

Version 02 February 09 (HWB); an outline of

MEMENTO (MarinE MethanE and NiTrous Oxide data collection)

[memento is taken from the Latin language and means 'remember!' and may be a perfect acronym for a data collection initiative which conserves the results of present and past measurement campaigns]

MEMENTO is a joint SOLAS – COST Action 735 initiative

Initial members of MEMENTO:

HW Bange (COST Action 735; IFM-GEOMAR, Kiel, Germany)

TG Bell (SOLAS Project Integration; University of East Anglia, UK)

M Cornejo (COST Action 735; Univ. Concepcion, Chile)

A Freing (COST Action 735; IFM-GEOMAR, Kiel, Germany)

G Uher (COST Action 735; University of Newcastle, UK)

RC Upstill-Goddard (COST Action 735; University of Newcastle, UK)

G Zhang (COST Action 735; Ocean University of China, Qingdao, PRChina)

Supporters:

PS Liss (Chair of COST Action 735)

DWR Wallace (Chair of SOLAS)

Aim:

- Collect N₂O and CH₄ data from the open and coastal oceans
- Archive the data in a database which guarantees open access for scientists
- Compute global (incl. coastal areas) fields of N₂O/CH₄ air-sea fluxes
- Publish the database and derived flux data

Target data:

Dissolved & atmospheric N₂O/CH₄, lat, long, date, time, diss. O₂, diss. nutrients (NO₃⁻, NO₂⁻, NH₄⁺, PO₄³⁻, SiO₂), sal, temp, sample depth, total depth, chl. a, meta data

Projected course of action:

1st YEAR

- Public call for data submission: Writing of short project description for SOLAS news, IMBER Update and Eos-Transactions AGU
- Public call for data submission: Writing of 'initial position paper' for the journal "Environmental Chemistry"
- Designate regional representatives responsible for identification of PIs who could contribute data:

Hermann Bange: European coastal waters, Indian Ocean, Arctic Ocean, Atlantic Ocean (N₂O), North Pacific (N₂O)

Rob Upstill-Goddard: Atlantic Ocean (CH₄), Southern Ocean (CH₄), North Pacific (CH₄), Siberian Shelf (CH₄), mangroves, intertidal mud flats

Guiling Zhang (Ocean Univ of China, Qingdao, PRChina): Chinese waters

Laura Farias/Marcela Cornejo (Univ. Concepcion, Chile): South Pacific, Southern Ocean (N₂O)

- Lists with PI's will be reported to H Bange
- Standard letter/questionnaire with a request for data will be send out to PIs
- Collection of data / archiving data in a database (database to be chosen)
- Set up of webpage (as part of SOLAS Project Integration webpage) as interface to data contributors / regular updating of contributions / data accumulation index

2nd YEAR

- Data processing (quality check, outlier test, gridding, etc.)
- Publication of database description in the open access journal "Earth System Science Data"

3rd YEAR

- Computation of global flux fields
- Publication of global N₂O/CH₄ air-sea flux fields in high ranking peer-reviewed journal