

GEOTRACES AT BODC

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**National
Oceanography Centre**
NATURAL ENVIRONMENT RESEARCH COUNCIL



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Outline

- ❑ GEOTRACES programme: objectives and organisation
- ❑ GEOTRACES in numbers
- ❑ GEOTRACES at BODC: data management workflow
- ❑ GEOTRACES at BODC: mutual added values

GEOTRACES programme: objectives and organisation



An **international programme** which aims to improve the understanding of **biogeochemical cycles and large scale distribution of trace elements and their isotopes** in the marine environment.

GEOTRACES programme: objectives and organisation

Scientific Objectives:

Mapping the distributions of key trace elements & isotopes in the ocean;

Key trace elements and isotopes in the ocean?

Micronutrients (e.g. Fe, Zn, Co, Cu)

Anthropogenic elements signature (e.g. Pb, Hg)

Proxies for ocean productivity & circulation (e.g. $\delta^{13}\text{C}$, Nd isotopes).

Identifying what controls these distributions;

Establishing the sensitivity of these distributions under changing physical and biogeochemical conditions.

GEOTRACES programme: objectives and organisation

Project management:

International Project Office (Toulouse, France)

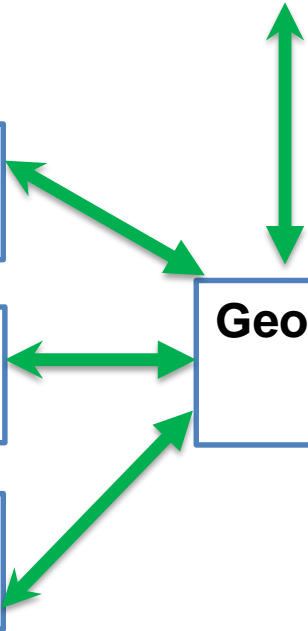
3 main committees

Scientific Steering Committee (SSC)

Data management Committee (DMC)

Standards and Intercalibration Committee (S&I)

Geotraces Data Assembly Centre

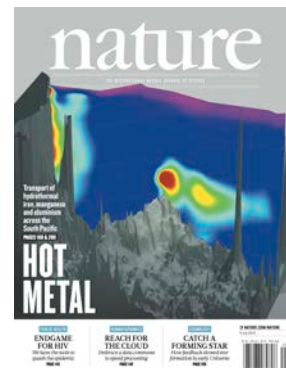
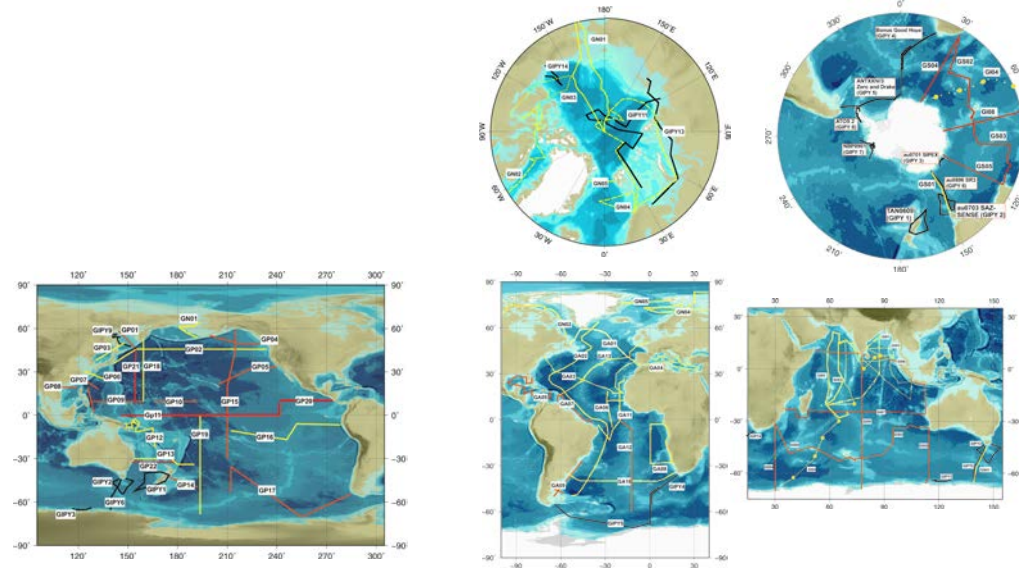
GEOTRACES in numbers

35 Nations

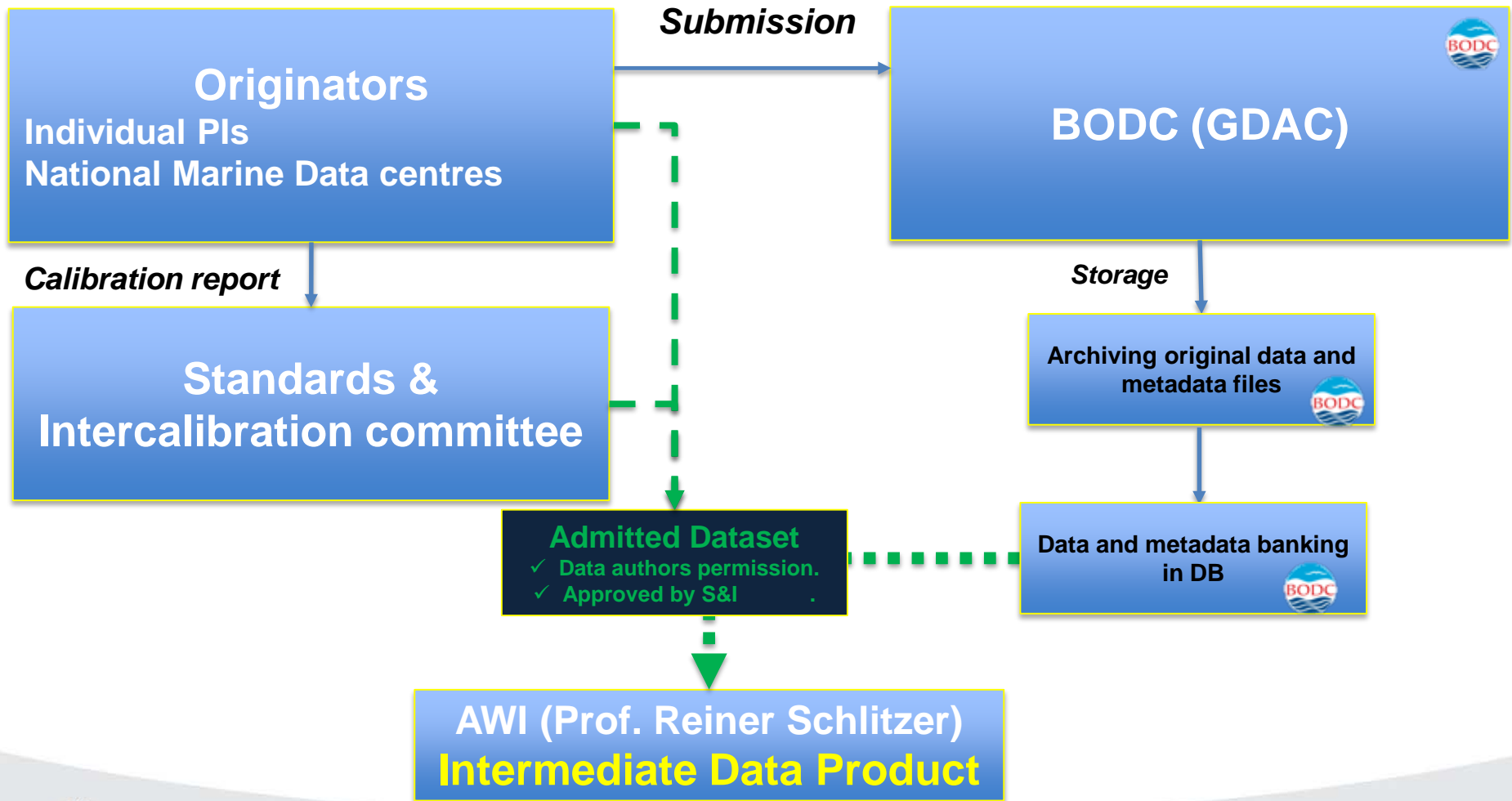
111 cruises completed

>670 parameters

1230 peer-reviewed publications



GEOTRACES at BODC: data management workflow



GEOTRACES at BODC: data management workflow



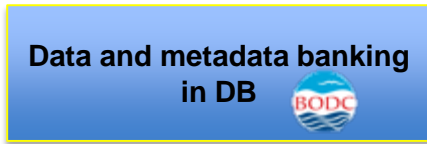
Accessioning

- Dataset ID attributed
- Cruise
- Title
- Author(s)
- log versions and other comments



Files archiving

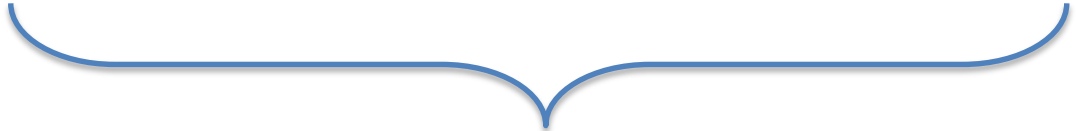
- Safe storage (data centre business!)



Samples matching (spatiotemporal identification)



Storing measurements



Relational DB, collected metadata using controlled vocabulary

GEOTRACES at BODC: mutual added values

GEOTRACES added values to BODC

Enrichment of BODC vocabulary and access to an expert scientific community: new parameters are created continuously.

International data management role and connections: working closely with scientists seating on the SSC and DMC, and with data managers involved in GEOTRACES data management at the national level.

BODC added values to GEOTRACES

Methodical data and metadata assembling and archiving: BODC know-how.

Ensuring the long-term accessibility and interoperability of GEOTRACES data: by ingesting GEOTRACES data into its database and standardising the metadata against internationally recognised standards.

Thank you for your attention