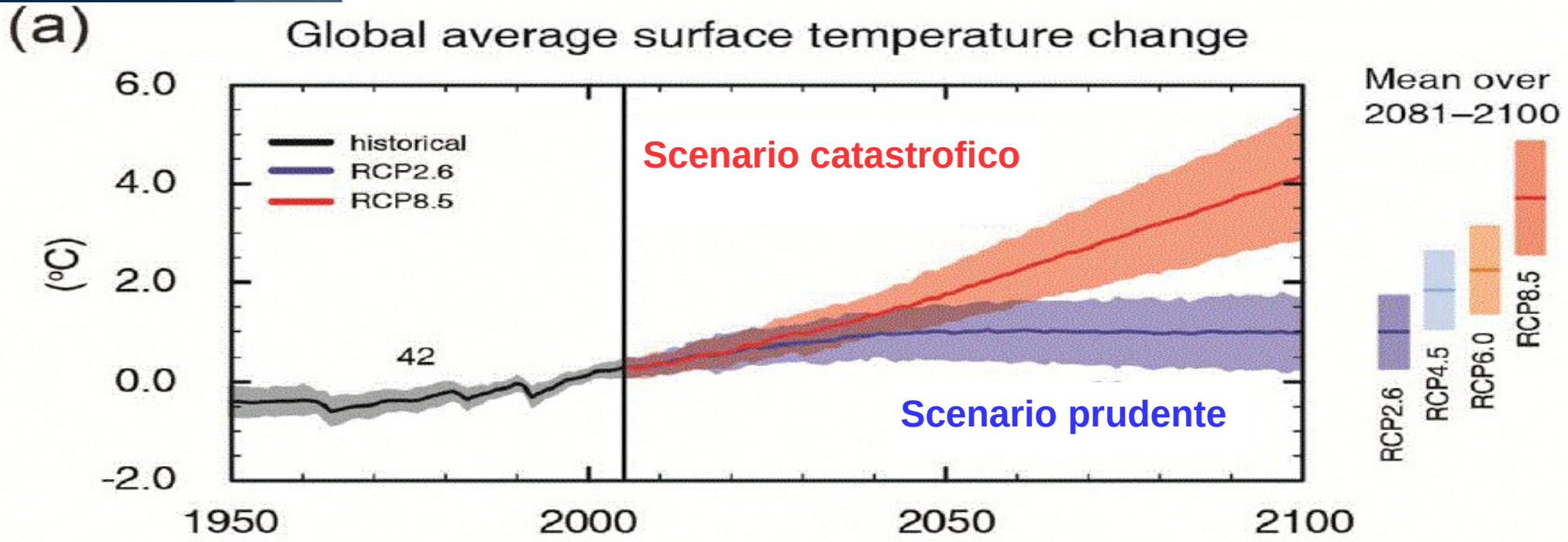
Ampie possibilità di compensazione deficit con piogge primaverili, ma situazione di attenzione elevata



ipcc
INTERGOVERNMENTAL PANEL ON climate change

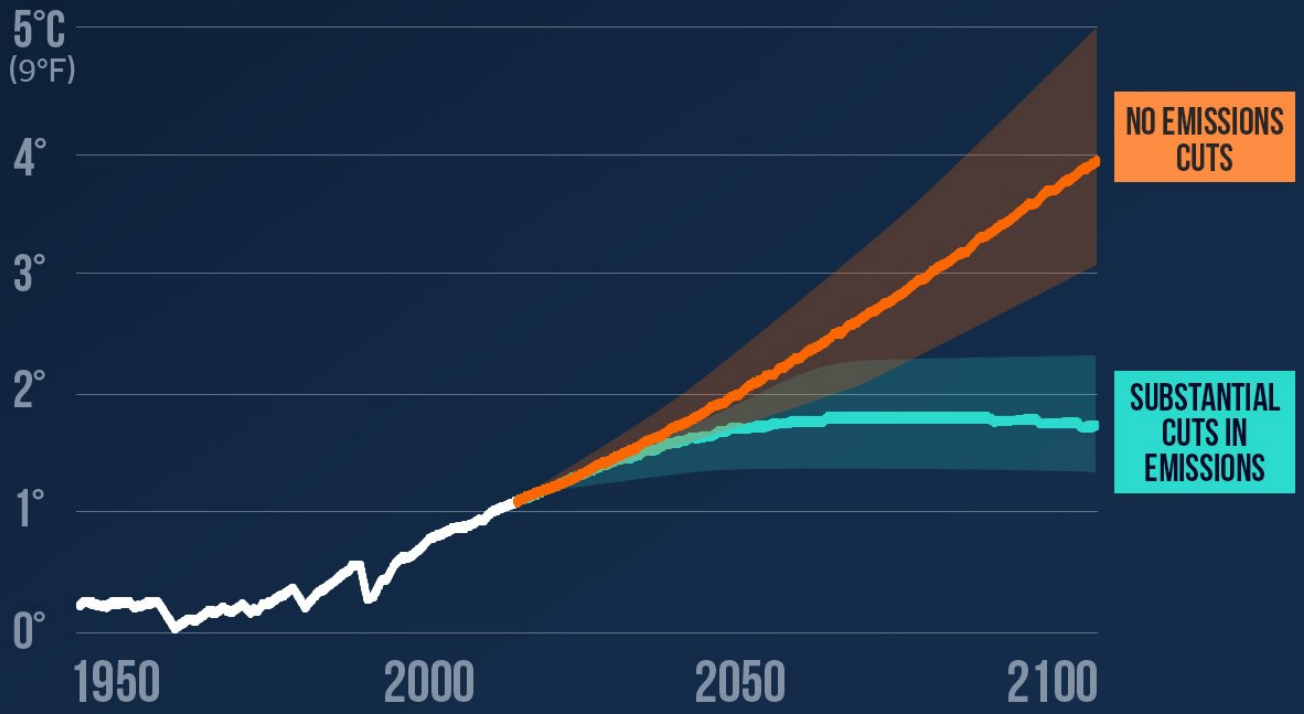
Scenari 5° rapporto IPCC (AR5 2013):

+2°C al 2100 se si applica **Accordo Parigi 2015** (linea azzurra), o fino a **+5°C** in più con business-as-usual (linea rossa)



FUTURE TEMPERATURES

WARMING DEPENDS ON CHOICES TODAY



Global surface temperature (°C) anomaly relative to 1850-1900
High warming scenario: SSP3-7, Low warming scenario from SSP1-2.6.
Source: IPCC AR6 WG1

CLIMATE CENTRAL

4, Figures S7-8), indicating that even if seasons are to continue at the current rate observed, a longer summer and shorter winter will become the new normal in the twenty-first century.

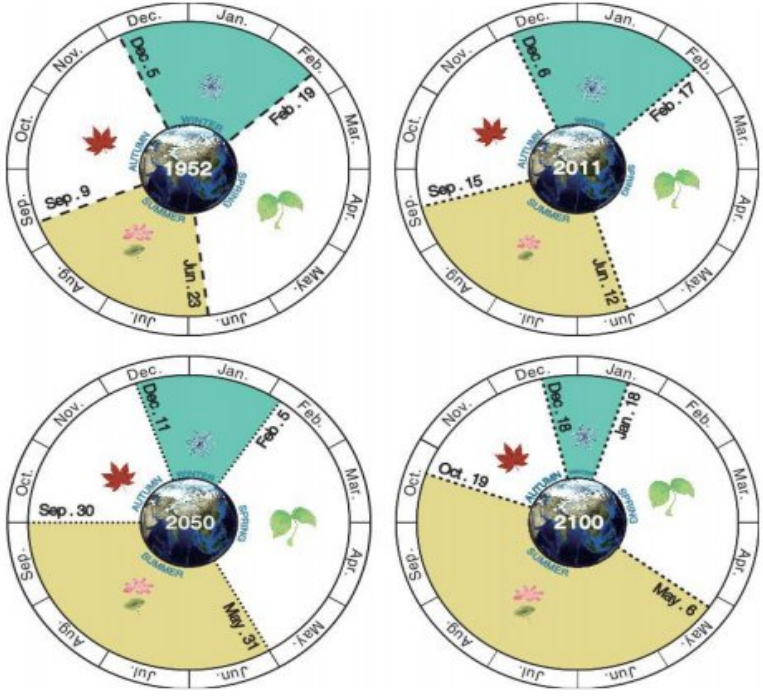


Figure 5. Onsets and lengths of the four seasons in 1952, 2011, 2050 and 2100. The top row is from HadGHCND, and the bottom row is from RCP8.5.

Inverni sempre più brevi, estati sempre più lunghe (fino a 6 mesi nel 2100)

Changing Lengths of the Four Seasons by Global Warming

Jiamin Wang Yuping Guan Lixin Wu Xiaodan Guan Wenju Cai Jianping Huang Wenjie Dong Banglin Zhang First published: 19 February 2021
https://doi.org/10.1029/2020GL091753 Geophisical Research Letters

Over the period of 1952□2011, the length of summer increased from 78 to 95 days and that of spring, autumn and winter decreased from 124 to 115, 87 to 82 and 76 to 73 days, respectively. In addition, summer is projected to last nearly half a year, but winter less than two months by 2100.

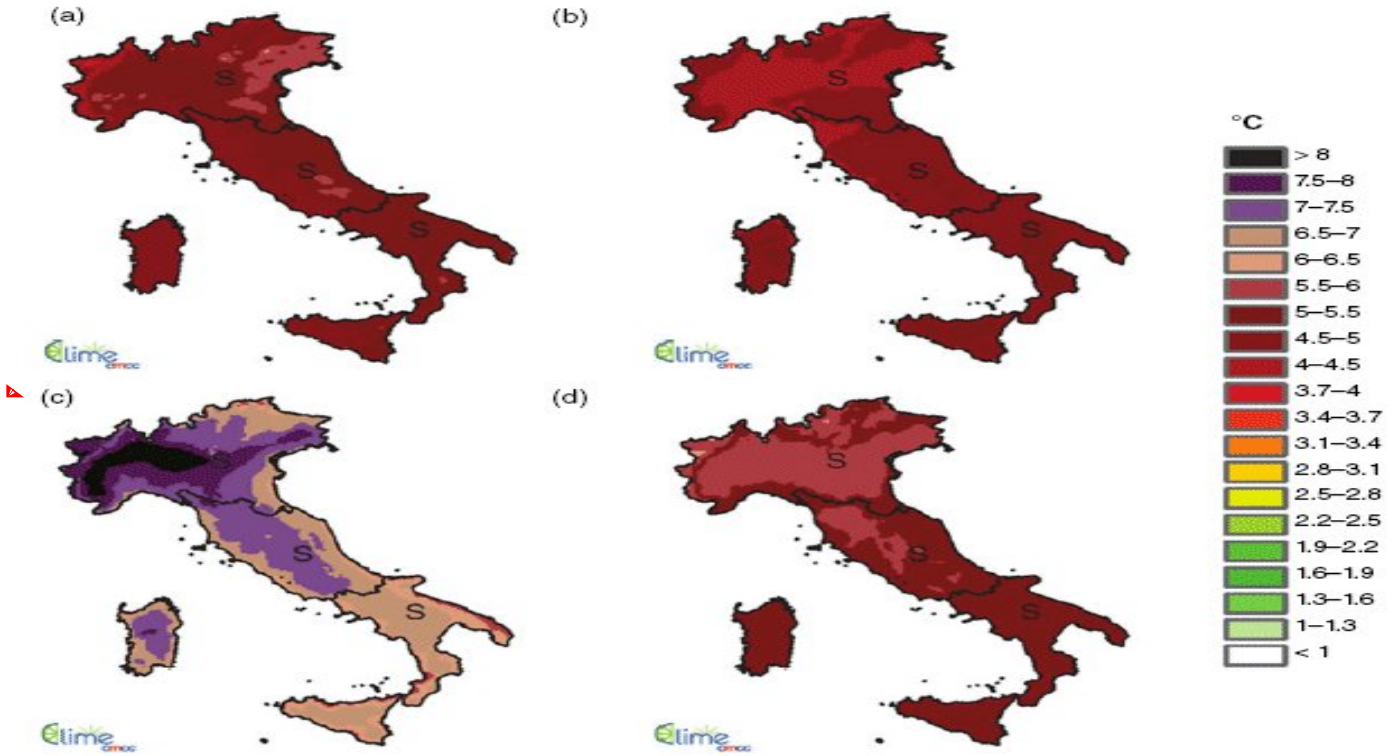


Figure 9. Temperature climate projections, RCP8.5: seasonal differences (°C), between the average value over 2071–2100 and 1971–2000 for (a) DJF, (b) MAM, (c) JJA and (d) SON (S, significant; NS, not significant).

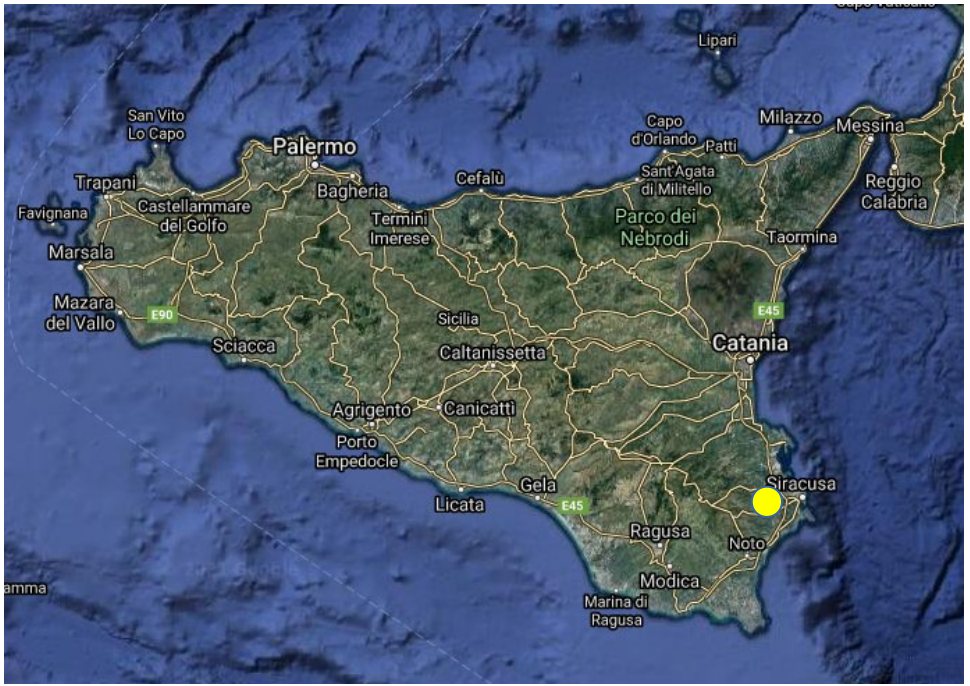
E se non facessimo nulla? NW Italiano + 8 °C in estate nel 2100! Torino come Karachi…

Bucchignani et al. (2015) *High-resolution climate simulations with COSMO-CLM over Italy*, Int. J. Climatol.

11 agosto 2021

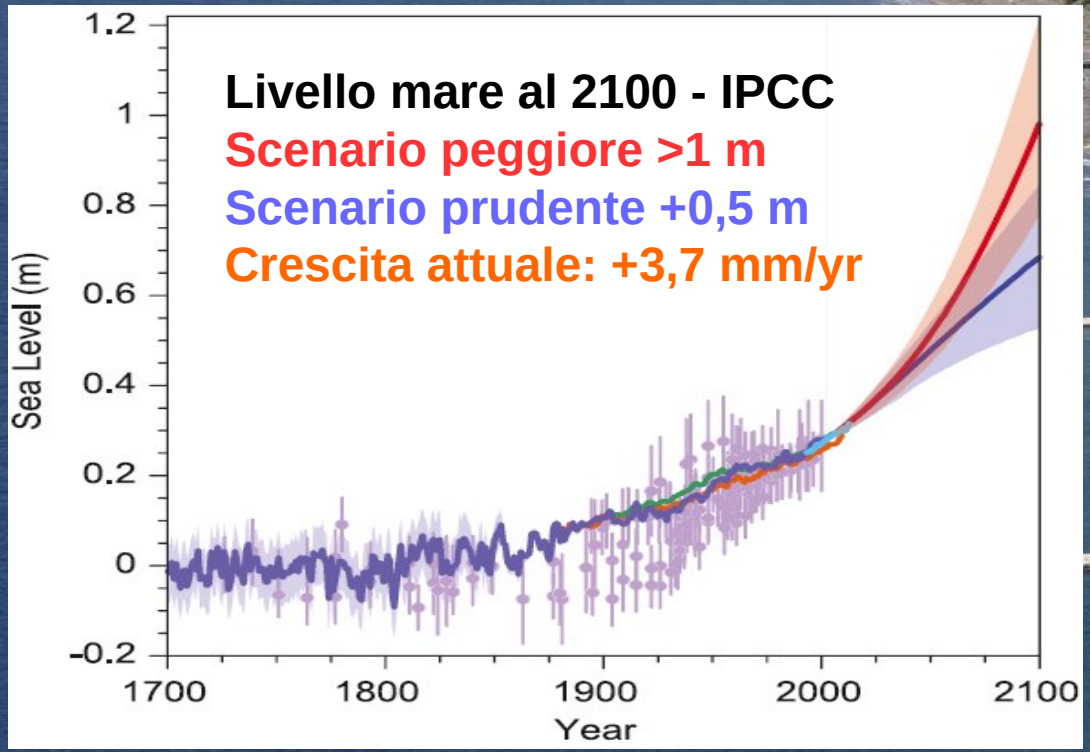
48,8 °C a Floridia, Siracusa

Temperatura massima record in Italia e in Europa in circa 200 anni di osservazioni

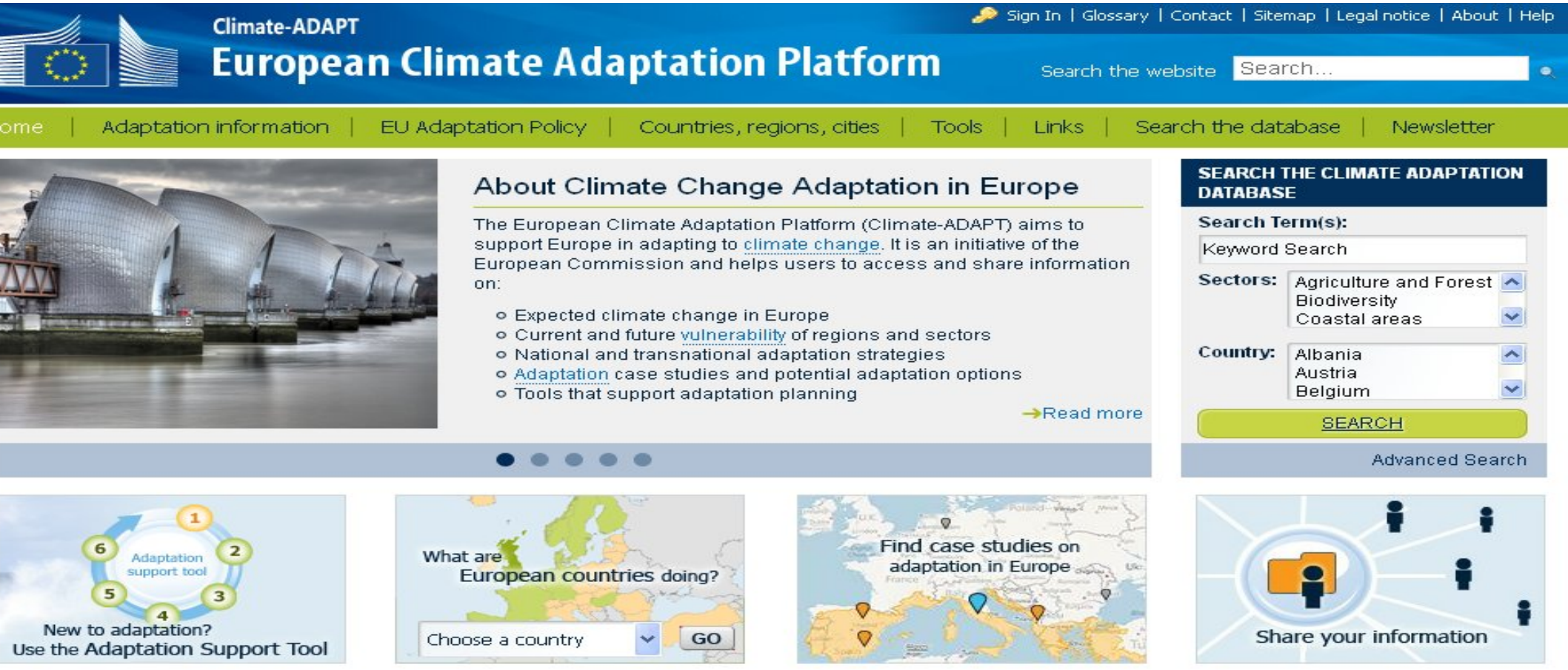


Stazione meteo rete SIAS

Le zone costiere risentiranno dell'aumento del livello marino, e dovranno essere adeguatamente protette (es: Venezia, delta del Po)

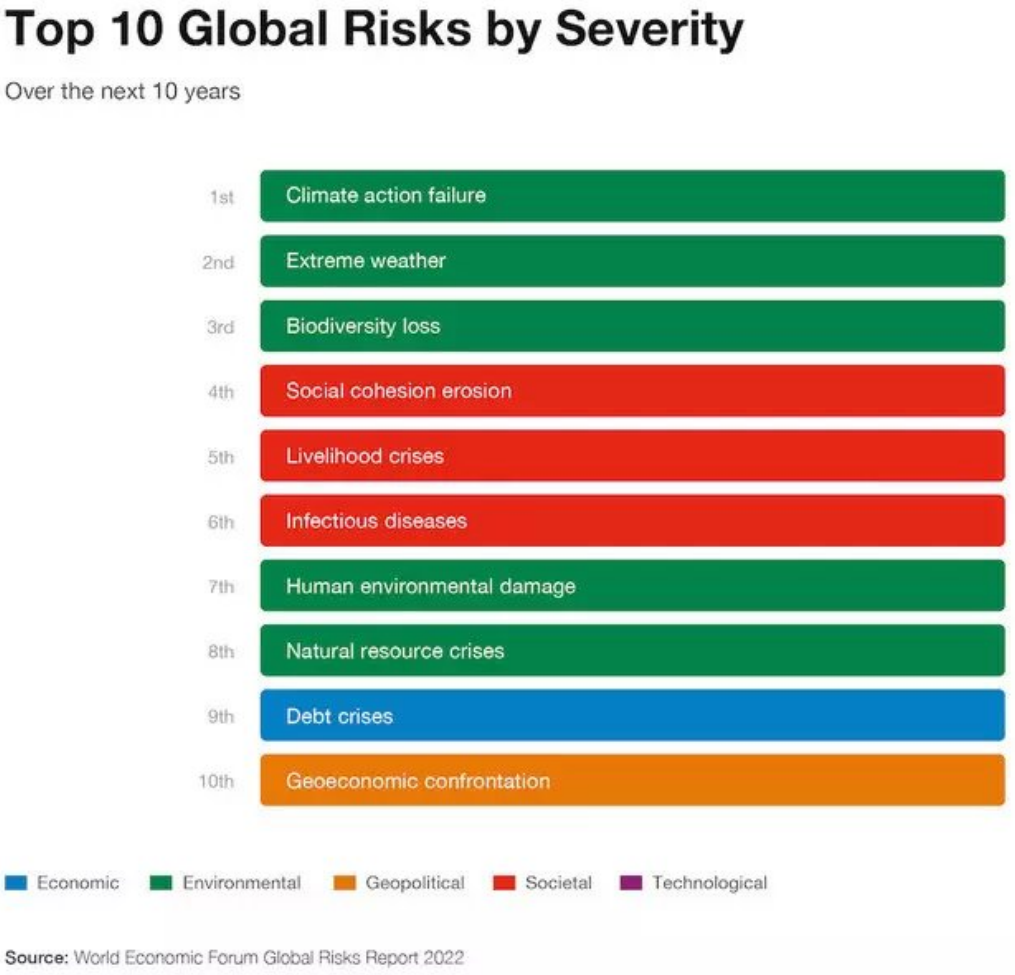


http://climate-adapt.eea.europa.eu/



European Green Deal

- Transition to a Circular Economy
  - A new Circular Economy Action Plan
- Preserving Europe's natural capital
  - Biodiversity Strategy for 2030
- A zero pollution Europe
  - Strategy on the sustainable use of chemicals
  - Clean Air and Water Action Plans
- Sustainable Transport
  - TBD with the commissioner-designate
- Farm to Fork
  - Farm to Fork Strategy
- Achieving Climate Neutrality
  - Revising 2030 Climate targets
  - Extending ETS
  - Climate Pact
  - Climate Law
  - Carbon Border Tax
- The transformation of agriculture and rural areas
  - Vision for Inclusive Rural Areas
  - Africa Europe agenda
- Clean, Reliable and Affordable energy
  - Review Energy Legislation
  - European Framework for gas
  - Review Energy Taxation directive
- Towards a modernised and simplified CAP
  - CAP reform proposal
- Financing the transition
  - European Investment Bank as European Climate Bank
  - Sustainable Europe Investment Plan
  - Green Financing Strategy
  - Mainstreaming climate transition and sustainability in the MFF
- Leave no one behind (Just Transition)
  - Just Transition Instrument, including the Just Transition Fund
  - Mainstreaming the Just Transition in the MFF



I primi tre rischi globali più importanti secondo il World Economic Forum 2022 sono :

- cambiamenti climatici
- eventi meteorologici estremi
-perdita di biodiversità.

Possiamo ancora agire per evitare di peggiorarli, ma dobbiamo farlo subito!