



Koninklijk Nederlands
Meteorologisch Instituut
Ministerie van Infrastructuur en Milieu

ICA&D

International Climate Assessment & Dataset

*Albert Klein Tank
KNMI, The Netherlands*

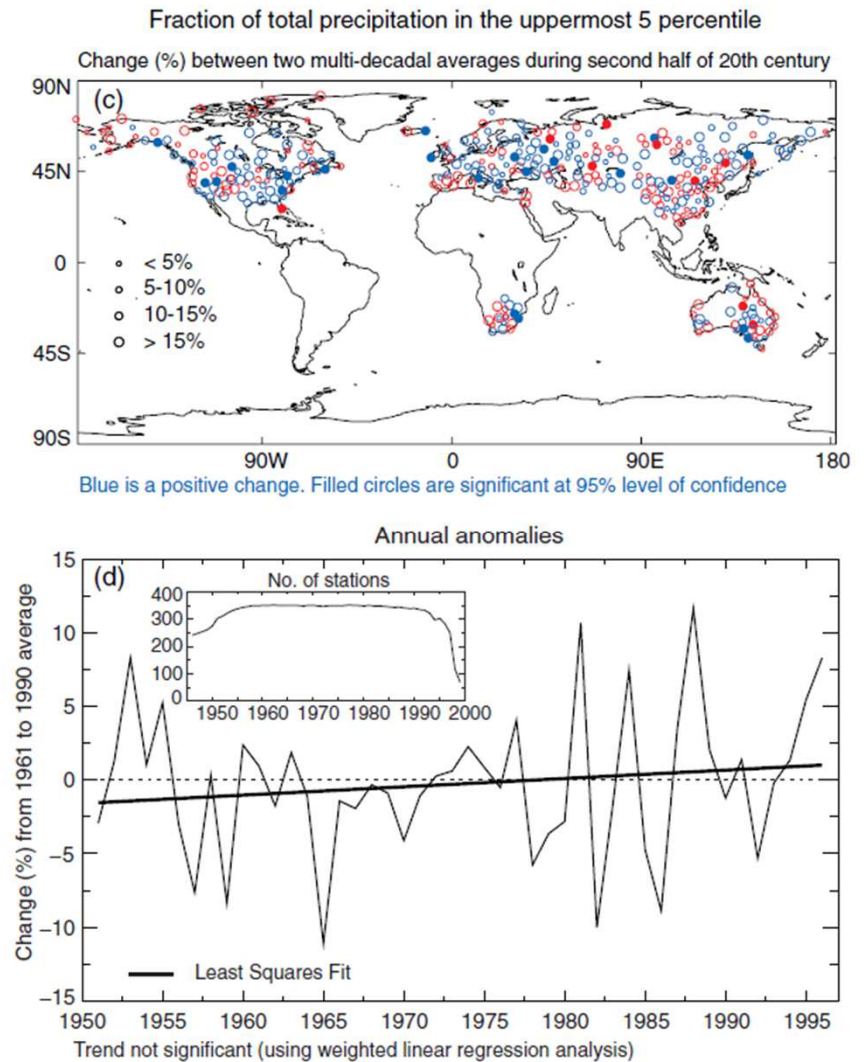




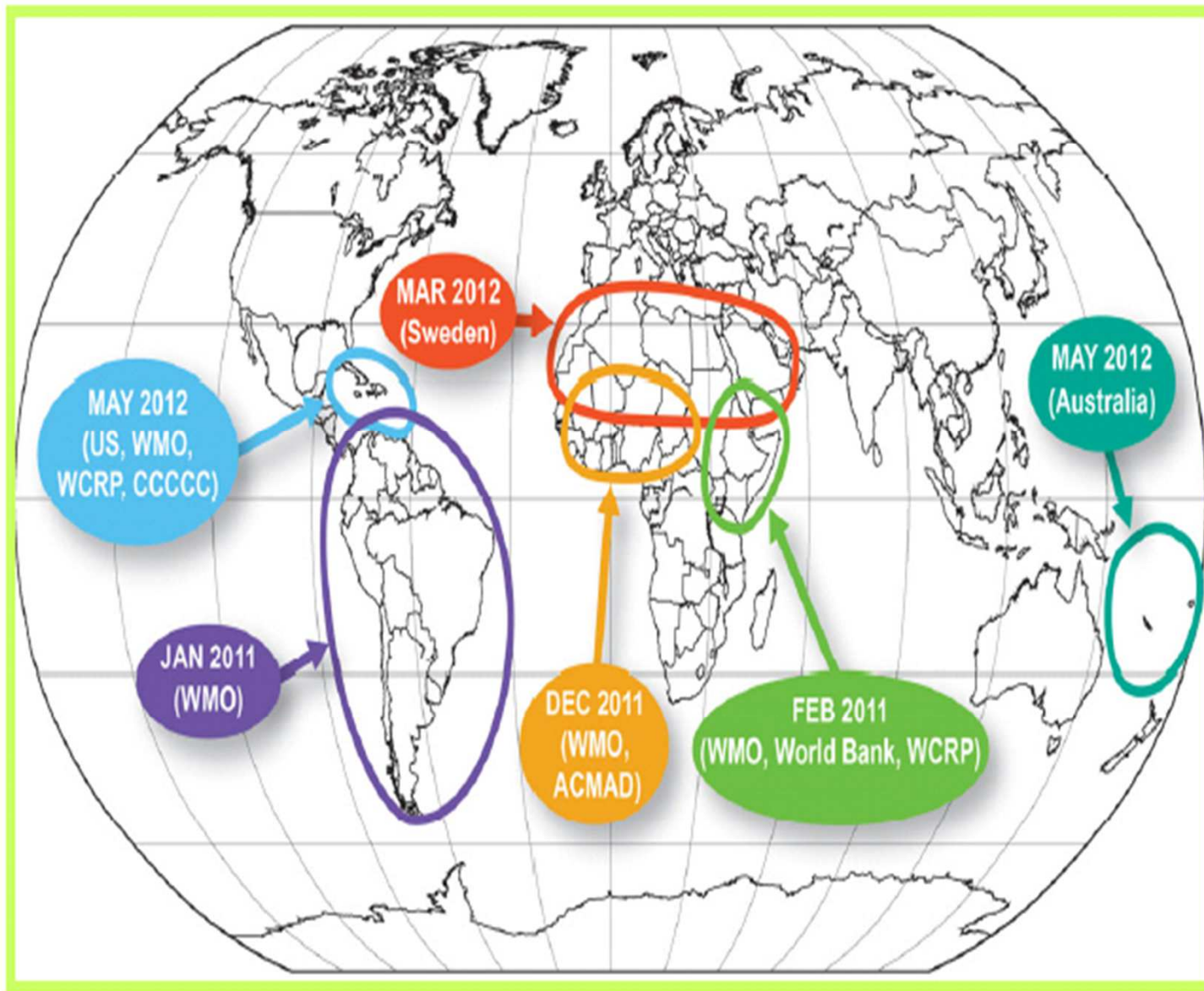
Motivation for “extremes indices”

- In the late 90s (the preparation phase of the IPCC-TAR) almost no information was available to answer the question:

“Has climate variability, or have climate extremes, changed?”

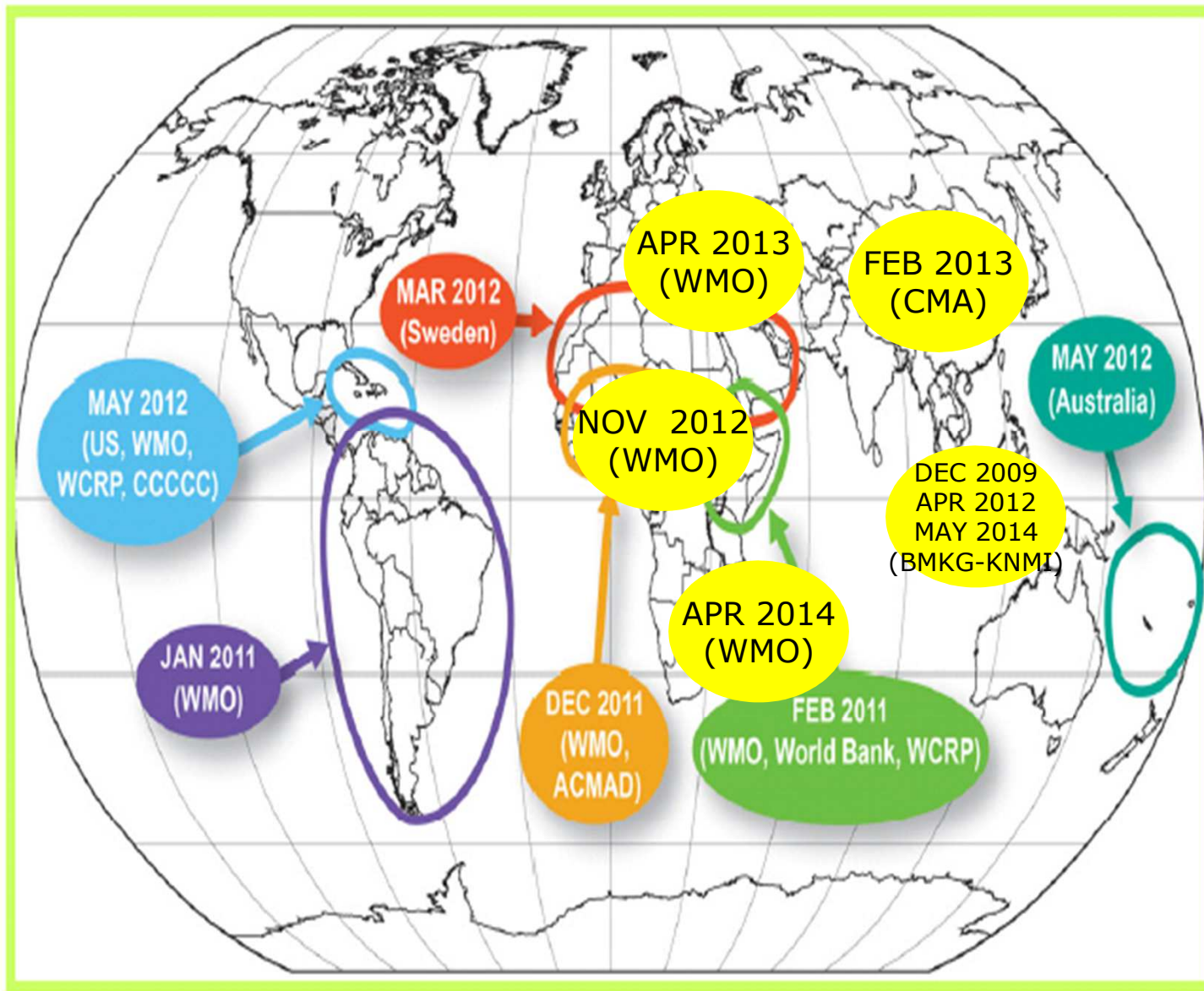


ETCCDI Regional Workshops 2011 - 2012



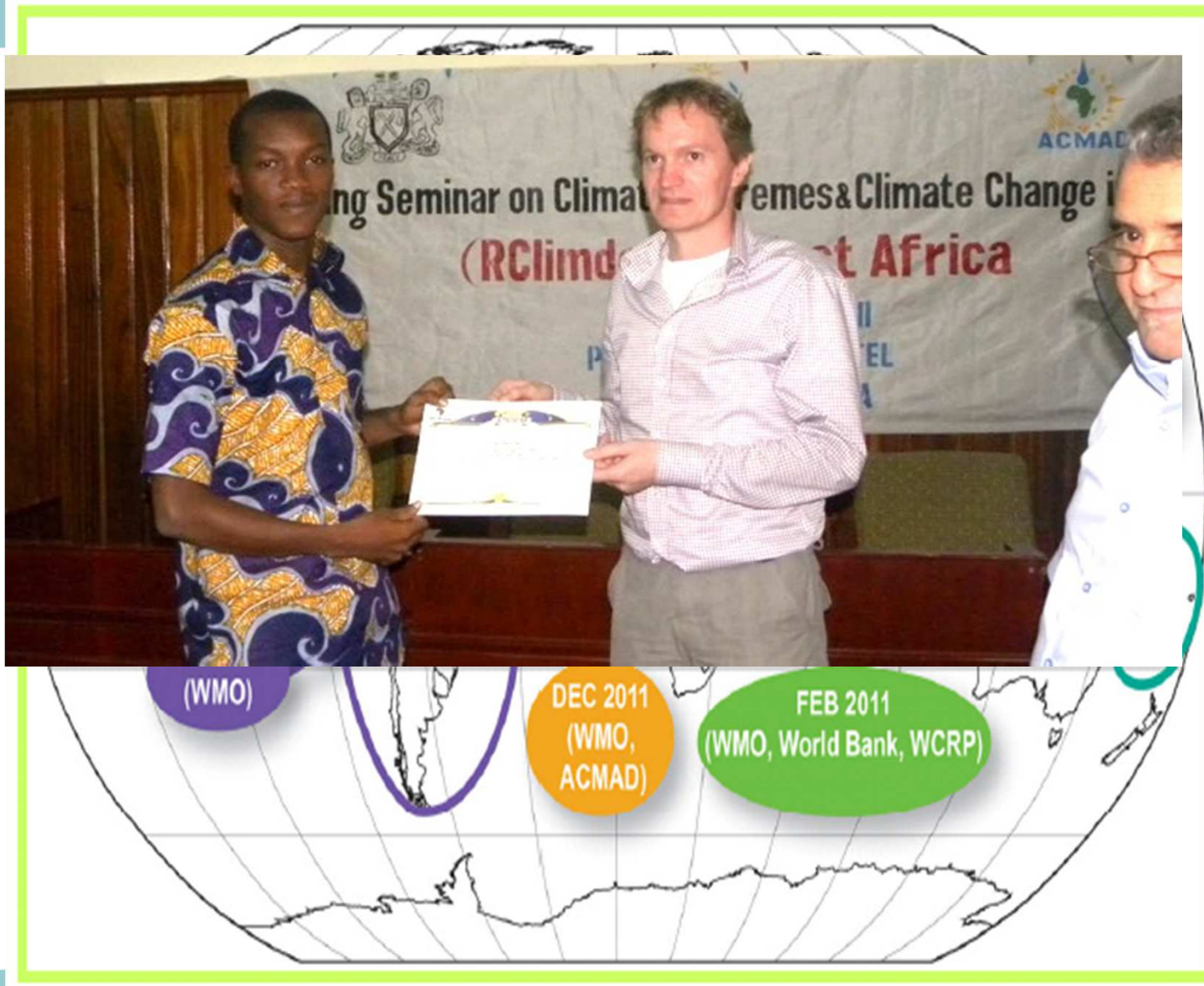
- Environment Canada provides the R-based software used for the workshops, which is freely available from <http://cccma.seos.uvic.ca/ETCCDI>

ETCCDI Regional Workshops 2011 - 2012



- Environment Canada provides the R-based software used for the workshops, which is freely available from <http://cccma.seos.uvic.ca/ETCCDI>

ETCCDI Regional Workshops 2011 - 2012



- Environment Canada provides the R-based software used for the workshops, which is freely available from <http://cccma.seos.uvic.ca/ETCCDI>



ICA&D

- ECA&D data repository www.ecad.eu:
European web portal for daily station data and derived extremes indices
- ICA&D www.ecad.eu/icad.php:
The ECA&D concept transferred to other regions of the world,
in particular Southeast Asia, Latin America and West Africa



DATA ACCESS

INTERNATIONAL CLIMATE ASSESSMENT & DATASET: CLIMATE SERVICES ACROSS BORDERS

BY ELSE J. M. VAN DEN BESSELAAR, ALBERT M. G. KLEIN TANK, GERARD VAN DER SCHRIER,
MARIAMA S. ABASS, OMAR BADDOUR, ARYAN F.V. VAN ENGELEN, ANDREA FREIRE, PEER HECHLER,
BAYU IMBANG LAKSONO, IQBAL, RUDMER JILDERDA, ANDRE KAMGA FOAMOUHOUE, ARIE KATTENBERG,
ROBERT LEANDER, RODNEY MARTÍNEZ GÜINGLA, ALBERT S. MHANDA, IUAN JOSÉ NIETO, SUNARYO.

Besselaar et al., BAMS, 2014



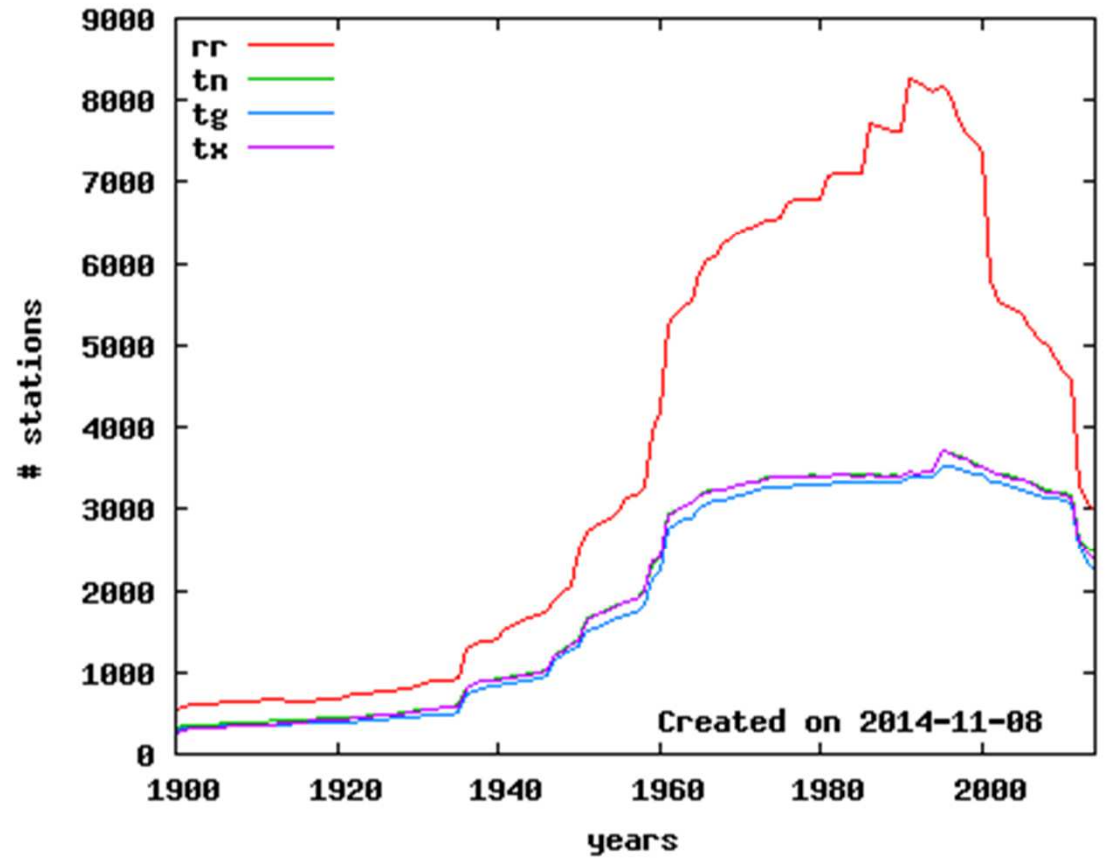
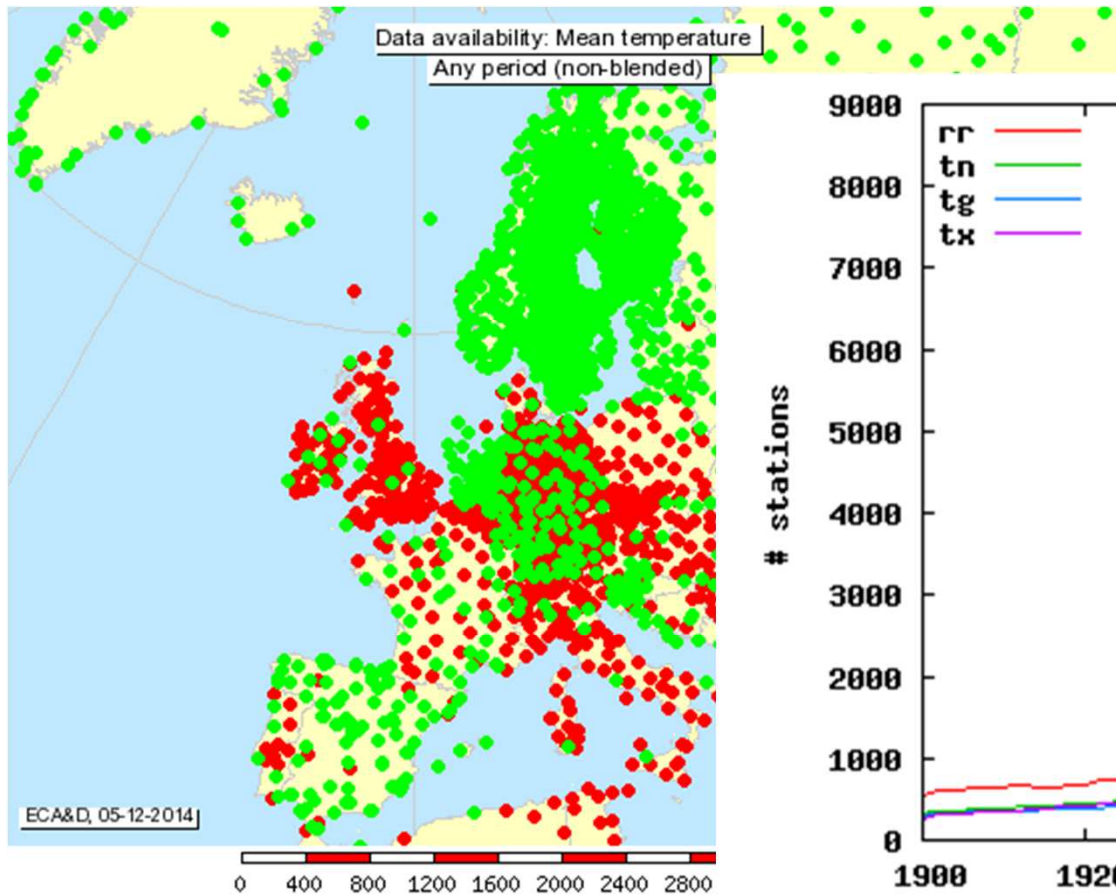
ICA&D

- Regional repositories provide daily data and indices to international datasets (ISTI, GHCN-D, HadEx) which were not available before
- Regular updates provided for data and indices
- Helps develop climate services at the regional level



ECA&D

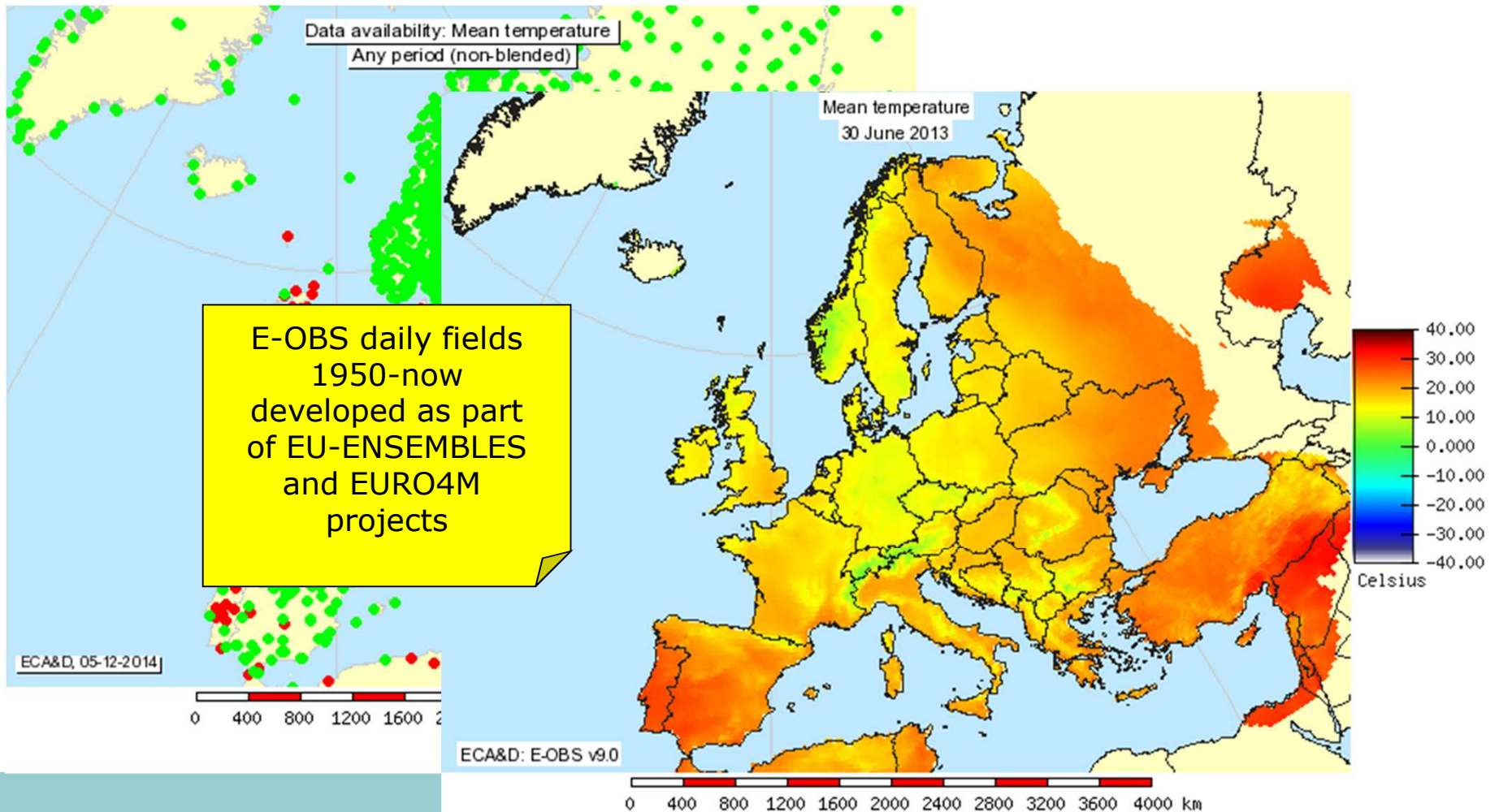
European Climate Assessment & Dataset





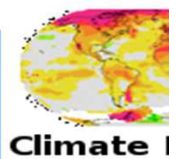
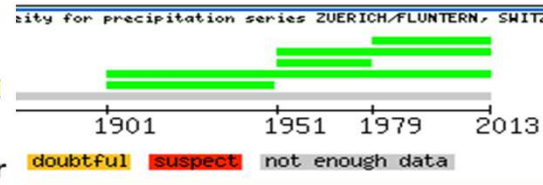
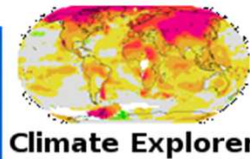
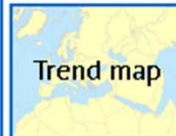
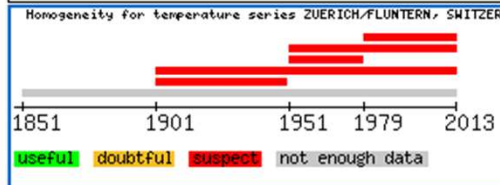
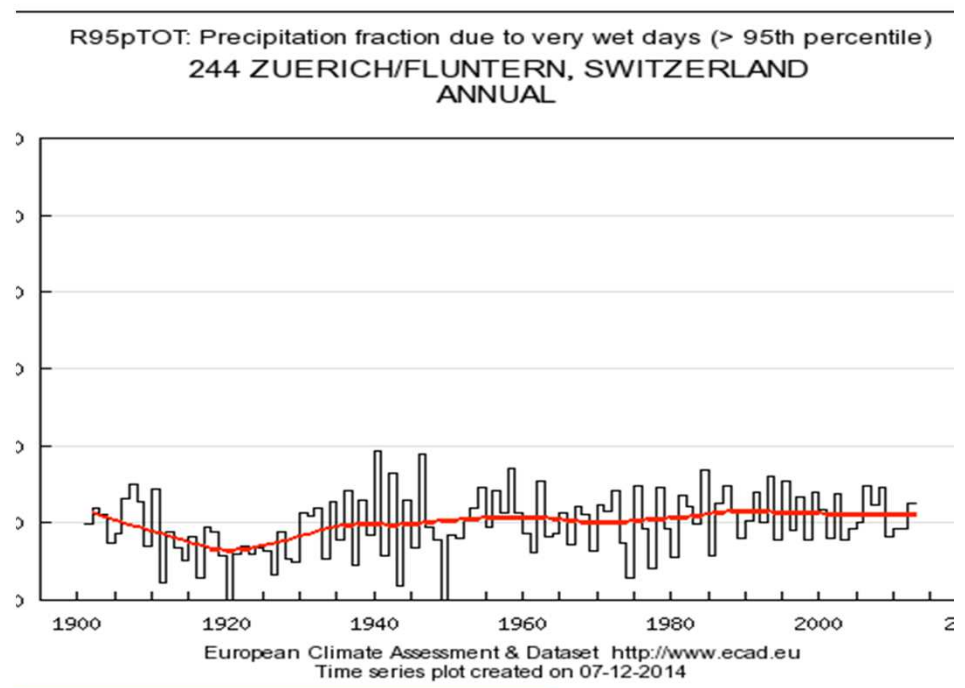
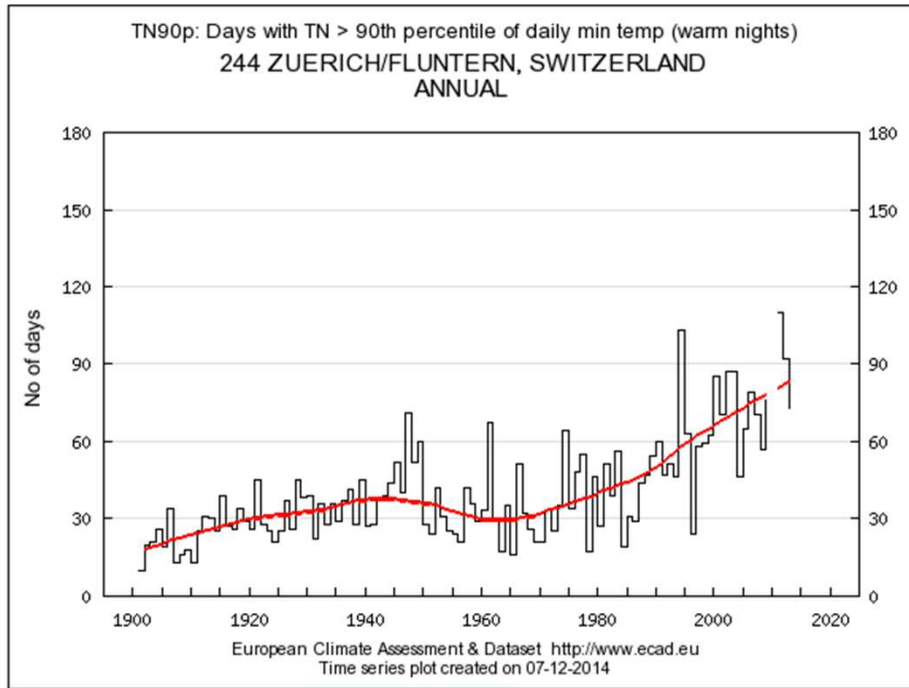
ECA&D

European Climate Assessment & Dataset



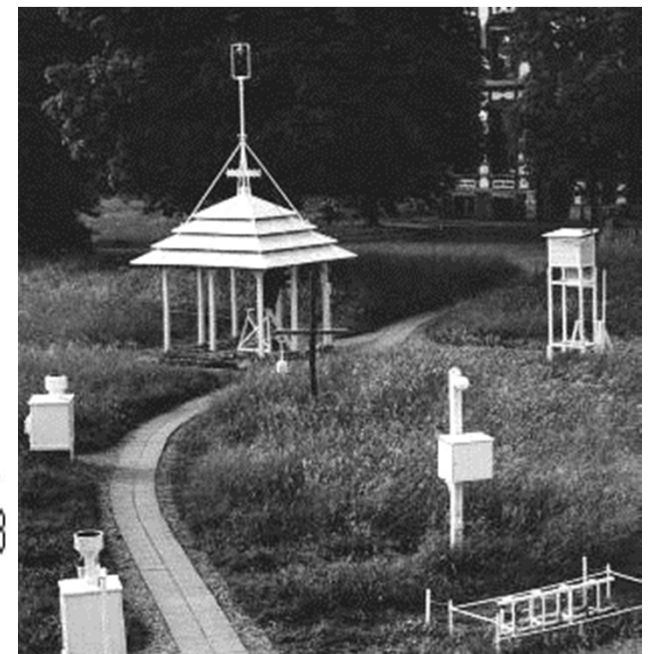
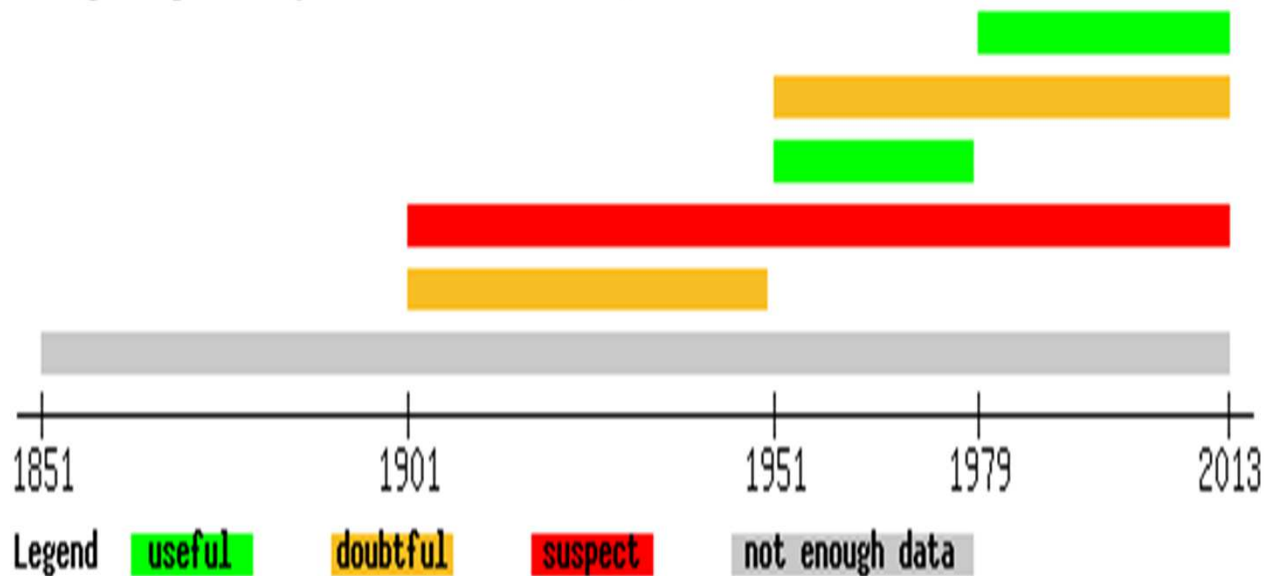
TN90p

R95p



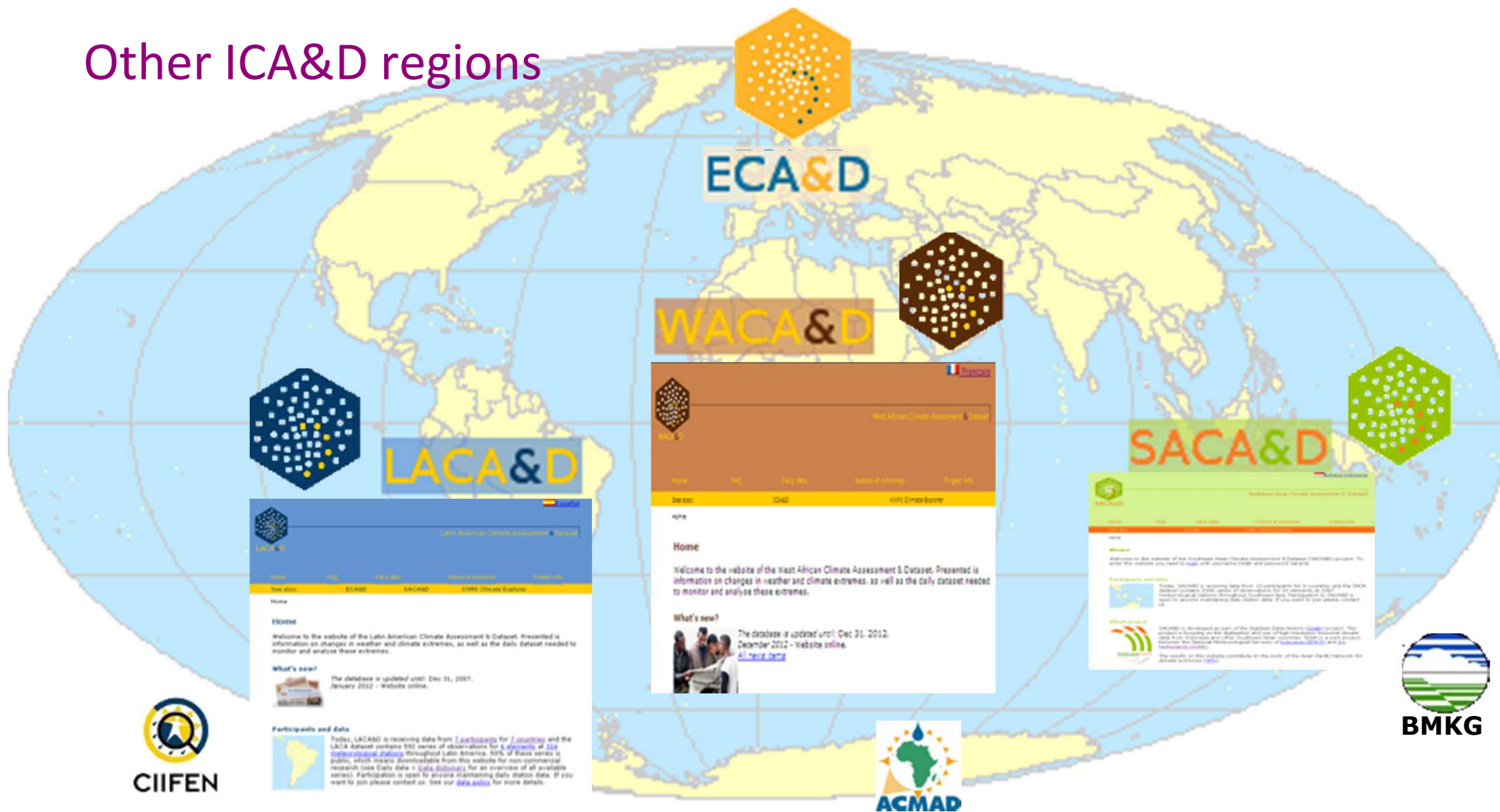
- Avoid non-climatic jumps and gradual shifts due to changes in station location, land use land cover, exposure, instrumentation or observing practices

Homogeneity for temperature series DE BILT, NETHERLANDS



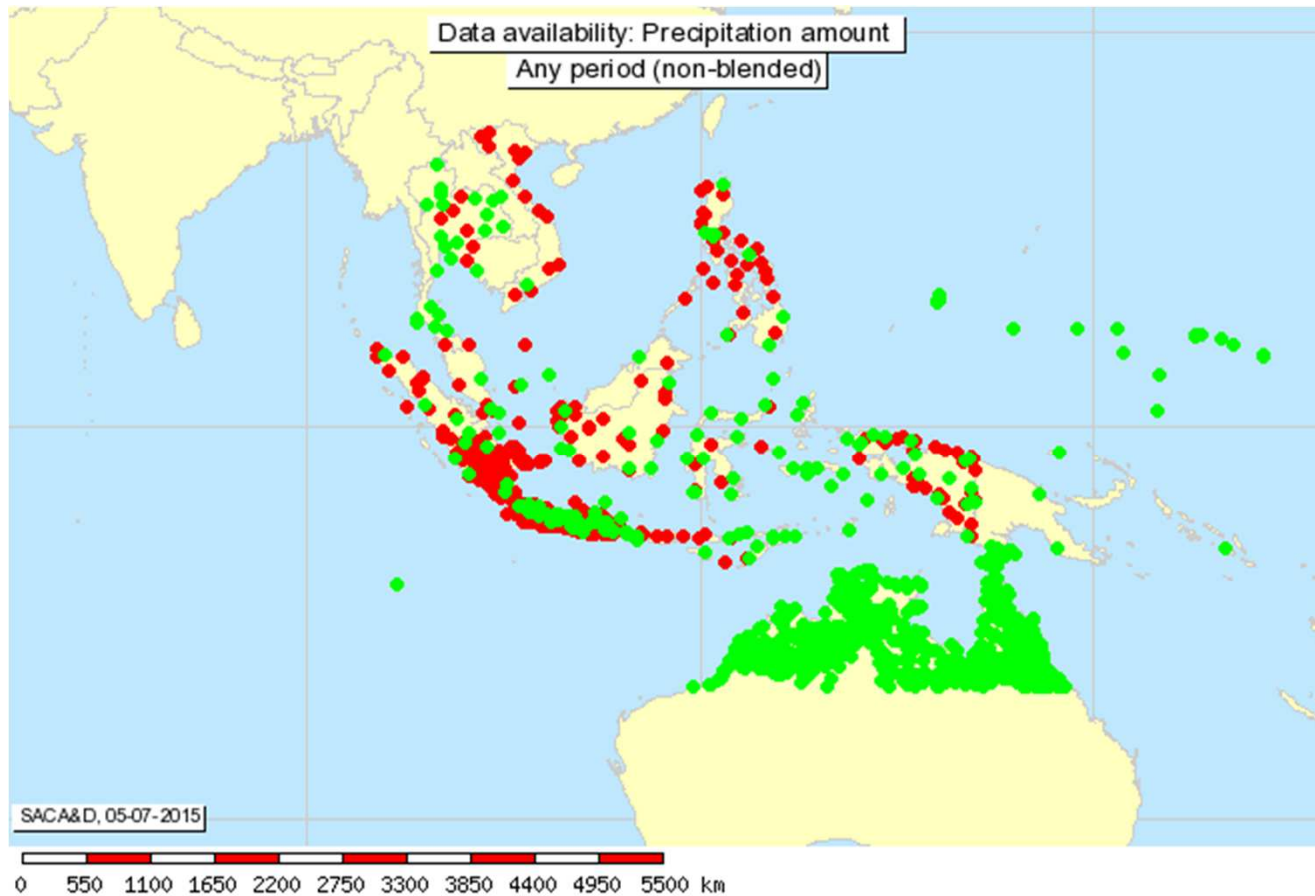


Other ICA&D regions





Southeast Asian Climate Assessment & Dataset



Data availability maps

● Downloadable data

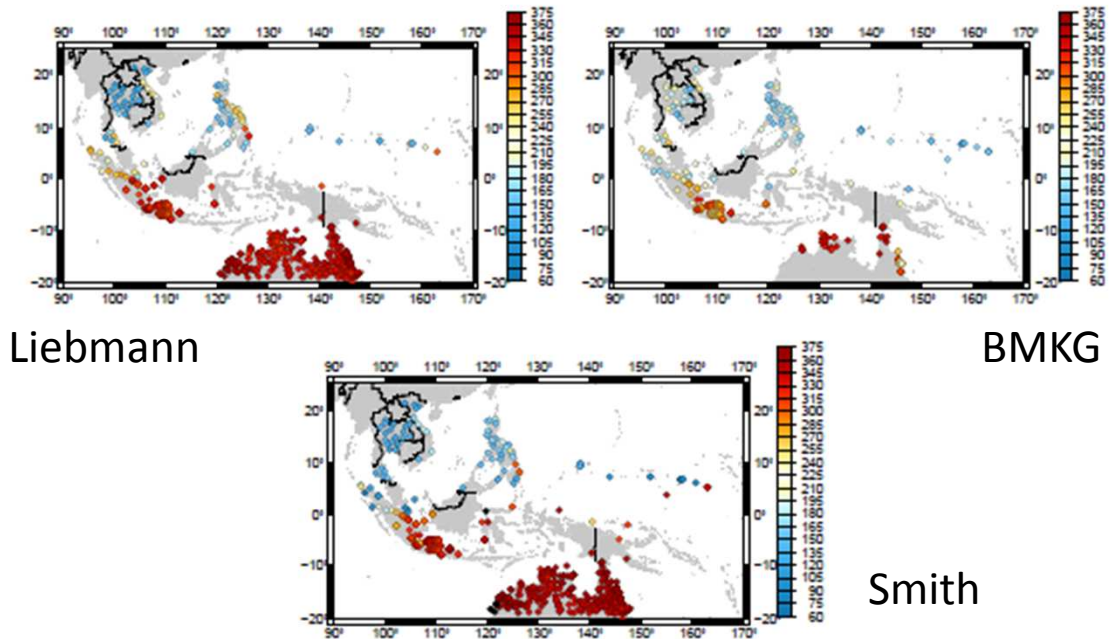
● Non-Downloadable data





Southeast Asian Climate Assessment & Dataset

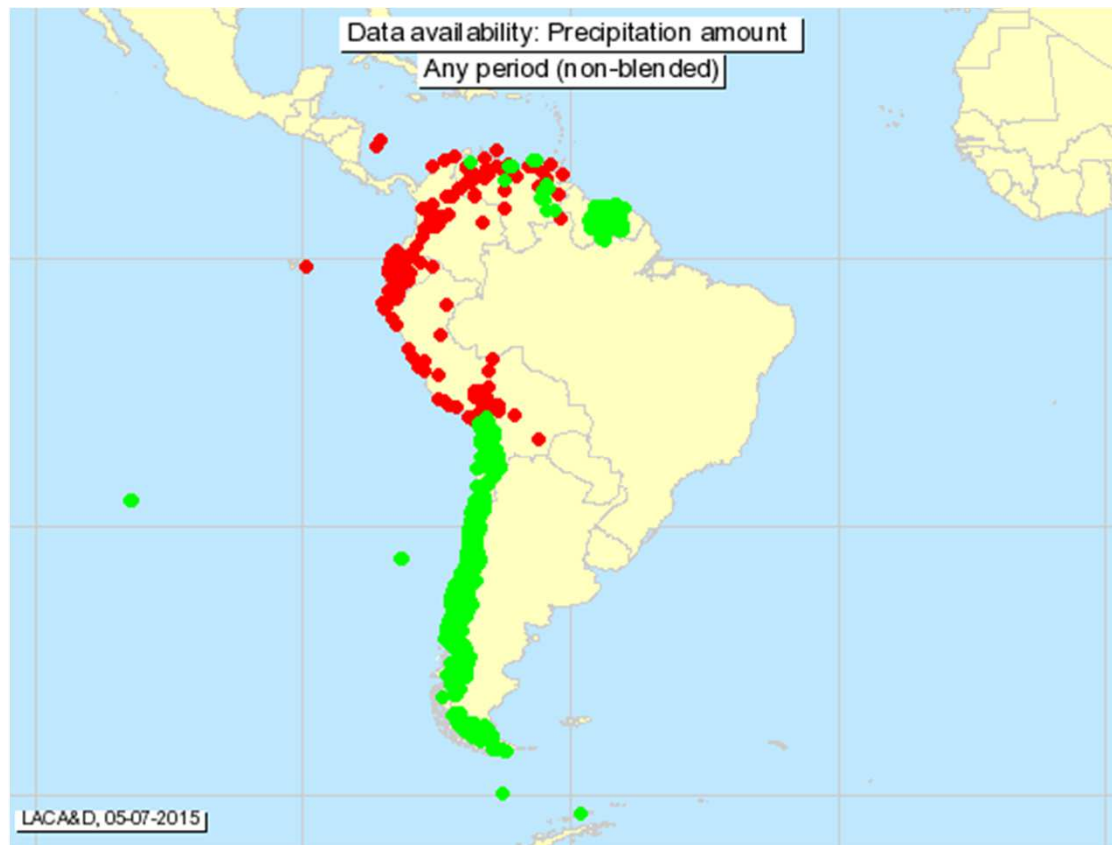
- Application to food security research (Marjuki et al., BMKG)
- Future rice yield will reduce due to the projected higher minimum temperatures and the delay in the onset of the rainy season
- Are these trends already visible in the observations?



Liebmann

BMKG

Smith



Data availability maps

-  **Downloadable data**
-  **Non-downloadable data**





ICSHMO - Home x +

www.icshmo-2015.com Search


11th ICSHMO

International Conference on Southern Hemisphere Meteorology and Oceanography
Santiago - Chile
October 5th to 9th 2015



[Home](#) [Abstract](#) [Key dates](#) [Committee](#) [Scientific program](#) [Registration](#) [Logistic information](#) [Sponsorship](#) [Organizers](#)

Exploring the Southern Hemisphere Oceans and Atmosphere





Future workshops and activities

- ETCCDI workshops in Costa Rica and Mexico?
- ICA&D implementation in China and South Africa?



Improve data coverage?

At best...

docs.lib.noaa.gov/rescue/ x
docs.lib.noaa.gov/rescue/cd041_pdf/00788582.pdf

Stations Observées	Baro- mètre réduit	Ther- mètre	Vent		État du Ciel	État de la mer	Observations
			Direc- tion	force			
Nemours	765.4	14.4	W	2	tr-mag'	houlous	pluie 27-0.
Alger	758.4	15.0	WNW	2	.. id ..	agité	.. id .. 0. 1
La Calle	756.0	13.5	W	2	mag'no	.. id id .. 4. 0
Tunis	757.0	14.5	NW	2	beau	houlous	.. id .. 8. 0

SITUATION GÉNÉRALE:
Hausse rapide du baromètre (10th Laghouat).
La bourrasque II (centre vers Marseille 7h8) gagne vers le Nord-
Est, après avoir amené, avec vents de WNW assez fort, de la pluie
dans tout le Tell algérien et abaissement marqué de température
(8^{de} de baisse à Sétif).
La Dépression I (Irlande) descend vers le Sud-Est, tendant à se
réunir à la précédente.
Le beau temps va revenir en Algérie avec les vents de SW secs,
chauds et modérés.
Température Alger (Le Bey): maximum hier 17°; minimum 9°2.
Humidité relative le 9: minimum 64% à 9%; maximum 80% à 34°.

36 million images at NOAA

...but more common



Climate archive in Mauritius



Brief history of the I-DARE Portal

- [WMO Congress 2012](#), extraordinary session
High priority project 8: Large-scale data recovery and digitisation
Objective: Enhance the capacity of NMHSs and other climate data communities to accelerate recovery and digitization of old and recent climate records.
- [WMO White paper on I-DARE Portal](#), May 2014
http://www.wmo.int/pages/prog/wcp/wcdmp/documents/IDARE_wcdmp83.pdf
- Supervised by the [WMO Commission for Climatology \(CCI\) Expert Team on Data Rescue](#), operated by the [Royal Netherlands Meteorological Institute \(KNMI\)](#), under the auspices of the [Global Framework for Climate Services \(GFCS\)](#).

www.idare-portal.org



Questions?

