



Save the Data: Global Climate Data Rescue

Stefan Brönnimann
Oeschger Centre for Climate Change Research
Institute of Geography
University of Bern

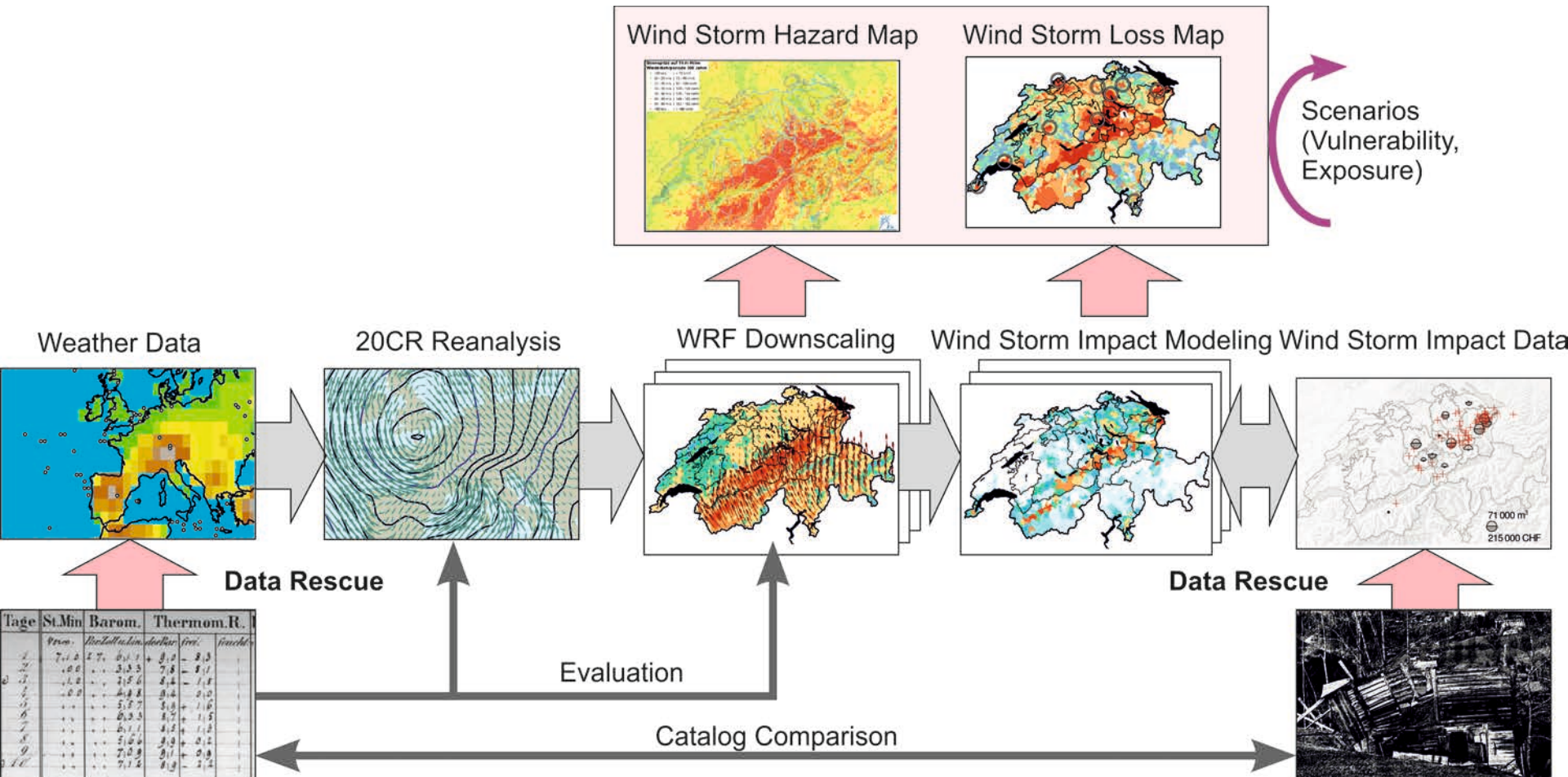
Neue Rolle für historische Klimadaten...



Neuer Gesellschaftlicher Fokus

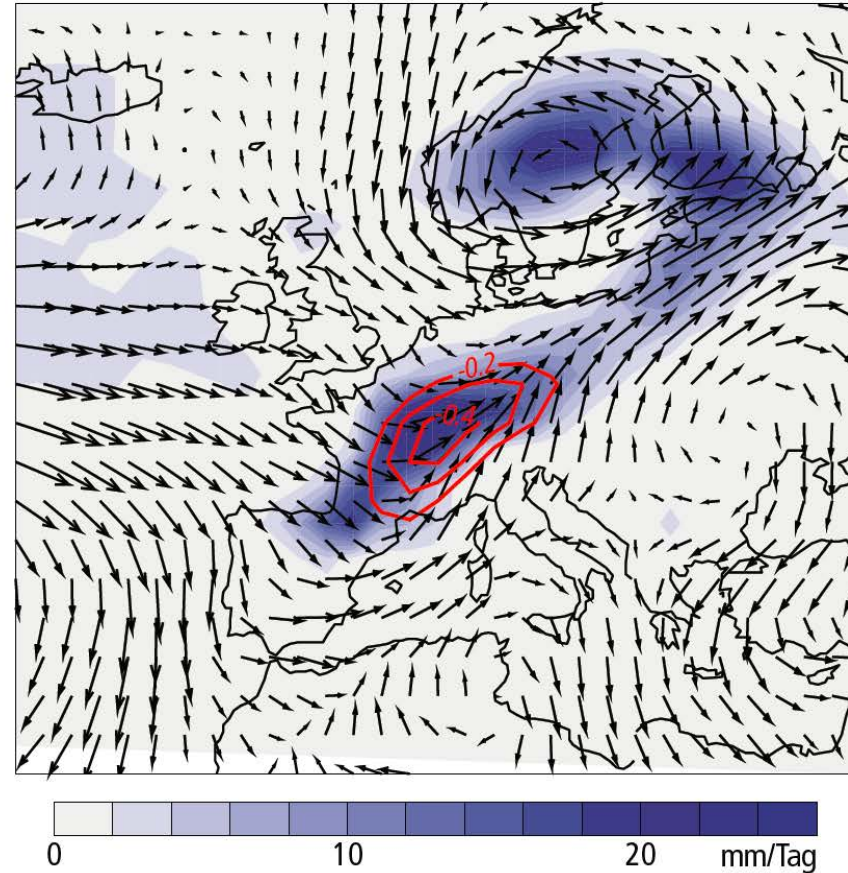
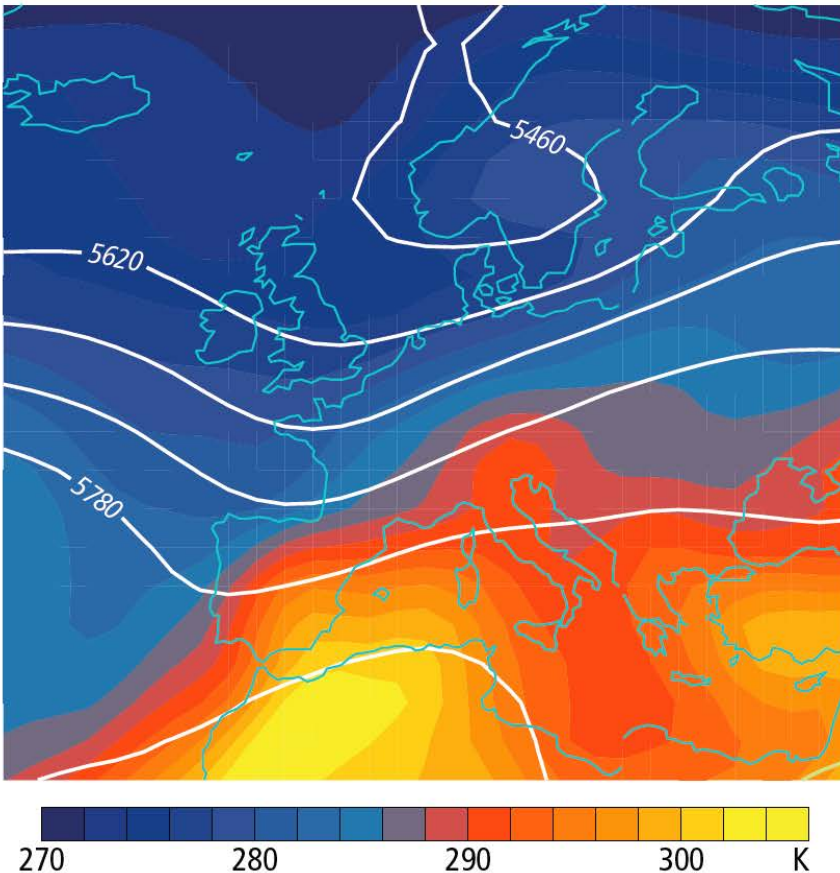


Neue Methoden: Quantitative Ansätze

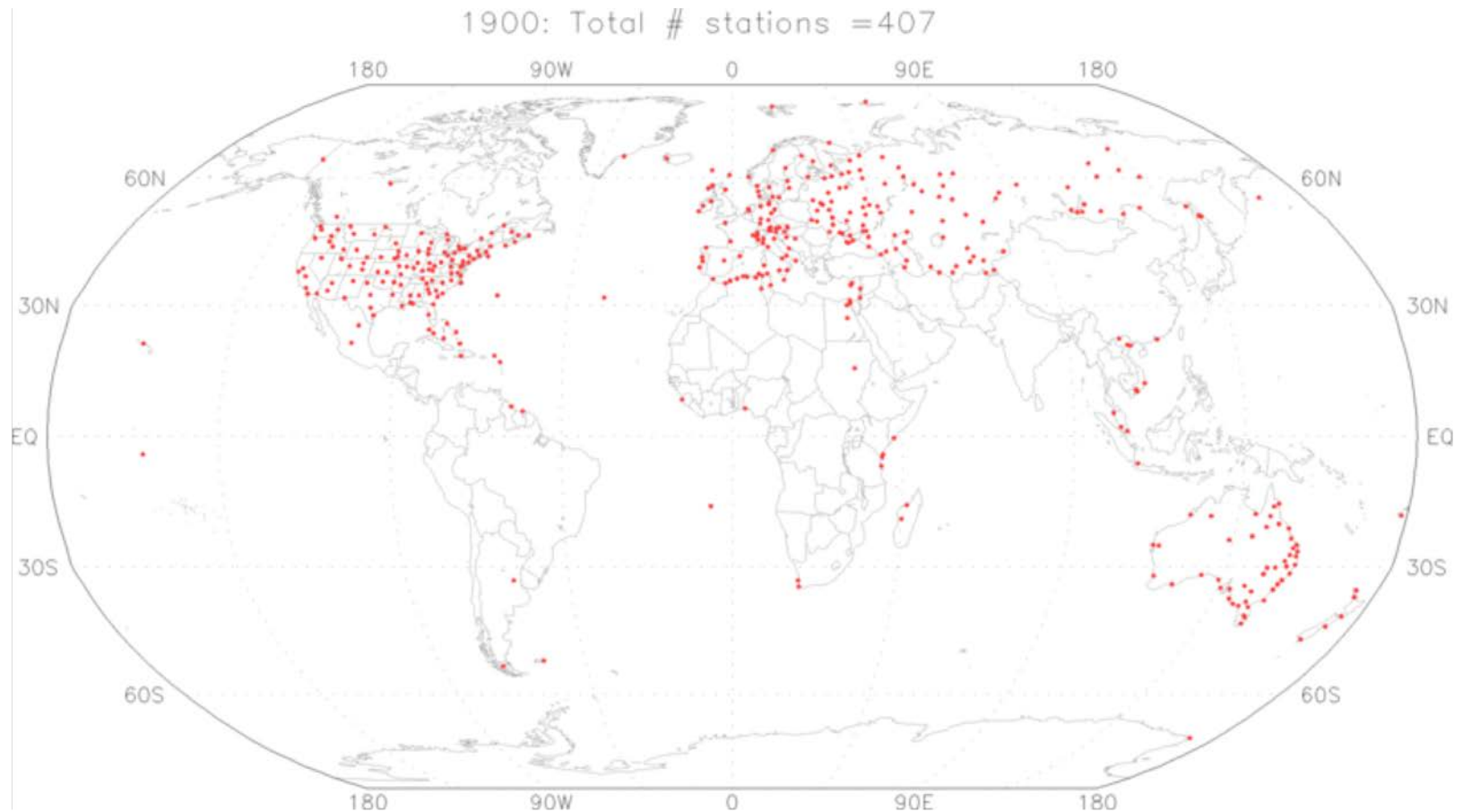


Neue Technologie: Reanalysen

> Weather on 29 July 1816



International Surface Pressure Databank



«Revival» von Data Rescue

HISTORICAL DATA

Hidden in the past

Old photos, logbooks and papers are a gold mine for fields such as ecology and climatology.

BY ROBERTA KWOK

In 2012, Ruth Thurstan turned to an unconventional source to study fishing: old newspapers. She wanted to know when people had started catching substantial numbers of snapper (*Pagrus auratus*), a fish species abundant off Australia's coast, and how much effort was needed at the time to catch them. But available detailed data stretched back only to the late 1980s. Thurstan, a marine historical ecologist now at Deakin University in Warrnambool, Australia, noticed that today's fishers of snapper often recount their experiences in magazine articles and blog posts. She

wondered where fishers from the past would have published such descriptions.

A search through Australian newspaper archives revealed about 270 articles containing quantitative information about snapper-fishing trips from 1871 to 1939. "The amount of detail was astounding," Thurstan says. One account¹ she found read: "... down went about twenty-four lines; in two minutes the cry rose 'schnapper'; in three minutes more, at least a dozen splendid fish were flapping on the deck ... For four hours and a quarter the sport was sustained with undiminished ardor and success ... When our respective plunder was totalled up we were found to have lessened

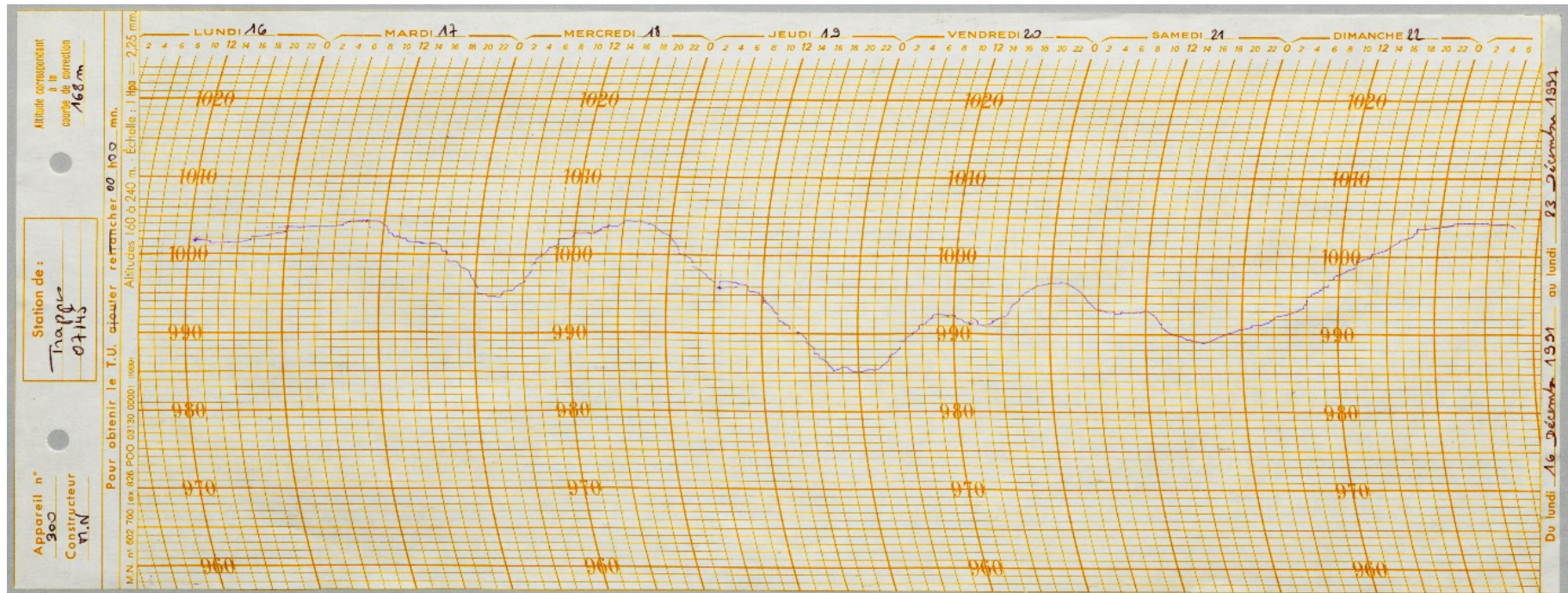
that particular tribe of schnapper by about 735 individuals."

By combining numbers gleaned from the articles with information from early-twentieth-century government fishery surveys and from a fisherman's book, Thurstan's team estimated that the average number of snapper caught per person per hour was about nine times higher in the late 1800s and early 1900s than it was by the end of the twentieth century¹. She is working with fisheries modellers to incorporate the data into snapper-stock assessments and to refine estimates of sustainable fishing levels.

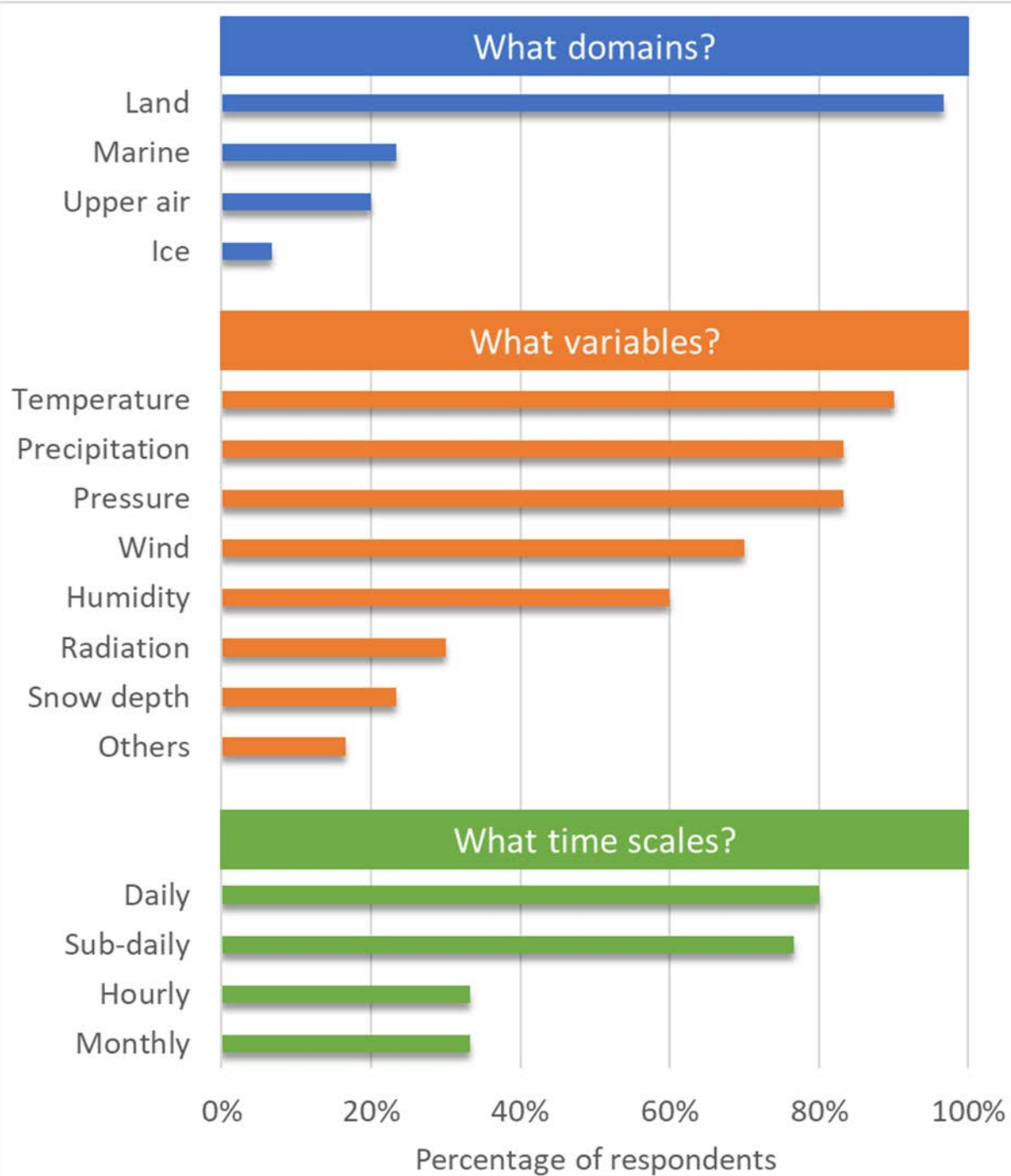
Thurstan's study is one of many examples ►

C3S Survey: Revisit the Archive

- Data rescue is a continuous activity
- Demand and technologies will change: revisit the archive!
- We need a community rather than a „one-off“ solution



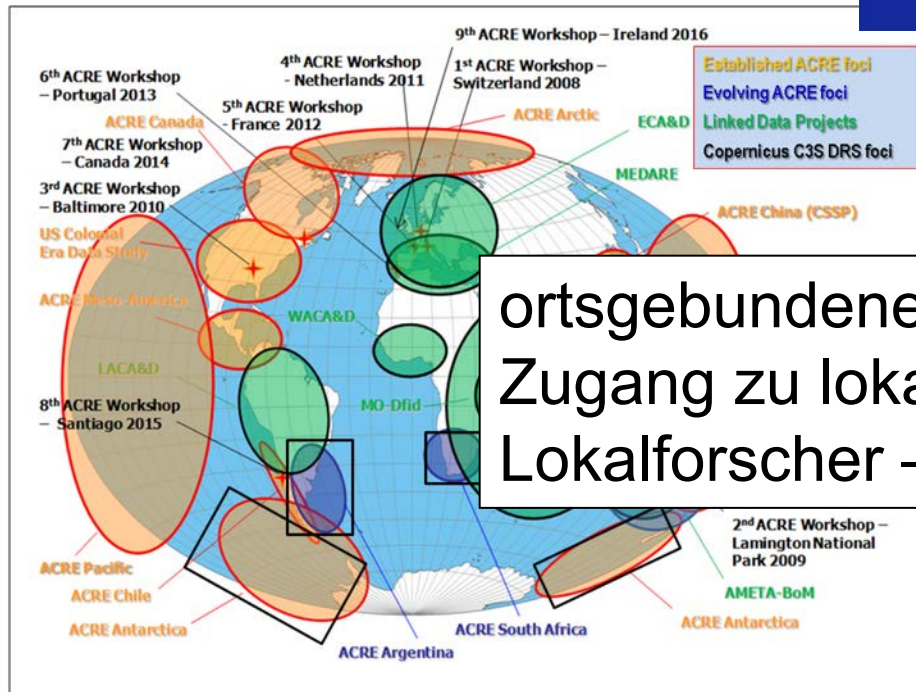
Was?



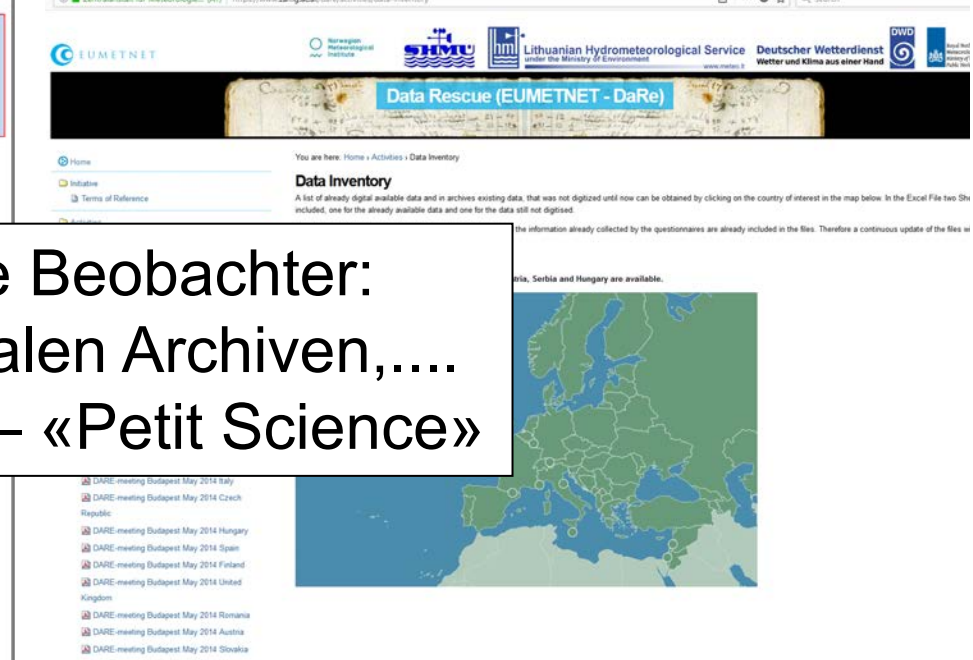
u^b

^b
UNIVERSITÄT
BERN

OESCHGER CENTRE
CLIMATE CHANGE RESEARCH



ortsgebundene Beobachter:
Zugang zu lokalen Archiven,....
Lokalforscher – «Petit Science»



Community: ACRE

Nationale Wetter Dienste

Citizen Science: Old Weather



Survey: 10% der Projekte verwenden Citizen Science

20CRv3 – May-Sep 1881 <https://vimeo.com/128684414>

data-rescue-at-home

E-Mail - stefan.brensemann - x mySNP x Data Rescue At Home x tagessieger.ch Nichts ver x +

data-rescue-at-home.info

582 data.rescue@home

Home Digitize News Links Register Contact

User name Password login

German Radiosonde Data from the Second World War
Klagenfurt, Oktober 1941

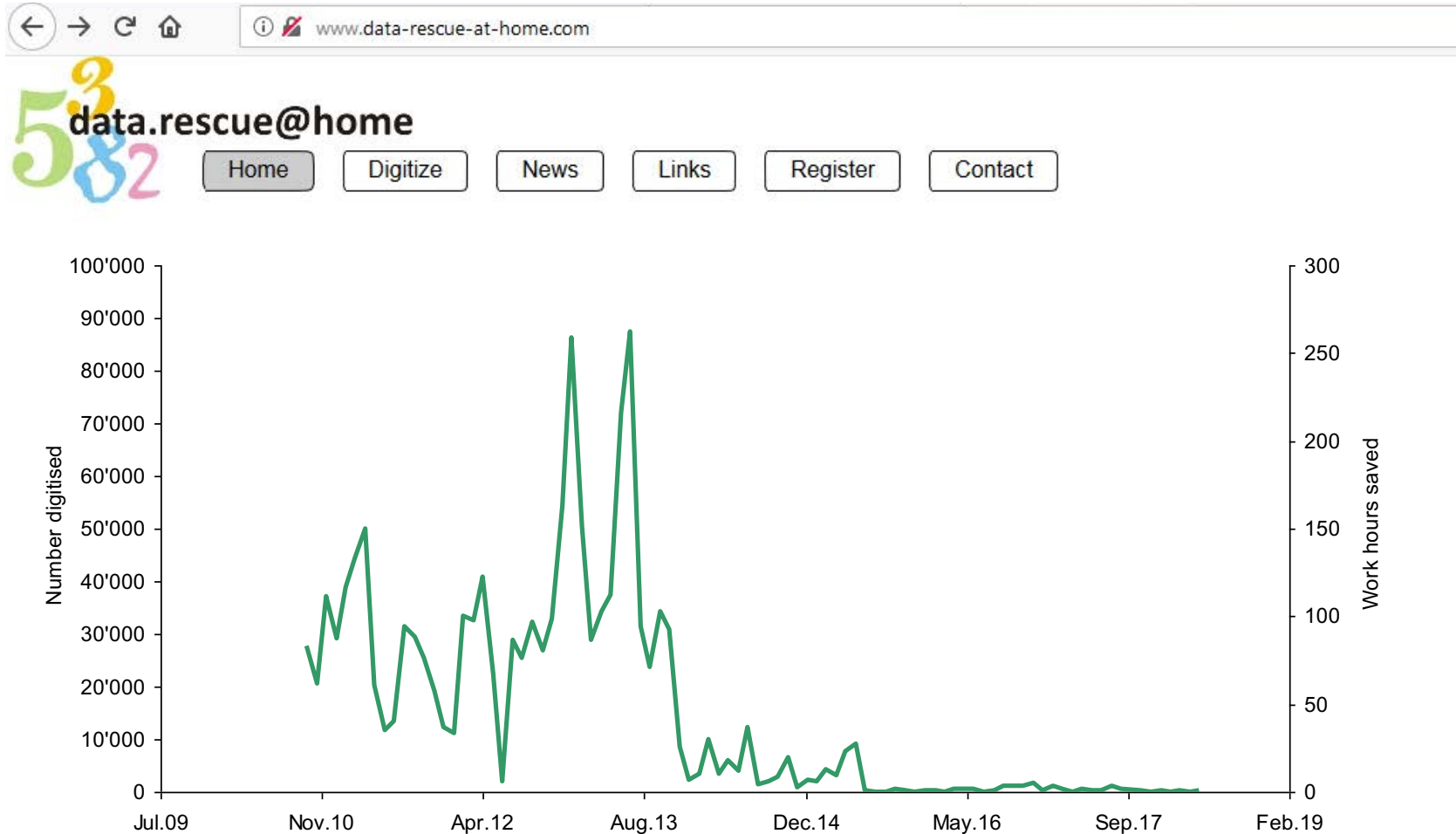
Please leave empty fields in the pictures also empty in the entry mask. Do not fill in zero!
Also leave the field empty whenever a value is totally or partly unreadable or if the field in the picture contains a dash ("-").
In case you are just not totally sure but can decipher the number, enter the assumed value.
When you fill in the entry mask the background color may change:
☐ No changes
☐ Unsaved changes
☐ Saving changes failed
☐ Changes saved (may switch back to grey)

lag	Zeit	1000mb			900mb			800mb			700mb			600mb			500mb			400mb			300mb			200mb			100mb			50mb		
		H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U			
1	10	212	-	-	137	11,1	75	238	8,1	75	340	1,1	45	406	-	1,1	578	-	11,1	738	-	11,1	828	-	11,1	1128	-	11,1	1371	-	11,1	-	-	-
1	11	235	-	-	105	11,7	85	216	8,1	75	318	1,1	85	475	-	1,1	585	-	11,1	734	-	11,1	885	-	11,1	1121	-	11,1	1382	-	11,1	-	-	-
1	12	138	-	-	103	11,2	85	216	8,1	85	318	1,1	85	477	-	1,1	585	-	11,1	734	-	11,1	885	-	11,1	1121	-	11,1	1382	-	11,1	-	-	-
1	13	112	-	-	107	11,1	85	198	7,1	75	344	-	1,1	475	-	1,1	584	-	11,1	731	-	11,1	873	-	11,1	1111	-	11,1	1381	-	11,1	-	-	-
1	14	115	-	-	95	11,2	85	198	11,1	85	322	1,1	75	475	-	1,1	584	-	11,1	734	-	11,1	873	-	11,1	1121	-	11,1	1382	-	11,1	-	-	-

lag	Zeit	1000mb			900mb			800mb			700mb			600mb			500mb			400mb			300mb			200mb			100mb			50mb		
		H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U	H	T	U			
6																																		
7																																		
8																																		
9																																		
10																																		

☐ Input mask does not fit picture (wrong captions, missing columns ...)
 Picture quality: undefined
 Save Cancel 100% rescale

data-rescue-at-home

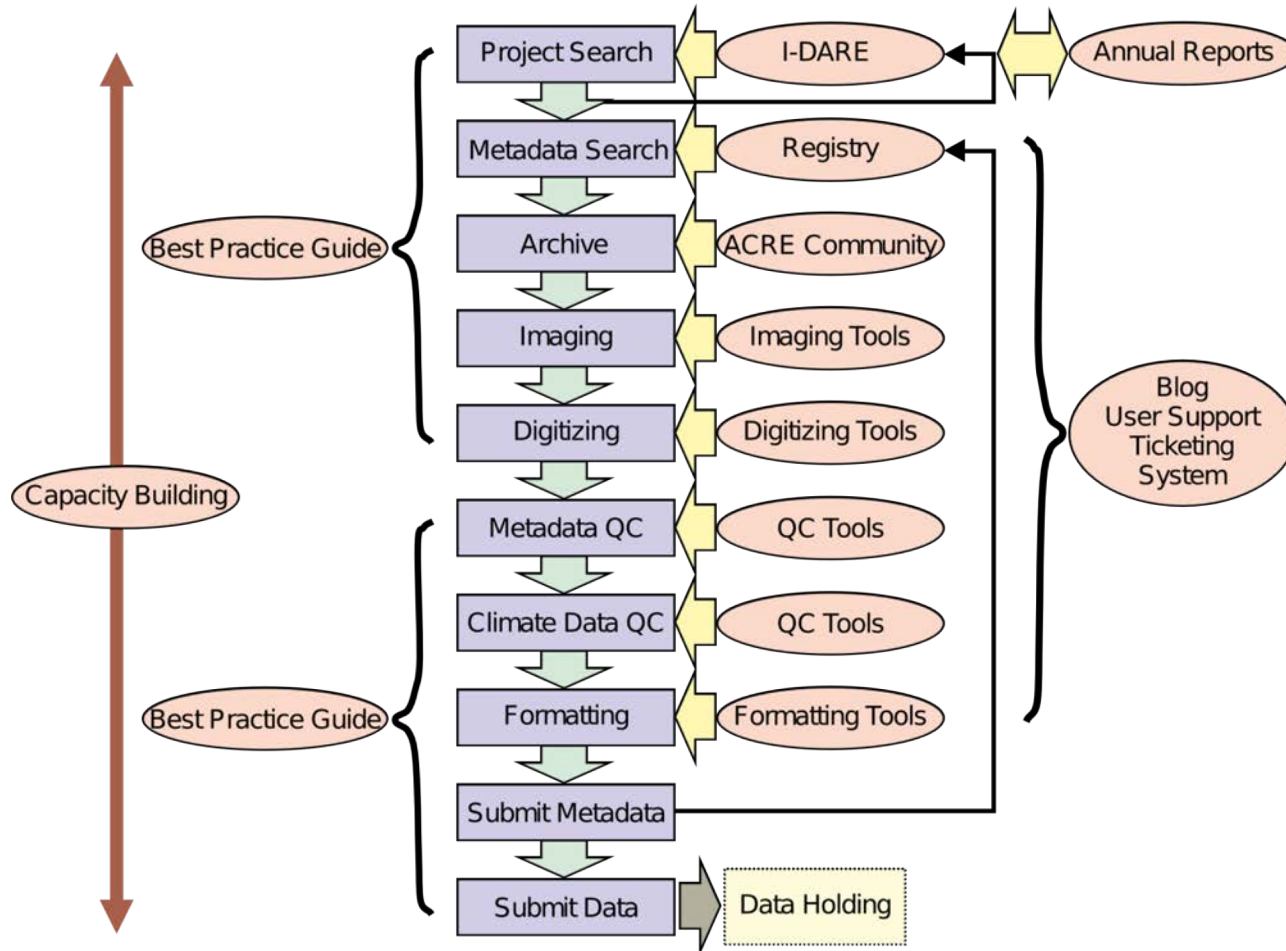


Citizen Science für Data Rescue

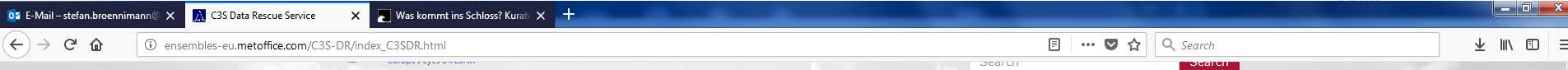
- > Grosser Beitrag von Wenigen, kleiner von Vielen
 - > Digitalisierung ist nur kleiner Teil der Arbeit
(Kontext/Metadaten, Korrekturen, Homogenisierung)
 - > Es braucht Unterstützung
 - > Projekte sollen in globale Datenzentren gelenkt werden
-

Copernicus Climate Change Services

Data Rescue Services



C3S Data Rescue Services



C3S Data Rescue Service - Collection and Processing of In Situ Observations

[home](#)

This project brings together fourteen partners in a consortium led by the Met Office to provide a service to facilitate climate data rescue that builds upon existing WMO International Data Rescue activities. The service will run an online repository (portal and registry) of information about past, current and planned climate data rescue, provide a wide range of data rescue tools and run capacity building workshops. The consortium has existing relationships and experience of working with ACRE (Atmospheric Circulation Reconstructions over the Earth). The service builds upon the WMO I-DARE portal and will provide climate observations to the Copernicus Climate Change Service (C3S) climate data store.

A prototype portal will be running by December 2017 and will be operational by 2019. Capacity Building workshops will be hosted during 2017 and 2019 in two key locations bringing together consortium partners and additional participants from the surrounding regions to encourage the development of support networks.

The service will develop and maintain the technical support services needed by users to facilitate all steps of the data rescue procedure; from consolidating paper archives to imaging data formatting and quality control, whilst piloting the use of new techniques and approaches to data digitisation. In addition to specific support for the tools, users of the data rescue process can strongly benefit from best practice guidelines. This is an excellent way to share expert experience in a targeted but accessible way. Best practice guidelines will be developed for all steps of the data rescue process, including minimum standards for metadata and images to be stored in national archives, such that these images remain useful. The service will produce annual assessments of the 'state of data rescue' supplying information about needs, gaps and priorities.

The project has identified three high priority regions for financial support to facilitate data rescue work as part of the C3S Data Rescue Service. These regional projects are ACRE Antarctica, ACRE South Africa and ACRE Argentina. Although already existing as projects under the ACRE umbrella these projects require substantial funding and stand to produce significant value in terms of new data over time periods and regions previously lacking in observations.

If you would like to know more about this service please contact the Technical Manager:
paul.vanderlinden@metoffice.gov.uk.

SUBSCRIBE TO C3S DATA RESCUE SERVICE EMAIL FORUM

Our email forum brings together a wide range of people working or interested in data rescue. It is for news, updates and discussion.

Please email data-rescue-c3s+subscribe@googlegroups.com and include your name, affiliation and a short reason why you would like to join.

- C3S Data Rescue Service
 - Workshops
 - Portal
 - Registry
 - Tools

C3S DATA RESCUE NEWS

1 Apr 2017
[C3S Data rescue Service Begins](#)

[More News](#)

C3S DATA RESCUE EVENTS

4 Dec 2017
[C3S Capacity Building Workshop and 10th ACRE Workshop - NIWA, New Zealand](#)

[More Events](#)

Schlussfolgerungen

- > Wertvolle Information aus der Vergangenheit
- > Citizen Science hat zunehmend Bedeutung
- > Zentraler Support via C3S
- > Es braucht auch Lokalwissen («Petit Science»)
- > Digitalisierung ist nur kleiner Teil



www.opennature.ch

u^b

^b
UNIVERSITÄT
BERN

OESCHGER CENTRE
CLIMATE CHANGE RESEARCH



Login

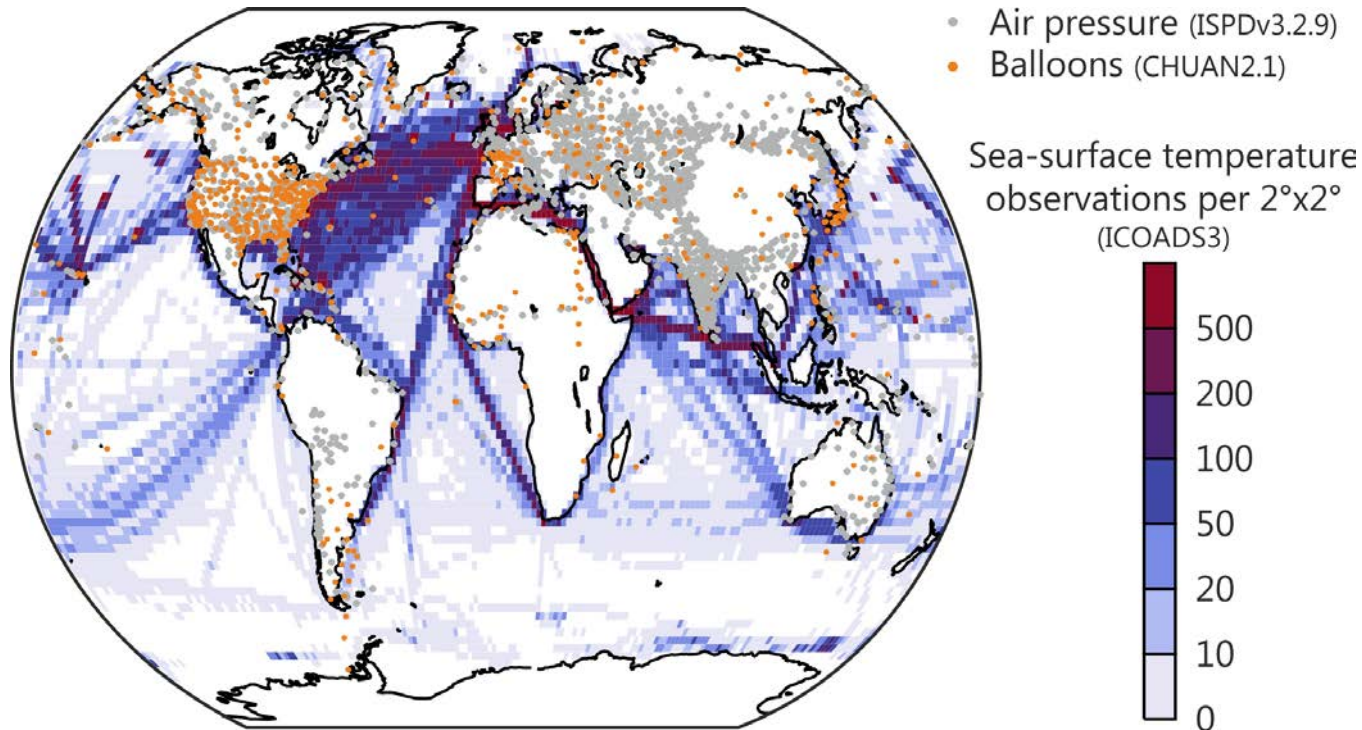


Jahreszeiten und Wetterextreme

Teile deine Naturbeobachtungen mit Wissenschaftlerinnen und Wissenschaftlern. Jede Aufzeichnung ist wertvoll – danke für deinen Einsatz!



Save the context: What do you see here?



Climate measurements also measure the needs of society.
1947 coverage shows nation states, trade, and a colonial world.

Ole Rössler, Simon Flückiger