

PAGES SSC 2016 Meeting Minutes

15-16 May 2017, Panticosa, Spain.

PRESENT

SSC: Willy Tinner (WT), Sheri Fritz (SF), Asfawossen Asrat (AA), Pascale Braconnot (PB), Ed Brook (EB), Cristiano Chiessi (CC), Mike Evans (ME), Peter Gell (PG), Hugues Goosse (HG), Darrell Kaufman (DK), Michal Kucera (MK), Katrin Meissner (KM), Blas Valero-Garcés (BV), Liping Zhou (LZ).

IPO: Marie-France Loutre, (MFL), Lucien von Gunten (LvG), Angela Wade (AW)

Future Earth: Hannah Moersberger (HM)

ABSENT

SSC: Lindsey Gillson (LG), Janet Wilmshurst (JW), Yusuke Yokoyama (YY)

1. Introduction and miscellaneous (Sheri)

1.1 New to PAGES

SF thanked BV for organizing SSC meeting in Panticosa and welcomed WT and EB as new members.

1.2 Approval of the Minutes from 2016 SSC meeting and outstanding actions

SF: 2016 Minutes. Any corrections?

Decision: All approved, no corrections.

SF: Outstanding items. Don't need to go through them.

Decision: All approved.

1.3 Approval of the 2017 Agenda

Decision: All approved.

2. IPO News and finances (Marie-France)

Three guest scientists were in PAGES office in 2016/17.

2.1 Funding overview

New financial year runs 1 Jan to 31 Dec (previously Aug-Jul). That's why have two budgets – one that already started 2017 and one for 2018. Mostly the same except the amount for working groups and the amount that's carried over from year to year.

ACTION: Ed noticed an added figure in 2018 budget for OSM. MFL to remove and update.

2.2 Budget overview 2017 and 2.3 Budget overview 2018

Discussed planned office relocation, fixed expenditures (salaries etc) and estimates.

US funding 2018 - last money comes in July or August 2017.

Suggestion for a brief budget overview, on one page, to get a sense of numbers.

ACTION: Next year provide a brief overview of the budget on one page.

Decision: 2017 and 2018 budgets approved.

2.4 PAGES' future funding

US NSF budget runs to end June 2018. Have to submit a new proposal this year. Discussion of meeting between SF and Alex Isner in 2016 and concerns about international activities.

Made it clear they expect a broader international buy-in, no longer just two countries (USA

and Switzerland), and want to see US interests more represented. They suggested an external review overseen by two academies. SSC discussed last year and agreed useful but eventually US NSF said no longer interested in a review. SSC went ahead as good to have metrics and see how effective PAGES is. This self-study put together November 2016. Sent to Justin Lawrence and he acknowledged receiving it, but no other feedback.

Discussion about various SSC members who contacted program managers on how to diversify our funding. Waiting on feedback. Discussion on how to diversify to be more international. Need explicit plans, new funding model, and discuss how to reduce costs and modify current budget model. Have to demonstrate why PAGES is important.

Before the SSC meeting, MFL and WT asked various people if knew about funding possibilities in their countries - Japan, China, UK, Germany, Norway, India, France, Switzerland, Italy. Response not encouraging. Need to explore private foundations.

ACTION: Need a concrete funding plan. Who contacts who? Should IPO do this?

Discussion about Germany, China, Australia, Japan, Swiss government, SCAR and IODP models, IPBES, PALMOD. Expanding to include three or four funding countries could attract more funds. Should we form groups for each country and PAGES provides them with material to approach potential funders, so that the proposal comes from people in each country rather than IPO? Some reservations about this involving a lot of work for a small group, with no guarantee of rewards. Plus, funding schemes don't always exist.

ACTION: Should IPO provide material to core group of participants from each country, who could then approach funding bodies directly?

ACTION: LvG to contact Tina Swierczynski from Floods meeting.

ACTION: MFL to contact Mojid Latif from PALMOD. (done, MFL contacted Martin Clausen)

Discussion about how PAGES is seen as part of Future Earth? HM said there are efforts from secretariat to get more funding for projects, esp. KANs. PAGES can apply for grants, but not really for running an IPO. Australia established a national committee. They could be a good entry point.

ACTION: Contact Future Earth Australia group regarding funding. Co-chairs or IPO?

Suggestion to ask current active working groups to contribute how they have benefited from PAGES. Ask if received grants etc. Numbers won't be trivial. US NSF will want to see how much investment put in, so actual outcomes that wouldn't have happened without their assistance would be helpful. Should be done before next IPCC report, as paleo has a good place, so there's a need to extract information from our community.

ACTION: Contact WGs to provide short report on how they have benefited from PAGES?

Discussion about Chinese Academy of Sciences and Thomas Stocker's visit to IPCC and Future Earth rep Qin Dahe in July. Could Future Earth share some of their funding from Chinese government? Need to promote PAGES to Pinxian Wang too. Could we have a Chinese co-chair?

ACTION: LZ to coordinate a group and prepare document to promote PAGES to Chinese government, asking for four years initial funding.

Discussion about approaching EU commission, rather than individual countries. RISE (Research and Innovation Staff Exchange), Horizon2020, SIDA (Swedish International Development Agency) in Sweden? To fund working group activities, not IPO. AA said at moment not feasible for African funding, but support for PAGES meetings in Africa? Africa Union or Commission on Science and Innovation might contribute.

ACTION: AA to approach these bodies when PAGES has workshops in Africa.

All agreed it is hard to find a solution. Discussion about separating funding for IPO and funding for science. Could Swiss money be used for IPO and other funding supports the science? Several members said their countries would not provide funds to support the IPO, but following the recent switch from Swiss NSF to Academy of Science, not sure if this would be acceptable. Meeting with ScNat at end of May.

Suggestion that a breakdown of IPO “in-kind” support ie IT assistance, office space etc would be beneficial, and take that into account in the budget. Plus, how the IPO activities support WGs in regards to the budget. How does the money benefit the WGs?

ACTION: IPO to break down Bern Uni in-kind contribution in upcoming budgets.

ACTION: Include how IPO activities support WGs.

Discussion about keeping door open to small contributions, crowdfunding, and establishing a fund with public money. Would it be possible to create our own foundation according to Swiss laws, and then distribute money from this (not Uni)?

ACTION: WT to look into logistics of creating own foundation.

Discussion about asking who contributed what for past workshops.

ACTION: IPO to ask workshop organizers to provide information about who else provided funding for all past PAGES-supported workshops.

Discussed Fondation Johanna Dürmüller-Bol support. Ensuing discussion about approaching possible funders with the budget separated into categories. IPO costs, OSM costs, support for ECRs and/or meetings, using terminology “Allow us to support them.”

Discussion about creating a two-page document to approach various governments for PAGES funding, or funding a workshop – “this is what PAGES is, this is what PAGES does”. First step is to explore bigger picture things, then exploring other things would be a subsequent step once funding-base solid. HM suggested making use of FE structures in place, as a colleague in Paris is expert at writing these. She will share his details.

ACTION: IPO to write a two-page white paper explaining what PAGES is and does, which can be modified for all countries/governments/organizations. (done)

ACTION: HM to provide details of colleague in Paris. IPO to send her reminder email.

ACTION: HM to provide information about FE regional centers. PAGES IPO to contact them.

2.5 PAGES' survey

By early May 2017, 400 people responded. Send a recall after OSM. In general, those people who responded are close to PAGES. Big enthusiasm about what PAGES does. There were some critical comments which is normal. A main aspect to address is how to make sure PAGES is perceived as bottom-up organization serving the community, open to everyone, and not an old boys club with same people always getting the money. Want to see more

activities, more OSM, more young science support. Need suggestions on how to improve things. Can use this data in the proposal.

ME mentioned bias in survey as comes from people who know us. Haven't had a proper external review. Will this be useful for independent audit of what done, achieved, what still need to do? Survey helpful in advance of proposals.

ACTION: LvG to extract 5 key statements from survey to use in all future proposals.

2.6 Stakeholder engagement

LvG doing Certificate of Advanced Studies (CAS) course on science management. Writing thesis on stakeholder analysis for PAGES. Would be happy to have SSC input.

ACTION: SSC to provide feedback on Lucien's thesis. (not necessary in end)

IPCC

General discussion about IPCC as a big stakeholder. PAGES should be involved during process for next report. Might be certain workshops on key subjects. If something is valuable for IPCC or PAGES, should think about gathering the community to help the process. Discussion that paleo not involved at all for IPCC report? Make sure aren't gaps across the chapters. Need to have people lined up to contribute to those workshops. Future Earth nominations are important, so that others can be nominated. Good to have broad choice to make sure have right experts in chapters. Need for better coordination of those activities. Ad hoc process.

MK suggested creating a pool of experts. If contact one person, might get response. If contact five people, no one responds. Make the emails to individuals instead of to a group. "We think you're the best person" might get a response. WG leaders should have cohesive structure for moving ideas forward. Could it be a new team for an integrative activity?

ACTION: How can PAGES make this process better for nominations?

ACTION: People involved in IPCC special report – make sure paleo represented.

ACTION: Discuss further in appropriate subsection.

3. Review of PAGES working groups

3.1 Implementation and human-focused activities (discussed day 2)

Should more be done about human dimensions and biodiversity? Top of scientific structure not well populated. Need for integration/coordination, new integrative activity? Don't want an empty shell.

The former regional integration theme generated interactions on Human-environment-climate. Some working groups still exist but some WGs felt they were losing the connection they had before with the Focus idea.

ACTION: What can be done to address these WG concerns?

ACTION: Should there be a meeting/workshop about the human theme to see if continue/expand?

Discussion about need to improve communication between WGs e.g, paleofire and forest dynamics at OSM were merged, but initially not happy. Afterwards they said it was a good idea. Could there be a creation of a leaders group, which could meet virtually, led by someone who can formulate it and see across all WGs? Could make some abstracts from progress reports, summary slides of progress, database of slides, 90 seconds on what

working on what planning to do? This information could be good for updating some of the working group website pages, as look tired.

ACTION: Ask WG leaders to make short summary of public parts useful for this coordination? Go ahead with this?

ACTION: Create a leaders' group/communicate more with leaders group about other WGs?

3.2 Working group discussion

ACTION: All SSC liaisons to include AW on meeting feedback emails to WGs, so IPO knows who has been contacted.

2k Network (LvG): Phase 2 concluded at OSM and starting phase 3. Energetic young team. OSM meeting was to gather ideas for new projects. Shaping up well. Good coordination. Old projects will be phased out and transregional projects phased in. Things progressed over year. Suggestion for leaders to intensify interaction across different projects.

Aquatic Transitions (PG): Group is becoming engaged, following workshops in UK, Maine and Kuala Lumpur over past 3 years. Database harder than thought would be, addressing that. Several papers published or ready to be published. Engage with Data Stewardship. Varves WG key people bringing their experience. Need young people to lead now, and smaller leadership group. In Kuala Lumpur, good group. Meeting in Nanjing consolidating China group. Europe and North America done a lot of work. Will submit proposal for another 3 years in October.

C-PEAT (SF): WG held several meetings but currently not well synthesized. South America and Antarctica. Workshop in Hawaii soon. One of leaders wants to renew, not clear how to make it happen. Communicated that need formal proposal with clear plans. Want their focus to change so need to elaborate. Group been productive. Will encourage them as their liaison for expectations for next phase.

CVAS (MK): Hamburg meeting well attended. Made it clear they need outcomes. Possible change steering committee towards younger people. Second meeting in Autumn. Had session and short course at EGU 2017. CVAS wants to produce magazine issue. Topic is complex and hope magazine will help communicate goals. Good group going in right direction.

DAPS (DK): WG just starting, with a lot of applicants. Last year, group was directed to do more training to develop the community. Plans for 1 day of classes, both in proxy system modeling and data assimilation. Develop a framework for other programs. HG said after the workshop (end of May) will write a new plan for SSC with more precise goals, as was vague at beginning. Need to understand the data assimilation and models that link these things. Will try to make links with other groups. Link with 2k obvious.

ACTION: HG to write the revised plan

DICE (MFL): Have been very quiet. Want to extend for another year to get something out of group. Leaders didn't receive grants they were expecting. Had no specific workshops. Leading sessions during AGU, EGU and OSM. Several members been active. Association with PMIP group. In workshop report, holding out for data compilation for comparison at end.

Workshop planned for Fall but haven't made funding request. Need a plan for current year - data synthesis? Remind them one year is time for this. Will apply some pressure, as WG is enthusiastic. PMIP could help push them.

ACTION: IPO to contact leaders to say will support for one year more.

EcoRe3 (CC): Group started July 2016, first workshop end of March 2017. Norwegian Research Council financed half of workshop. Products in PAGES Magazine. Symposium to take place end of year. Will ask for money from PAGES for workshop in January 2018. First workshop important to get things running. Working towards objectives on proposal. Good impression. Can the group make progress in between workshops with virtual meetings? Papers in outline stage. Joint symposium with Aquatic Transitions WG and/or Forest Dynamics WG.

Floods (BV): First big workshop June 2016 in Grenoble. 50 participants, 16 countries. Remaining active with people database and another of archives. Very active through email and internet. Had a meeting at OSM. Records difficult to get, but progressing well. Want three different papers. 1. Short paper in California about dams and how important to have paleo for engineers for risk and assessment. 2. General review paper targeting Nature and Science, interesting process. Wrote to editor, don't think flood risk that interesting for their general audience. Good for the group – frustrations etc. Don't know where will be published. 3. White paper dedicated to stakeholders and agencies. Had meeting at EGU. Next meeting next year. How to integrate paleoscientists, how to bring this work to non-paleoscientists isn't easy. Lot of discussions back and forth about database, and if need one at all. Stakeholders are diverse group. Floods are local, making a global database hard. Group already 1.5 years old. Good ideas, progressing, try to push them in right direction. Proposed they have regular online meetings now, not just once a year. Bruno Wilhelm (group leader) was at PMIP Town Hall and Extreme Events meetings at OSM. Attended E3 meeting, but they weren't interested in paleofloods. At Warmer Worlds meeting hard to integrate Holocene data. Didn't work out way they wanted. Hope Bruno doesn't get too frustrated. First have to define scientific questions.

ACTION: BV to ask Hannah for details and pass on to Bruno to contact Extreme KAN leader.

ACTION: BV to contact them if need help, how PAGES can help etc.

Forest Dynamics (SF): Concern this WG is unfocused. Primarily Holocene. Members still trying to understand each other. First meeting had discussions in sub groups. Good starting point, not sure how will continue. Activities during workshop, then quiet in between perhaps? Contact with EcoRe3? This WG a good example of stakeholder engagement - session at forestry conference. Planning questionnaire for community about perceptions of paleoecology. Manager of small natural reserve at first meeting. Communication and accounting problems with leader. Has been discussed.

ACTION: Closer contact/supervision required.

Global Paleofire 2 (PB): Very active group, always responsive and committed. Meetings include fire baseline biomes, fire risk and management, linkages with biodiversity and conservation activities. Putting together a database, unusual high level of burning in last decades. Trying to fill geographic gaps etc. Have several publications. Can play with database on their website. Developing metrics. Highlighted gaps in eastern Europe. Want to

provide an expert assessment for next IPCC for risk of fire evaluation changes. Knowledge about past fires, direction of regional changes and expectations of final. Planning workshop. In last IPCC report WG wanted to improve representation. Asking questions not just to paleoscientists but what to expect of fire etc.

ACTION: Ask working groups to provide slides for future SSC meetings?

Gloss (AA): Initial idea was to develop a database. Global map of human impact. Launched November 2014. Thomas Hoffman leads but minimal input from others. Establishing a database taskforce. Had August 2015 meeting, then another in Belgium recently where started building this database structure. One abstract EGU, contributed one piece to magazine June 2017. First field data December 2017. Problems accessing webpage in Germany. Database structuring challenging and time consuming. Communication among members seemed to be weak. Need to push on communication and products. One year to complete first phase. The group needs to identify scientific questions that the database will help to answer. Hoffman led LUCIFS group so it's strange there is low visibility and output. Group focused on small area. Other members must step up; propose a synthesis. Can Data Stewardship help?

ACTION: AA to encourage others to do more to assist Hoffman.

ACTION: AA to advise WG contacts Data Stewardship team.

LandCover6k (WT): WG ends 2017 and will apply for another 3 years 2018-2020. Perhaps too diverse a group. Sessions, workshops, education training. Met all over world, lot of activities, had other sources of funding. Outputs are problems – forgot to mention PAGES. Discussion about why papers included in report if don't mention PAGES. Good things going on, topic is timely, vegetation history, archaeology and anthropology modeling, and earth system and landscape modeling. The leadership has been difficult because of the structure in sub-groups. Needs a synthesis. Ralph Fyfe new contact. Overall leader will be archaeologist Kathleen Morrison. SSC has given WG a lot of money, so need more relevant products. Need to send a clear message before they propose again, as it's a big group tackling every continent. Should go to synthesis now.

ACTION: WT to communicate to all that lack of PAGES acknowledgement unacceptable.

ACTION: Communicate that WG needs to focus on main synthesis product.

OC3 (KM): Discussed last SSC meeting about group not being active enough. Contact with Andreas several times (very responsive), group seems to only be run by Andreas. Group has produced new database (*Paleoceanography*, in review. June 26 workshop, only had 11 abstracts so far. Took decision if right people are there can still be productive. Plan request for an extra term/year? Plan second workshop, core downpour data retrieval, and then third year for model data conversion. Need it for PMIP. Ocean models now with tracers - important. Connect with the ocean group and tracer group. Suggestion to push group more, via e-news perhaps.

ACTION: Encourage WG to publish something before IPCC deadlines. (*Paleoceanography paper was published 03.07.2017*)

ACTION: Encourage WG to have one or two additional active leaders to share the load. (*done – email to Andreas, 23.5.2017*)

PALSEA2 (MFL): Running well and sunsetting. Good team of coordinators pulling the whole group. Have a meeting every year with specific topic. Maybe less clear how they go towards a final product. Each year, they are producing lots of good papers, one after the other, on what they are doing and acknowledging PAGES. Preparing review paper for end of this phase. High visibility science. Paleo has extreme direct relevance. Should focus on how to motivate them for logical transition to next phase.

ACTION: Contact WG and discuss/encourage next phase.

PlioVAR (LZ): Leaders are good. Didn't make it to many of these meetings, but attended session at OSM. Group had well-attended sessions. Vibrant community. Clear relevance for Warmer Worlds. They use this opportunity. Working on database.

QUIGS (MK): Working on their operational models. Had two meetings, third this year. Will be up for extension next year. They thought they already had this but have to apply. Taking significant role on Warmer Worlds, which is a positive. On track.

ACTION: Remind WG have to reapply for 2nd phase.

SISAL (MFL): Group is new. Have first workshop in June. Laia leader is also involved with Iso2k and at DAPS workshop. Becoming part of community. Close to PMIP. Will have leadership rotation. They took our advice in expanding the team. Trying to expand into Africa. Seem to be very active and have already started database.

VICS (HG): An active group. Meeting 2016 USA and again before OSM. Plus a session during OSM. Next meeting in 2018. Smaller papers in Eos and focus papers. Involved stakeholders. Group involved in social impact of volcanic activities, in VOLMIP, in outreach. Final synthesis product in 2018. One small remark is need to decide on product. Group could be more related to Extremes. HG did not succeed in motivating them to go to the meeting on Extremes. If SSC agrees, can include the SSC voice. Already planning second phase. Discuss what added value of this group. Activity for 2017 is to apply for 2018.

ACTION: HG to include SSC voice to encourage group to join Extremes Integrative Activity.

4. Review of endorsed and affiliated groups

Arctic Holocene Transitions (DK): Built on data sent. Shaun Marcott gave good session at OSM. Interested in this arctic database and how it can go global and combine with others.

IODP (KM): KM doesn't have any connection. Is someone better placed? Last year talked to Alan Mix. IODP concentrating on countries with money.

ACTION: KM to hand over notes etc to EB, then EB to contact IODP as new liaison.

PCMIP/PMIP (PB): No PCMIP anymore - ceased after workshops, coordinators not active. PMIP had group on tracers, isotopes, models, oceans. Data side is an issue. Should be focused on more. Lots of initiative around. If PAGES wants to do work with modeling, is there a direct connection to PMIP? Could we facilitate this activity? Would need to clarify the connection between PMIP and PAGES. PMIP has ties with WCRP. When do something from working group need to highlight it – acknowledgement phrasing needs to be rethought. A PMIP liaison, one for data and one for models, in PAGES working groups, to

integrate even more? This information will be public in one year, gives our working groups time before AR6. Suggestion came up at Town Hall, make a connection between working groups creating data synthesis that have specific PMIP connection. Made a table connecting groups from PAGES and groups in PMIP.

ACTION: Remove PCMIP from website etc and all correspondence *(done)*

ACTION: IPO to add on WG and workshop forms the need to acknowledge PMIP if use them.

ACTION: Liaisons with relevant working groups for data to remind them that PMIP is there.

ACTION: DK to write a list and send to all working group leaders.

ACTION: Send email to working groups with PMIP deadline (end of this week).

Discussion about endorsed groups. Maybe PALSEA could proceed as endorsed & affiliated? Losing this community a bit. Varves WG heartbroken not a WG anymore, still doing great work. PAGES still credited. New section on website that this WG is still part of PAGES?

ACTION: Discuss this afternoon.

5. Proposals for new PAGES working groups

WG1 – Data for the SDGs. **Decision:** Not approved.

WG2 – Guiana25K. **Decision:** Not approved.

ACTION: IPO to contact group to suggest first holding a workshop, then submitting a more coherent WG proposal. *(done)*

WG3 – People2k: **Decision:** Approved with comments from EXCOM.

ACTION: IPO to contact group. New name required. *(done)*

6. SSC and EXCOM membership and nominations

6.1 Current SSC membership

Noted those rotating off at end of 2017 and 2018.

6.2 Second terms up for renewal

SF asked if DK and BV would like to continue?

Decision: Both happy to continue.

6.3 Nominations for SSC in 2018

Lengthy discussion about the eight nominees. Three members rotating off end of 2017. Not decided if three replacements. Discussion on SSC size, gender balance, geographic distribution, ECRs, moving forward in funding phase.

6.4 Nominations for EXCOM in 2018

Two rotating off end of year. Use past process. In September, will ask for nominations. Co-chair from US will be one, so replacing LZ. Will take person with highest votes. Two rounds.

Decision: Do in September

7. Meeting support proposals and SSC comments

7.1 Update – Travel restrictions

Discussion about issue in USA. MFL suggested encouraging meeting organizers to consider the impact of where holding meeting and consider providing their meeting online for those who can't travel. Agreed this was good idea.

ACTION: IPO to update workshop proposals. (done)

7.2 New proposals

The SSC discussed the meeting support proposals in order to inform the decisions made by the EXCOM. Discussed budget and how it should be spread. WG proposals should be in line with the WG and delivery of final product. Should be inclusive with funding for ECRs and people from developing countries.

Current working groups

P1 – SISAL. **Decision: Approved.**

P2 – LandCover6k. **Decision: Not approved.**

P3 – GPWG2. **Decision: Approved.**

P4 – VICS. **Decision: Approved.**

P5 – PALSEA2. **Decision: Approved.**

P6 – CVAS. **Decision: Approved.**

P7 – EcoRe3. **Decision: Approved.**

Open call

O1 – Climate Change in Africa. **Decision: Approved.**

O2 – Silk Road. **Decision: Approved.**

O3 – Tephra Hunt. **Decision: Not approved.**

O4 – Trace elements (resubmission from 2016). **Decision: Approved.**

O5 – Annually resolved marine records. **Decision: Not approved.**

O6 – Marine Systems. **Decision: Not approved.**

O7 – Fire prediction. **Decision: Approved.**

O8 – Freshwater in Anthropocene. **Decision: Not approved.**

Educational meeting

E1 – eScience. **Decision: Not approved.**

E2 – Ecological challenges in Poland. **Decision: Not approved.**

8. Revisited: EXCOM recommendations for meeting support and SSC nominations

8.1 From the EXCOM meeting

US co-chair: **Decision: ME will replace SF as US co-chair from January 2018.**

SSC nominations: **Decision: Emilie Capron and Zhimin Jian will join SSC in 2018.**

8.2 Liaison officers

New liaisons to replace SF and LZ who finish end of 2017: **Decision: PlioVAR to EB; Forest Dynamics and C-PEAT to ME.**

Liaison for WG3, which was approved: **Decision: PG happy to continue.**

9. Integrative Activities

There was a suggestion for a new Biodiversity Integrative Activity but not fruitful.

9.1 Data Stewardship

- Hard getting traction on this. Identified 5 activities last year. Coordination task force didn't happen.
- Need a way to move activity forward. How is the working group assigned? How get data stewardship?
- Working group proposals include a section on data stewardship now, which is good.
- Should we provide an example on website, so have a model to follow/consider?
- Start webinars.

Data Standards

- Working with Linked Earth (NSF project) & Julien Emilie-Geay.
- All of PAGES 2k temperature data set now uploaded to this wiki platform.
- Time is right for PAGES to take a step up and speak on behalf of community to develop coalition with other paleo organizations with interests in paleo data and take first steps in developing standards.
- What are the minimum reporting requirements for a record to be accepted as legitimate?
- Work Linked Earth done allows us to move forward with INQUA etc
- In discussion with NOAA all the time.
- Know already lot of databases created everywhere, but should think of PAGES as connecting rather than asking people to refill.
- Doesn't compete with existing databases, simply enhances their utility.
- Have to communicate benefits to community.
- Concerns about longevity and reliance on NOAA?
- Key thing is data submitted.
- A lot of the new working groups enthusiastic. Want to use LiPD format.

Discussion about ICSU

- PAGES endorsed ICSU big data policy. Need concrete way of enacting those policies.
- PAGES 2k editors gone through all 16 papers in special issue one by one to evaluate how data handled in each paper.
- Coming up with guidelines for authors on how to bring up to higher standard.
- Could be a link with the modeling/PMIP?

Discussion on expectations of how data shared

- Is this a good resource for authors? Determine whether or not, by acknowledging PAGES, they agree to meet a certain level of data stewardship.
- But what about all the other pages acknowledged by PAGES – does that mean they meet a certain level too?
- Papers will be acknowledged before we know it so can't monitor
- Should there be clear guidelines of what expected on website? All articles that acknowledge PAGES support aspire to a higher level of stewardship.
- WGs should address in annual report.

Definition

- Need to define what we mean by data. Could be a black hole. People know what needs to go in.
- PB discussed PMIP CMIP etc
- First is to know what we want to put in, and how we call it.

Policy

- Data citations. Will bring up publications to next level if they use data citations.

- To use a data citation data needs to be stored in public.
- People concerned about giving data as they lose the credit. Maybe not even author on product and anytime uses data in future. Way we can convince they will get credit is through data citation. Provides the author, tracks the author.
- Alicia Newton is eager to hear from us in Nature Geosciences would like to see papers that acknowledge PAGES.
- Treat like citation so author of code gets credit. Rapidly evolving landscape. Number of companies trying to develop it first to sell to publishers.
- Questions about data in appendices, because so restricted on references. Appendices will be available to web crawlers. Clim.Past may not be as accessible.
- Need to promote this new culture of citing data. Technology will catch up.
- Paper in Scientific Data coming soon.

ACTION: Data definition and how to handle code and how to use code to make figures.

ACTION: Data policy from Future Earth, led by Mario Hernandez. Contact him if see a way to link for communications?

ACTION: Would someone like to join the DS leaders group as currently just DK and LvG?

ACTION: Add an example page for Data Stewardship on PAGES website?

ACTION: IPO to add section in annual report form, asking how did WG conform to Data Stewardship standards.

ACTION: LvG to set up DS webinars.

9.2 Warmer Worlds

- Met in Bern 5-7 April. 60 participants, organized by Alan Mix, Hubertus Fischer, KM.
- First two days talks, gather information, third day breakout groups worked on well-defined questions as goal of workshop was to write a summary paper that can be used by IPCC.
- Hopefully have draft by May 31. Right now 80 pages.
- Hard to distinguish between 1.5 and 2 degrees global warming, so group moved away from that.
- Holocene, Interglacials and Pliocene. Impacts, feedbacks, climate variability, rates of change.

9.3 Extreme events and risk management

- First activity was lunch workshop during OSM.
- Contacted many people, only 7 attendees plus HG and BV as leaders.
- Discussed how to define extremes, timescales - broad scientific discussion.
- Floods came and very keep. CVAS and 2k could need encouragement.
- Conclusion of meeting was go slowly but not too slowly - energize community in next 6 months, then do some real activities, not just networking.
- Activity not ready to move forward – haven't yet done things said would do.
- Write a report to attract people to group.
- Link with Future Earth KAN and WCRP (Gabi Hegerl) with Grand Challenge on Extremes.
- Gabi invited us to define paleo people. This WCRP link is an opportunity.
- PAGES not getting out of paleoscience comfort zone and focusing on potential of this Integrative Activity. Connection with WCRP is where the future is.
- Need deadline to keep people motivated (for IPCC report? Unsure here)

Decision: HG to be PAGES representative on level like Gabi.

ECS group

- Suggestion members of ECS group could be involved in this, if approved?

ACTION: Create deadlines for group, based on IPCC report in September?

9.4 Thresholds

- Until now, this IA has not evolved. No leader chosen.
- Discussed that EcoRe3 should be building block.
- Encourage other groups with relevance to integrate, such as Aq Tr.
- EB said this IA sounds important from scientific point of view and offered to lead, with possible help from new SSC member Emilie Capron.

Decision: EB to lead Thresholds IA.

ACTION: EB to contact EcoRe3 and start planning.

10. OSM review

Feedback includes:

- Stall holders wanted to be more within the posters, as opposed to separate section.
- Need more time to engage with posters. Using short pop up talks to introduce them? Because of the size of meeting hard to see enough. Generic problem.
- At YSM the 1-minute poster talks worked well. Take onboard for OSM?
- Which session to attend was hard to decide. Many people with wide interests, many clashes in timetable
- Some of the smaller rooms in hotel not big enough. Originally thought 400 people would attend – got complicated with 900 participants.
- How can it be better decided how many people interested in a session? At moment only use abstracts.
- Less oral talks, more posters? Just invited lectures and the rest posters?
- Attractiveness of venue meant more attendees
- Good that sessions recorded so can see them afterwards
- Ask YSM participants to look out for key crosscutting themes and have session on last day?
- Provide a list of participants
- Skype with Gabi Hegerl did not work, so perhaps in future record the person in advance and project the video and use Skype only for questions.
- People weren't keen on having the conference continue to Saturday. Wanted to be home for weekend.
- Some sessions had too many conveners. Should restrict.
- Some big ones were because merged sessions.
- How do we keep the new members of the PAGES community engaged?
- For next meeting, huge opportunity to put PAGES in media. Did local and regional and national. Would be good to have someone to hire company to do this. Money well spent.
- Should invite the community of science writers next time.

General discussion about next OSM – do we want it to be so big? First need to secure funding. Perhaps next OSM will be in the country of a new funder?

11. Upcoming meetings

11.1 PAGES SSC Meeting in 2018

AA said better to have 2019 than 2018 SSC meeting in Addis, as he will be in Berlin September 2017 to mid-July 2018. In 2019, could coincide with 6th AFQUA meeting and another meeting of 120+ people. Infrastructure is there for SSC or even OSM. Need to decide a month. ME said could be an option to meet virtually in 2018 to cut costs?

Decision: Put 2019 on agenda in Addis for SSC Meeting. Maybe OSM in 8 years?

ACTION: SSC Meeting 2018 – AGU in December in Washington, China, after EGU (maybe Bratislava), virtual?

11.2 AGU, EGU and other general assemblies

Discussed need to make PAGES more visible. WGs there, but need to be seen from outside our own community. How can we advertise the work of PAGES? Sponsorship so can have logo present? Push WGs to have sessions or sponsor sessions? Booth?

11.3 EEA 2019 Bern, Switzerland

MFL said she will help with organization of meeting. Expecting 2000. Early stages, only themes decided. Perhaps one session being more related to climate? Good opportunity to integrate human aspect.

11.4 IODP-PAGES Workshop on Global Monsoon in Long-Term Records

MFL said asked to be partners for this meeting in Shanghai. Haven't received much information. Calendar entry, speakers invited. Global Monsoon WG has sunsetted but hoping for a new group, new name, on global rather than regional scale.

Future Earth group on Monsoons with Asia focus. Not same goal or objectives as PAGES but still interesting. Contact Valerie Masson-Delmotte? Push to have meeting with common questions, global objectives.

ACTION: LZ and SF to make contact, re new working group, before September workshop.

12. PAGES products and communication

12.1 PAGES Magazine

LvG said always receive good feedback, hard copies appreciated. Working on Biodiversity issue and joint CLIVAR issue where CLIVAR leads. Following issue is CVAS working group, centennial to millennial climate change. Discussed data stewardship issue, 10-12 articles – would be first 2018 issue. DK as editor, but unsure it's too early? Idea of a joint Future Earth issue.

12.1.1 Magazine updates

Over last year, done a lot to transform to new design, new name. Continuing this effort.

- All articles now have DOIs and working on adding them to all back issues.
Replacing all links with DOI links.

- With DOIs also have plagiarism check. Every new article run it through system. Usually not a big deal, but can happen.
- Now have HTML articles. Not all as pretty as would like at moment but content there. Allows for better search. More hits on website.
- Working currently to get permanent archive with CLOCKSS to keep articles safe. We pay a small fee, upload all our content to their website. If PAGES doesn't exist anymore, our content is automatically converted in creative common license and made available through consortium. Then safe for almost eternity.

All those steps are useful for us, to enhance visibility. Allows us to get an Open Access label in future. Shows better value of magazine. We have better policies about what we expect, open access content. CCBY. A lot happening.

12.2 Communications

AW presented last year's communications – website, social media, products, promotion etc. Discussed idea of a “communicating with stakeholders” webinar, run by Owen Gaffney from Future Earth. Low-level training for WG leaders.

ME asked how opaque is our language/dialect when dealing with stakeholders?

WT mentioned professional help from universities with making our language more understandable to general public. HM said FE communications team good at this.

ACTION: Ask Owen Gaffney about “communicating with stakeholders” webinar.

12.3 ECR group in PAGES?

Briefly discussed YSM participants wanting to start a group, and if one is needed. EB mentioned ICYS took a year to get going and after initial help they are independent now.

Didn't take much to make it happen with assistance from some senior people.

PAGES will wait to see what participants propose.

13. WCRP update

Dave Carlson, who attended SSC meeting in 2016, has resigned. A big loss.

13.1 Town Hall at CLIVAR

PB discussed PAGES WCRP Town Hall in China. Presented WCRP and PAGES. Short talks. Circulated notes afterwards. Conclusions published in a magazine. Mostly CLIVAR people, proxy modeling. Science related to AMOC. Workshop in US could be extended to broader community. Linkage with 2k. Ed Hawkins will get in contact with Gabi Hegerl. Hope to merge people from different communities. Minimum projects to start with, so means it is effective. Discussed WCRP funding issues. HG tried to get money for DAPS but told no money to give and the link with PAGES is not always a priority.

MFL went to their general assembly meeting where they talked about reorganizing their activities and priorities because there is less money. Could we join together for workshops?

13.2 Grand Challenges

Crosscutting actions. There is a new one on carbon, water. Last year went to general assembly and made contact with people between WCRP and PAGES. Positive.

PB said as part of CLIVAR, each group, when nominated, know they should have someone from paleo.

Brief mention of the CLIVAR YSM meeting in China, held one day before and two days after.

14. Future Earth update

Consult appendix for further information.

HM discussed progress report and outcomes of the SC/EC meeting in Montreal 2017, overview and highlights, Open Network, ECR Network, upcoming meetings, development of KANs, and opportunities for PAGES.

Mention of Pegasus Grant, Belmont Forum and EU Era-Net BiodivERsA.

14.3.1 Natural Assets

- Process of setting up KAN is ongoing
- definition workshop happening
- Formation of a Development Team (DT)
- Online open consultation on research themes/foci

ACTION: PAGES encouraged to be involved.

14.3.2 Oceans

- Kiel meeting was successful
- KAN will officially launch in June
- April 2017 call for members of Development Team:
 - o To refine purpose, structure and governance of KAN, and how to move forward.
 - o 80 applicants. No one from PAGES applied.

ACTION: PAGES encouraged to be involved.

14.3.3.1 Risks and Extremes KAN

- Concept currently developed between Future Earth (incl E3S cluster), ICSU's Integrated Research on Disaster Risk and WCRP.
- 1st online meeting with Dorothea Frank and Marcus Reichstein September 2016
- HG and MFL said hadn't heard anything since November 2016
- HM admitted this was a recurring problem
- DT aimed for Fall 2017
- Belmont Forum CRA: Risk Reduction and Resilience (DR3)
- One day scoping workshop 23 November Paris?

ACTION: Email Thorsten and Fumiko to make sure PAGES involved.

ACTION: Send a rep from PAGES to November meeting.

FTIs and Clusters

- All Fast Track Initiatives ended June 2017.
- Outcome report coming in 2 weeks

SC/EC Meeting in Montreal

Outcomes include

- To improve clarity of KANs, via Task Team KANs
- Establish/highlight importance of GPRs to Future Earth
- Streamline governance structure

- Merge and downsize committees
- GC will draft new governance structure by 30 June 2017
- New Executive Director hopefully start in August
- Defining priorities
 - Develop 5 overarching narratives.

PAGES' Science Plan and Implementation Strategy

ACTION: Send HM the 2016 PAGES' Review document to see if acceptable (done)

Communications

Discussion of way Future Earth communicates with PAGES/GRPs.

- Too much information coming too often from Future Earth
- Driven by narrative
- Very few communications on science side of things – lack of scientific outcomes
- Unrealistic deadlines – not given enough time to prepare and respond appropriately
- Reciprocal communications currently lacking
- Concern about changing liaison person every year
- Imperative that interaction between KANs and GRPs are addressed by Task Team KAN
- Is paleoscience important to KANS and Future Earth?
- Identification of 3 KANs PAGES will be involved in. Remain just 3.
- Suggestion for PAGES to make 2 slides for each KAN on why paleoscience is important for these KANs.

ACTION: HM to make sure AW and MFL receive clearer emails from KANs to forward to PAGES community.

ACTION: IPO to contact HM to see if the “paleoscience” slides would be used.

ACTION: If so, make slides about science from scientists. MK Oceans, HG Risks and Extremes, who would make Natural Assets?

HM wrapped up her informative presentation by saying she had heard that PAGES is strong and a keen core project and it was clear to her now this was actually the case. PAGES concerns are valid and she understands them. Need more clarity. PAGES commitment to some of the KANs wasn't clear from Future Earth perspective – not sure PAGES wanted to get involved or not. She would have a good message to take back to global hub leaders.

IPBES

Discussed difficulties for PAGES to be involved in IPBES and Future Earth Task Force on IPBES.

ACTION: PG to contact LG and Kathy Willis about IPBES. What to do? Perhaps make a group of three or four people who will cover this.

ACTION: Marie-France to ask for more information. (done)

ACTION: Ask Thomas Giesecke to be involved with Lindsey. If she is willing to continue?

15. Any other business

15.1 PAGES and INQUA

- MFL met with Alan Ashworth 2 weeks ago.

- Young scientists group – maybe PAGES young scientists group could be involved in organization of workshop.
- Mention of complimentary goals and actively seeking new ways to work with them.
- Discussion of INQUA structure.
- DK said would be good to have support of INQUA for paleo data standards.
- Brief discussion on possibility of merger, but organizations do different things.

15.2 IPCC

- Discussion of how PAGES can contribute to IPCC?
- Is there time to react? Is there something to prepare in advance?
- PAGES is in a good place where scientific paper could be produced for IPCC assessment by early 2020.
- Push people around you to apply – only need small number but important they are good nominations, young people, varied. PAGES can help to motivate people.
- Plus think about review of the reports. Review will be from first draft. First draft to review the science. Process starts? Group 1 published by 2020, then group 2 and 3.
- PAGES needs to come up with lists of individuals willing to engage on these things as paleo doesn't have own chapter this time, but paleo is welcome. Paleo needs to address questions relevant for future climate in story of IPCC.

ACTION: How should PAGES proceed? Collate a list of individuals willing to assist?

15.3 ICP13 Meeting

- KM organizing the 13th International Conference on Paleooceanography in Sydney, Australia, 1-6 September 2019.
- Expecting 400-800 participants.
- Will write a proposal for PAGES funding - could bring PAGES and ICP communities together
- Suggestion to contact working groups directly and suggest sessions or splinter meetings and also a PAGES early-career scientists meeting, if it goes ahead.

15.4 SF last SSC meeting

- SF thanked the group, as this is her last official in-person PAGES meeting. She said the group was inspiring to interact with, and she is grateful to PAGES for enriching her life.