D1.2 12-months meeting report

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12-months meeting report

By

Bremen University, Germany
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Contents

Executive Summary of the COOPEUS 12-months meeting – report

This report gives an overview of the meeting activities in COOPEUS in the first 12-months. The report attaches great importance to the 2nd annual meeting held 25-27th September 2013 in Boulder, Colorado, as the culmination of our continuous activities throughout the year. During year 1, COOPEUS held well-attended general meetings for partners and stakeholders at the AGU conference in San Francisco (12/2012) and EGU-conference in Vienna (04/2013) as well as conducting workshops on *harmonization of Research Infrastructures* and *PID assignment for open data series.*

The COOPEUS annual meeting in Boulder successfully brought all major partners and stakeholders of the COOPEUS project together. In a joint effort, the EU and US steering-committees had crafted a very robust agenda revealing the current status of the project, advancing the investigation on the best practice for promoting cross-disciplinary collaboration and initiating the COOPEUS user-scenarios. Furthermore, two high-profile speakers; Berit Johne (JPI Oceans) and Nobel laureate *Dennis Ojima (*USGS Climate Science Centers) were invited to provide high-level keynote seminars, which were held at the National Center of Atmospheric research (NCAR). Having the COOPEUS annual meeting at the NEON headquarters in Boulder CO consolidated the transatlantic cooperation and allowed COOPEUS to open up to stakeholders in the US. The meeting was attended by 48 participants, who, apart from the COOPEUS partners, also included representatives from various research-infrastructures, datacenters and infrastructure-projects such as EarthCube, NEPTUNE, Federation of Earth Science Information Partners (ESIP), UCAR and others.

The progress of the individual workpackages was presented in a series of talks by the WP-leaders. In the first year of COOPEUS, the current status and future challenges of interoperability within the RIs involved in work-packages 2-6 was successfully assessed through a series of questionnaires, workshops and meetings. Fact finding and gab analysis reports were produced, which are available on the COOPEUS website. Some reports were slightly delayed according to plan as many workpackages used this annual meeting as an opportunity to meet in-person and finalize their work of the COOPEUS year 1. The foundation for the cross-disciplinary collaboration was laid out by work package 7 and 8 through questionnaire analyses and continuous COOPEUS-meetings at EGU and AGU. Based on these investigations, it was concluded that there is an overall good organization level of the participating infrastructures and a high degree of availability and accessibility of data. Open access is offered for the majority of metadata delivered by COOPEUS research infrastructures.

During year 1, the lack of funding on the US-side generated some uncertainty about the activity levels feasible within each work-package, and the annual meeting was used as an opportunity to clarify the current funding situation, and its impact on COOPEUS. During the first year, funds were sought for specific US-COOPEUS activities and funds were received from NSF-SAVI designated specifically for WP1, WP7 and WP8. In this way, funds are currently available for the

cross-cutting work of COOPEUS. However, all activities of US-partners in individual work packages (WP2-WP6) will be dependent on reallocation of funds and in-kind funding from the involved institutions. At the annual meeting, there was a consensus that this will be the frame of the financial situation for COOPEUS in year 2 and 3. Funds will be sought where possible, but given the limited of availability short-term funding sources and the reduced time-frame, fund-raising will be focused more on the large-scale long-term funding opportunities extending and expanding the COOPEUS initiative beyond the current timeframe ending 2015. For year 2 and 3, the COOPEUS management has recommended the EU-partners to make use of the opportunity to spend COOPEUS funds on inviting experts from US-partner institutions to meetings (cf. Annex 1 p48) in order to consolidate the transatlantic collaboration within WP2-6. It is the COOPEUS steering committees opinion that the establishment of a US steering committee and the hiring of a US COOPEUS manager from the NSF-SAVI funds will improve the transatlantic collaboration significantly.

User-scenarios will play a prominent role in COOPEUS. In year 2, user-scenarios will be initiated within COOPEUS on Global Carbon Cycling coordinated by Andy Fox (NEON) and Tsunami wave detection coordinated by Laura Beranzoli (Ingv). Furthermore, COOPEUS will seek to take part in an ongoing user-scenario regarding model-predictions of Icelandic volcanic ashes which is currently being conducted under the frame of GEO supersites. Chuck Meertens (UNAVCO) will be the point of contact for COOPEUS involvement in this initiative. For the next COOPEUS meeting at AGU 2013, working-groups shall be formed by the coordinators of each user-scenario and a prospectus explaining the scope of the user-scenario and setting the frame for its implementations shall be produced.

The Strategic Cooperation Board (SCB) was invited to the COOPEUS annual meeting, where the SCB also held their 2nd meeting. The COOPEUS management and COOPEUS WP8 had prepared a list of suggested agenda items asking the SCB to give recommendations on finding avenue for advancement of the cross disciplinary work and collaboration with other projects as well as evaluating the progress in the first year. Overall, the SCB is pleased with progress to date in most areas. The SCB recommends the COOPEUS partners play an active role in discussions, planning, and future calls for proposals related to the Belmont Forum, EarthCube, and Horizon2020 programs.

The next COOPEUS meeting will be held in connection with the AGU-meeting in San Francisco on December 11th 2013 with the main goal of forming a consortium to address upcoming proposal solicitations and progress on the user-scenario work. The next annual meeting will be organized at the Finnish Meteorological Institute in Helsinki in September 2014 by Sanna Sorvari (FMI) and the COOPEUS management team.

COOPEUS 2nd Annual Meeting Attendees:

Participant	Organization	COOPEUS PARNER	EU/US
John Picard	INGV	x	EU
Ari Asmi	UHEL	x	EU
Christoph Waldmann	UNIHB	x	EU
Fernando Aguilar	CSIC	x	EU
Fiona Grant	Marine Institute	x	EU
Ingemar Häggström	EISCAT	x	EU
Jean-Daniel Paris	LSCE	x	EU
Jesus Marco de Lucas	CSIC	x	EU
Ketil Koop-Jakobsen (webex)	UNIHB	x	EU
Laura Beranzoli	INGV	x	EU
Magdalena Brus	UHEL	x	EU
Michael Diepenbroek	PANGAEA		EU
Robert Huber	UNIHB	x	EU
Sanna Sorvari	FMI	x	EU
Nadine Schneider	LSCE	x	EU
Johne Berit	Norway research council		Other
Aaron Pina	Colorado State University		US
Andrea Thorpe	NEON		US
Andy Fox	NEON		US
Anja Stromme	SRI	x	US
Anthony van Eyken	SRI	x	US
Bob Weller	WHOI	x	US
Brian Wee	NEON	x	US
Chris Lenhardt	Renci		US
Chuck Merteens	UNAVCO	x	US
David Moore	Uni Arizona		US
Dennis Ojima	Uni Arizona		US
Diana Liverman	Uni Arizona		US
Erin Robinson	Esipf		US
Fran Boler	UNAVCO		US
Francoise Pearlman	IEEE		US
Frank Lind	MIT		US
Greg Anderson	NSF		US
Hank Loescher	NEON	x	US
Jay Pearlman	IEEE		US
Jeffrey Taylor	NEON		US
John Orcutt	Scripps	x	US
Lee Allison	Arizona Geological Survey		US
Linda Rowan	UNAVCO		US
Mairi Best	Neptune, Canada		US

Melinda (Lindy) Paul	Springer		US
Mike Daniels	UCAR		US
Rebecca Koskela	DATAONE		US
Robert Weller	WHOI	x	US
Siri Jodha Khalsa	University of Colorado		US
Tim Ahern	IRIS	x	US
Wenming Ye	Microsoft Research		US

COOPEUS annual meeting participants

NEON Headquarters

Boulder CO September 2013

COOPEUS 2nd Annual Meeting Agenda:

Wednesday, September 25, 2013

08:00 – 08:30 Registration materials – coffee/tea/juice
08:30 – 08:45 Greetings NEON CEO (R Lea)
08:45 – 09:00 Opening remarks – meeting objectives (H Loescher/ C Waldmann)

COOPEUS Workpackage updates

09:00 – 09:30 WP1s Project Management
- EU-management (C Waldmann)
- US-management (H Loescher)

09:30– 10:00 WP2 EISCAT – AMISR (I. Häggström /A. Van Eyken)

10:15 – 10:45 WP3 ICOS – NEON (D Paris / D Papale / J. Taylor)
10:45 – 11:15 WP4 EMSO – OOI (R. Weller / L. Beranzoli)
11:15 – 11:45 WP5 EPOS – EarthScope (C. Meertens/UNAVCO and T. Ahern/IRIS)

11:45 – 12:30 Lunch (served)

12:30 – 13:00 WP6 LIFEWATCH – NEON (A. Thorpe / J. M. de Lucas)
13:00 – 13:30 WP7 Data policies and Standards (R Huber / J M de Lucas)
13:30 – 14:00 WP8 Common Research Infrastructure (S. Sorvari/F. Grant)

Collaboration with other initiatives

14:15 – 14:45 EarthCube (J. Pearlman)
14:45 – 15:15 DataOne (Rebecca Koskela)
15:15 – 15:45 ICSU / Future Earth (D.Livermann)
15:45 – 16:15 WDS incl. aspects on GEOSS (J-B Minster and M. Diepenbroek)

16:30-17:00 GEO infrastructure implementation-board (Siri Jodha Khalsa)

17:00-17:30 Coordination of COOPEUS involvement in EGI - current and future strategy / Exploration of potential overlaps of different data networks / initiates related to COOPEUS (I. Häggström)

17:30-18:00 Analysis of COOPEUS stakeholders, their interest and potential involvement in future COOPEUS or COOPEUS related initiatives (J. M. de Lucas).

18:00- 19:00 COOPEUS STEERING COMMITTEE MEETING

Thursday September 26th 2013

User Scenarios derived from concrete research challenges
08:30 – 09:00 Carbon cycling
(ICOS – NEON D Paris / D Papale / H Loescher / A. Fox /S. Berukoff)
09:00 – 09:30 Tsunami-wave detection (L. Beranzoli, R. Weller)
09:30 – 10:00 Icelandic Volcanic activities (C. Meertens)

Coffee break

10:15 – 12:00 Planning COOPEUS user scenarios
12:00 – 12:45 Lunch (served)

12:45: – 14:30 **Development of a common strategic plan and roadmap for EU-US collaboration** (A Asmi/B Wee)

Keynote Talks UCAR Meeting Room

15:30 – 16:30 ***Berit Johne***
PhD, Special Adviser for the Research Council of Norway (RCN) and the Joint Programming Initiative Oceans, Four years as Norway's Science and Technology Attaché in Washington DC with accreditation also to Ottawa, Research biomedicine and biotechnology, and positions as research manager and board member in biotech industry. In the RCN she headed a broad national foresight on biotechnology.
Title: "JPI Oceans and its roles in European ocean observation and EU-US cooperation"

16:30 – 17:30 ***Dennis Ojima***
USGS Climate Science Centers, Heinz Foundation Senior Scholar, Aldo Leopold Leadership Fellow, Senior Scholar is serving on the Human Dimensions of Global Change and the Board for International Scientific Organizations for the National Research Council, Nobel Laureate. **Title "Multiscale Approaches for Understanding and Responding to Ecosystem Responses to Global Environmental Changes"**

Friday 27th 2013
08:00-09:00: NEON tour

Evaluation of year 1 / Planning for year 2 and beyond.

09:00-09:45 Short-term planning (- 08/2015) – WP specific and general (Loescher/Huber)
Details of the funding situation:
- Existing opportunities for short-term US funding
- Common strategy for WPs with only EU funding
Work plan and Resources for WP1-8
-How shall the work load be shared between US and EC side?

09:45-10:30 Evaluation of COOPEUS Year 1 (Loescher/Huber)
Goals, Milestones, Activities and inter-project collaborations such as EGU workshop/PID workshop/Marine RI-project coordination group
Next year's goals: What are the milestones according to DoW – What other activities/initiates would we like to support: COOPEUS / ODIP workshop at EGU2014, RDA PID-groups

10:45- 11:30 Long-term COOPEUS strategy (beyond 08/2015) (Waldmann/Loescher)
Future Directions/Emerging challenges and opportunities/ Synergies / Globalization of COOPEUS / Leveraging / Involving COOPEUS in international coordination activities

11:30-11:45 Update from the Steering Committee meeting (SC representative**)**
11:45-12:00 SCB recommendations (SCB representative)
12:00 –12:15 Summary and Meeting Adjourned (Waldmann/Loescher)

COOPEUS 2nd ANNUAL MEETING Report:

Introduction to meeting:

In the introduction and welcome to the meeting Hank Loescher (NEON) (COOPEUS US Coordinator) and Christoph Waldmann (Uni-HB) (COOPEUS EU-Coordinator) emphasized the unique opportunities laying ahead for exploring new frameworks for cooperation across disciplines. It was highlighted that the experience COOPEUS partners currently gain from their groundbreaking investigations and analysis of cross-disciplinary collaboration among research Infrastructure makes COOPEUS a key-player on the global RIs scene. In this regard, it was emphasized that with our substantial knowledge and experience also comes a responsibility to take leadership in setting the framework for future international collaboration among environmental research infrastructures.

Status update from individual workpackages:

WP1: (COOPEUS management) Christoph Waldmann (Uni-HB) (COOPEUS EU-Coordinator) & Henry W. Loescher (COOPEUS-US-coordinator)

WP1 deals with all management aspects of the proposal and involves all partners of COOPEUS.

In the previous year, two well-attended COOPEUS meetings were held in connection to the AGU2012 and EGU2013-conferences. These meetings along with the consistent meetings of the steering committee are the reason COOPEUS progressed significantly in the first year. The COOPEUS webpage was designed and currently works as the main media providing information about COOPEUS as well as an archive for minutes, reports and presentation from meetings and workshops, some of which are publically available and some which are restricted to COOPEUS partners. The Blog on the webpage highlights the latest event in and around COOPEUS.

Dissemination activities in the previous year include a COOPEUS Poster presentation at the Research infrastructures session at the AGU 2012. Furthermore, COOPEUS was represented at the EMSO booth at the EGU 2013, and an article presenting COOPEUS was published in the journal *International Innovations*. Additionally, the design and production of a folder for distribution at future conferences and events is in progress. #

In collaboration with the EU-project EUDAT, COOPEUS hosted a well-attended workshop at the EGU2013 on the challenges of future harmonization of Research Infrastructures. For the upcoming EGU conference in 2014, COOPEUS is planning to follow-up with a collaborative workshop with the FP7-projects ODIP, EUDAT and iCORDI focusing on oceanic cross-disciplinary collaboration. Additionally, COOPEUS will be co-editor on a special edition of the iLEAPS newsletter focusing on Research infrastructures. Posters and articles as well as workshop reports are available at http://www.coopeus.eu/documents/

On the US-side, COOPEUS received funds from NSF-SAVI. The governance of US-COOPEUS (SAVI) was formed with the following PIs; Henry W. Loescher (NEON), Tim Ahern (EarthScope –IRIS), Charles Meertens (Earthscope- ,PBO), Robert A. Weller (OOI), Anthony van Eyken (AMISR) Jeffery Taylor (NEON) and Brian Wee (NEON). A steering committee consisting of a minimum of 2 scientists from each RI will meet on a regular basis, and a new

project manager (Dr. Lindsay Powers) was employed for US-COOPEUS. The NSF-SAVI funds are designated to COOPEUS WP1, WP7, WP8. All other COOPEUS activities in the US is currently dependent re-allocation of funds and/or in-kind funds from the partnering institutions.

Both COOPEUS management teams (EU and US) and WP8 are working closely with the strategic cooperation board (SCB) to assure continuity in the guidance and evaluation of the project progress. The SCBs work was already initiated at the kick-off-meeting, and their work continued at the current meeting. The SCB currently consists of the following members from both sides of the Atlantic; Beatrix Vierkorn-Rudolph (ESFRI, EU), Gregory Anderson (NSF, USA), Pierre-Philippe Mathieu (ESA, EU), Tim Ahern (IRIS, USA) and Geoffrey O'Sullivan (Marine Institute, Ireland). An additional US representative will be selected and added to the SCB within the next few months.

WP2: Ingemar Häggström (EISCAT) Space Weather (EISCAT-AMISR-SRI)

WP2 aims for the creation of a sustainable working environment to be used globally for atmospheric radar studies. In the previous year, a fact finding analysis of incoherent scatter data (D2.1) was compiled reporting on distribution of observation time, data composition and processing as well as availability and usage of data. This included information from Madrigal; an upper atmospheric database used by research groups throughout the world. A Gap Analysis report on incoherent scatter data was produced (D2.2) emphasizing the challenges originating from a mismatch between the levels of data and data-standards available, and the data levels and standards demanded by user-groups.
Both reports are available on http://www.coopeus.eu/progress/
Within year 1, WP2 has held multiple in-person meetings as well as teleconferences including a splinter-meeting that at the EISCAT symposium involving EISCAT, SRI and MIT. In Year 2, WP2 will continue to hold regular teleconferences and arrange EISCAT/MIT/SRI-meetings, the next following in connection to AGU2013. Furthermore, the international collaborators will meet and during an EISCAT_3D user meeting in May and during the meeting of the International Union of Radio Science (URSI) in Aug2014.

WP3: JD Paris (CEA) Global Carbon Cycling (ICOS-NEON) :

WP3 aims to coordinate the integration plans for carbon observations envisioned by ICOS, NEON, Inc. and NOAA/GMD in Europe and the US.
In recent months, MoUs were signed between ICOS-ETC and NEON consolidating the transatlantic collaboration. In the first year of COOPEUS, WP3 has focused on data gap identification and its impact on current and future data sharing activities across the Atlantic. Meetings were held with major stakeholders related to ICOS, NOAA, NEON as well as other relevant initiatives in order to share visions, identify common practices and differences, and propose pathways to harmonize data access and data use policy and practices. The outcome was summed up in the deliverable report D3.1 "*Gap Impact Coordination report*". A report that will also feed into WP7 and in parallel will set the frame for the data sharing efforts of ICOS, NOAA and NEON. In year 1, WP3 conducted 3 meetings to work on task 1. In the coming year, WP3 will continue holding regular meeting and furthermore WP3 will be in charge of coordinating the COOPEUS user-scenario on Global Carbon Cycling.

WP4 Laura Beranzoli (INGV) – Ocean observations (OOI-EMSO)
WP4 will lay the ground for a sustainable and collaborative working environment between the US Ocean Observatories Initiative (OOI) and the European counterpart, EMSO.
In the first year, WP4 conducted a fact-finding analysis identifying the state-of-the-art in ocean observations and outlining a common collaborative framework for future collaboration including identification of commonalities/opportunities in observation methods and strategies and scientific and technological planning. The fact finding report identified scientific and technological themes as well as opportunities for a common scientific and technological plan to reach convergence between the existing and upcoming observing infrastructures. This included identification of a core set of ocean parameters that can be selected as a base for COOPEUS purposes: Temperature, Conductivity, Bottom Pressure, Turbidity, Dissolved Oxygen, Currents (single-point and layers), etc. Furthermore, the opportunities for exchange among similar or complementary observation methods were debated.

The fact finding report (D4.1) is available online at http://www.coopeus.eu/progress/

In the coming year, WP4 will lead the COOPEUS user-scenario on tsunami wave detection originating from an urgent need for early warning system for near-shore areas as well as improvements in Tsunami modeling. Initially this user-scenario will outline the common work needed to begin data exchange and sharing. This includes identifying opportunities for harmonization of data as well as finding common implementation rules and WP4 will give recommendations for improving interoperability among RIs, which can provide data for tsunami wave detection.

WP5: Charles Meertens (presenter, UNAVCO) T. van ECK (WP-leader, KNMI) (EPOS-IRIS) - Solid Earth Dynamics
WP5 will coordinate the long-term integration plans for solid Earth science envisioned by EPOS (European Plate Observing System) in Europe and EarthScope/IRIS in the US, ensuring interoperability through the frameworks recommended by GEOSS.
As part of work tasks 5.1 and 5.2, WP5 has analysed the interoperability of cyber-infrastructures in solid earth RIs, specifically in seismology, focusing on e/cyber-infrastructures (in-situ) and earth science standardization concepts. Progress was made on EU as well as US to pave the way for increased interoperability including work on internal EarthScope and IRIS DMC /UNAVCO priority developments and the EPOS multidisciplinary (earth sciences) 'Integrated Core Services' model. Initiatives to improve the transatlantic interoperability is currently on-going as part of COOPEUS WP5 including the coordination of different IT projects developing formats and web services in alignment of long-term IT visions in geosciences (seismology/GNSS) such as EarthCube (brokerage) and EPOS ('3-layer approach'). Furthermore, synchronisation of use case development (implementing EPOS IT model in Iceland) is in progress. Additionally, WP5s current activities also focus on interoperability in terms of standard data formats and services, and there are multiple on-going activities in this regards including exchange of personnel to perform web-services installations in two EIDA nodes (ODC/RESIF) as well as technical coordination meetings (+ visits) discussing homogeneous metadata, services, QC standards, DOI, products. Furthermore, coordinated test implementations of DOI's identifying and/or referencing data providers was conducted.
As part of work task 5.3; *"Best practise integration Euro-GPS, GNSS*", US web-service installations-visits at EUREF and INGV were initiated. At EGU 2013, a COOPEUS and EPOS

data services coordination-meeting was held and more coordination meetings are planned for the coming year.

A report on the current status of Interoperability of cyberinfrastructures in solid earth research (D 5.1) as well as a report from the an EU-US workshop on the same topics (D5.2) is available is available online at http://www.coopeus.eu/progress/

WP6 Jesus Marco de Lucas (CSIC) – Biodiversity (Lifewatch-NEON-Dataone)

WP6s main objectives are to identify how the EU and the US knowledge bases and services on biodiversity may contribute to new and efficient approaches to serve the biodiversity scientific user communities on both sides of the Atlantic Ocean and beyond. In Year 1 of COOPEUS, a questionnaire investigation was conducted during the summer of 2013 in order to document and analyze the current links between EU and US Biodiversity initiatives. The investigation revealed a general opening towards open data and data policies as well as a strong common interest in selected topics such as global names and data standards, which can form the basis for advanced international collaboration. The questionnaire also indicated that lack of future funding may significantly limit international collaborative initiatives here initiated by COOPEUS. On September 18th and 19th, 2013, COOPEUS WP6 hosted a meeting in Madrid screening ongoing biodiversity initiatives in the EU and US and identifying prominent challenges for transatlantic collaboration in regards to connecting databases and sensor networks etc. The future framework for a transatlantic Biodiversity cooperation within COOPEUS was debated among 25 experts representing the leading infrastructures and projects involved with biodiversity research on both sides of the Atlantic, such as Lifewatch, NEON, ENVRI, Creative-B, EU-BON and many more. COOPEUS WP6 have generated a substantial list of more than 40 project initiatives in the EU and US working on various aspects of biodiversity data collection and management. Selected experts have agreed to join a working group under the COOPEUS framework in order to progress on the international biodiversity collaboration. This group will have bimonthly telephone conference calls.
A report on harmonization strategies will be available on the COOPEUS webpage shortly.

WP7 Robert Huber (UniHB) - Common Data Policies and Standards

The main objective of WP7 is to set the technological and formal basis for improvement of interoperability and data exchange between environmental RIs. In COOPEUS year 1, a status quo assessment of data availability and standards as well as data policies was conducted as a questionnaire analysis. Good feedback was obtained from all COOPEUS involved RIs showing that overall good availability and accessibility of data has been reached within the COOPEUS network. Overall availability of metadata is also very good and the majority of RIs offer metadata in XML or ASCII format which is well suited for integration purposes. The majority of infrastructures provide at least partly formalized data management workflows. Data ingest and quality management procedures are well advanced within COOPEUS. Most infrastructures provide well defined workflows as well as quality assurance and documentation strategies
A full report on the Common Data Policies and Standards assessment analysis is available on http://www.coopeus.eu/progress/

Additionally, a forum debating the progression on the use of Persistent Identifiers (PIDs) was initiated by WP7 at the COOPEUS- EUDAT joint workshop at EGU 2013. This was followed up by a 2-day workshop designated to topic "PID for open time series" in Bremen June 2013 with more than 25 participants from various project within EC and US such as COOPEUS, EUDAT, ENVRI, EuroARGO, DataCite, RDA and EPIC.
A First white paper on PIDs in open time-series is in the process of being drafted, and the work on PIDS will continue in a working group under the framework of the Research Data Alliance (RDA). A report from the workshop is available at http://www.coopeus.eu/documents/

Additionally in order to ease the flow of data and information within COOPEUS related RIs, a protocol for COOPEUS data sharing principles was created by WP7.

WP8 Sanna Sorvari (FMI) - Common Research Infrastructure Framework

WP8 aims to develop common strategies and a joint framework for long-term EU-US cooperation on data interoperability and on interworkability of methods between environmental research infrastructures.
In Year 1, WP8 has produced a COOPEUS summary report on commonalities, opportunities and developing needs within COOPEUS. At the annual meeting, a 2 hour session was designated to debating the outcome of the questionnaire investigation and discussing a strategy for future collaboration. In this regard, 5 common themes of interest were identified as the most prominent topic for cross-disciplinary collaboration:

- Shared sites
- Educational programs
- Common standards, formats
- (Loose) institutional level collaboration, e.g. board
- Stakeholder cross pollination

A discussion about long-term and short-term strategies for ensuring a prominent role for research infrastructures was initiated emphasizing the need for availability and exchange guidelines for data and information assessing the impact of Global Climate Change and natural climate variations. In short-term aiming for easily achievable goals ("Low hanging Fruits") appears to be most promising approach in order to rapidly prove and document the need for data availability and exchange guidelines. In the long-term, research infrastructures have to position themselves in a global framework of earth observations, and existing frameworks like GEOSS and Future Earth have to be leveraged.

WP8 was also involved with setting up, coordinating and facilitating the thematic work of the Joint Strategic Cooperation Board (SCB), which held their first meeting way ahead of schedule at the COOPEUS kick-off meeting in Bremen September 2013, and their second meeting at the annual meeting in Boulder. A brief summary of the SCB meeting is available on page 16 and a substantial analysis of the SCB recommendations is being produced by WP8 and will be available on the COOPEUS webpage.

Collaboration with other initiatives

COOPEUS is working closely with other initiatives involved with connecting Research infrastructures and easing the international collaboration in terms of sharing of data and knowledge. In order to consolidate our collaboration outside COOPEUS, various speakers were invited to the annual meeting to present and update us on the progression in their respective projects such as EarthCube (J.Pearlman), Dataone (R.Koskela), International Council of Science (ICSU) - future earth initiative (D.Liverrman) and International Council of Science (ICSU) – World Data System (M.Diepenbroek), The Federation of Earth Science Information (Erin Robinson) and GEOSS (Siri Jodha Khalsa). The presentations of other initiatives were followed up by a Stakeholder analysis conducted by Jesus Marco de Lucas (WP6) highlighting that COOPEUS could improve its awareness of stakeholders and their diversity and gain more from the stakeholder involvement by at an early stage evaluating their interests and potential contribution and level of involvement to COOPEUS.

USER-Scenarios

In the coming year, user-scenarios will have a prominent role in COOPEUS activities, and a prominent goal of the annual meeting was to select user-scenarios, form working-groups and appoint leadership for these groups.

User- scenarios was on the agenda at all preceding COOPEUS meetings (Kick off meeting 2012, AGU meeting 2012, EGU meeting2013) debating the configuration of user-scenarios in a COOPEUS context. Many themes were suggested and debated, and the scope of using user-scenarios as demonstrators or evaluators was discussed. To initiate the election of user-scenarios for COOPEUS; 3 topics were presented as potential user-scenarios: 1) Global Carbon Cycling 2) Tsunami-wave detection and 3) Icelandic volcanic ashes. At the meeting, it was agreed to continue with the suggested topics as user-scenarios with Andy Fox (NEON) and Laura Beranzoli (INGV) as working group coordinators for the User-scenarios on Global Carbon Cycling and Tsunami-wave detection, respectively. In regard to the user-scenario modeling Iceland ashes, COOPEUS will seek to collaborate with already ongoing activates in the area. Chuck Meertens will be coordinating the COOPEUS involvement in these activities.

In coming month, it will be the responsibility of the User-scenario coordinators to identify key players and set up working groups for each user scenario. These working groups shall define the scope of the user-scenario and set the frame for its implementation.

During the discussion on COOPEUS user-scenarios, it was emphasized that the user-scenarios should reflect our cross disciplinary goals. Some catastrophic events are offering a chance for research infrastructures to demonstrate their capabilities, raise their visibility and show the need for cross-disciplinary collaboration. For example, can volcanic eruptions lead to massive deposition of ashes in the ocean effecting oceanic primary production as well as biodiversity; a scenario that in a COOPEUS context could involve WP3,4,5,6. It was recommended that the user-scenarios make use of the GEOSS infrastructure. Siri Jodha Khalsa will in this regards function as liaison to GEOSS.

At the upcoming COOPEUS meeting, Dec 11th 2013 at the AGU meeting in San Francisco, the coordinators (or other representative) shall present a plan for the conduction of the user-scenario. Furthermore, a prospectus shall be produced explaining the scope of the user-scenario and setting the frame for its implementations. The prospectus will be published on the COOPEUS webpage.

COOPEUS Strategic Cooperation Board - Meeting Summary

The Strategic Cooperation Board (SCB) was invited to the COOPEUS annual meeting and the SCB held a meeting on the final day of the annual meeting. In this regard, the COOPEUS management and COOPEUS WP8 had prepared a list of suggested agenda items. In the second year, COOPEUS shall be devoted to strengthen the already well-established cooperation and to find avenue for advancement of the cross disciplinary work. The Strategic Cooperation Board was asked to assist in this process as well as evaluating the progress in the first year.

The SCB-meeting brought up the following items:

1. Introductions and review of the agenda
2. Discussion of 3rd US SCB member (Ahern)
3. Review of COOPEUS progress to date (Waldmann/Loescher provide summary)
4. Opportunities and threats perceived by the SCB
5. How should COOPEUS further develop linkages with other similar efforts (e.g., GEOSS, EarthCube, Belmont Forum, etc.)?
6. What sources of funding can be sought to further support trans-Atlantic cooperation via COOPEUS?
7. Should COOPEUS focus its work on existing members of the collaboration, or should it be extended to other domains or geographic regions?
8. How can COOPEUS demonstrate progress and disseminate results effectively in a constrained environment?
9. Plan for further SCB meetings

SCB Evaluation and recommendations:

Overall, the SCB is pleased with progress to date in most areas. The SCB members are slightly concerned about status of WP2 and WP4, which have made less progress than other WPs. Actions were taken to follow up on the progress of these WPs. The SCB recommends that the COOPEUS partners focus their efforts on first demonstrating success in trans-Atlantic partnerships, and then using such success as a basis for wider expansion.
The SCB recommends the COOPEUS partners play an active role in discussions, planning, and future calls for proposals related to the Belmont Forum, EarthCube, and Horizon2020 programs. The SCB believes these three efforts are particularly well aligned with COOPEUS goals, and would likely advance the current and envisioned cooperative efforts.

The SCB recommends that the COOPEUS partners should develop short (up to about 4 pages) written documents from each of the COOPEUS work packages, that describe the short- and medium-term scientific goals, what is missing from current efforts, and what is necessary to meet the scientific goals. These should be based on the gap analyses already undertaken in the COOPEUS work packages. These documents should be written for an audience of those involved with the Horizon 2020 planning efforts, and should start with WP4 with a goal of completion and release in December 2013; the other work packages should follow in early 2014. These same documents can then be converted into articles in venues such as EOS, to be accessible to the wider scientific community and organizations on both sides of the Atlantic.

A thorough analysis of the SCB recommendations can be found in a report from WP8 (D8.1)

Inter-annual COOPEUS MEETINGS:

During year 1, COOPEUS held well-attended general-meetings for partners and stakeholders at the AGU conference in San Francisco (12/2012) and EGU-conference in Vienna (04/2013) as well as conducting workshops in *harmonization of Research Infrastructures* and *PID assignment for open data series.* The Steering committee held regular teleconferences every 3-month and in-person meetings at the kick-off meeting in Bremen (09/2012) and at the annual meeting in Boulder (09/2013). These meetings are the foundation for the significant progression occurring in COOPEUS in the first year.

Individual reports on each of these meetings and workshops are available on the COOPEUS webpage

http://www.coopeus.eu/documents/

A few of these documents are password-protected and only available only to the inner-circle of COOPEUS partners and evaluators. If you think you are entitled to access please contact the project manager at University of Bremen: Dr. Ketil Koop-Jakobsen; kjakobsen@marum.de.