

## PAGES SSC Meeting, Pune, India, February 2–3, 2000

### Present:

**SSC:** José (Pepe) Boninsegna, Keith Briffa, Julie Brigham-Grette-Grette, Patrick De Deckker, Zhentang Guo, Laurent Labeyrie, Vera Markgraf, Bruno Messerli, João Morais, Yugo Ono, Daniel Olago, Tom Pedersen (chair), Dominique Raynaud, Matti Saarnisto, Ashok Singhvi, Thomas Stocker and Anne de Vernal.

**Guests:** Ray Bradley, Arthur Chen, Jean Jouzel (representing CLIVAR) and Bob Wasson.

**IPO Staff:** Frank Oldfield, Keith Alverson and Niklaus Schranz

**ACTION ITEMS ARE UNDERLINED, INFORMATION UPDATED SUBSEQUENT TO THE MEETING IS WHITE ON BLACK**

### 1. Welcome

The hosts Pant and Kolli welcomed SSC in India. Pedersen thanked them for their tremendous help and hospitality. He opened the session and welcomed the new SSC members Brigham-Grette-Grette, a terrestrial paleoclimatologist with valuable Russian Links, Olago, a sedimentary geochemist working mainly on the East African Rift Lakes and Singhvi, the new South Asian representative who brings a terrestrial Focus to PAGES. He also welcomed the guests Bradley, Chen, Jouzel and Wasson. He thanked the departing SSC-members Overpeck (who had been vice-chair and has done an outstanding job as data coordinator) and Partridge for their valuable contributions. In his “chairman’s remarks” he praised the PAGES office staff for their work, especially for the impressive Newsletter. Schranz explained in short the distributed PAGES website statistics, which illustrate the (still growing) importance of this part of PAGES communications.

### 2. Minutes of the last SSC-Meeting

SSC approved the minutes from the Shonan meeting. Labeyrie corrected that SCOR does not provide “ample” funds to IMAGES. Briffa reported that the action item of discussing the different concepts of high resolution between the HiHol/PICE-initiative and PAGES-CLIVAR has been discussed and sorted out with Overpeck. De Deckker clarified his statement in the IMAGES discussion: He didn’t say ocean/continent interaction was discouraged at the EPILOG workshop, but he was annoyed by oceanographers not wanting terrestrial scientists to produce climate maps.

### 3. EXCOMM minutes 1999

Pedersen reported that the main item had been the search for a new Executive Director. (see 10). Vera Markgraf has been appointed new vice-chair of SSC. Briffa thanked the QSR special volume editing team (Alverson, Oldfield, Bradley) for a very good job.

### 4. Activity and task leaders reports

Mainly those reports requiring decisions by SSC were discussed. The requests for workshop funding were deferred to the budget discussion (6., below).

#### 4.1 ARTS

Boninsegna reported that there will be a special session on tropical treerings at the Mendoza treering conference. He will contact Dunbar.

ARTS’ support for the joint PAGES-LOICZ sea-level initiative was appreciated (see 8.4).

Pedersen agreed to write a letter to COMPLEX supporting shallow water drilling (30m depth needed). Labeyrie mentioned that since ODP has no big vessels available, one new development there is actually shallow water drilling. He argued that ODP needs to be pushed to do more global change research in general. Pedersen agreed to write accordingly to the Joint oceanographic Institutions. De Deckker suggested that shallow water drilling should focus on ocean/terrestrial interaction, Brigham-Grette and Singhvi supported this from their respective Arctic and Indian perspectives.

Alverson will inform Dunbar about the planned PAGES-CLIVAR meeting in the Pacific. Labeyrie noted the mention of data synthesizing problems in Dunbar’s report. Alverson will also address this in his letter.

#### 4.2 IDEAL

Olago reported from the Malawi Synthesis meeting, which went very well. All the important people were present and there’s new coring planned. IDEAL has the form of a loose consortium. There are some collaboration problems though: There’s a tendency of westerners to use African scientists as logistical support but not to let them participate in the actual research. He suggested that a part of the research proposals should consist of stipends for the involved Africans to work abroad in state-of-the-art labs.

Another problem: dating is not available. There is a lab in South Africa, but it is expensive and lacks an AMS facility. The best solution is mutual collaboration with western labs. Olago has managed to get a

special deal with Sandy Harrison's lab. Bradley suggested setting up a prep lab in Africa: that's easier to fund than "an infinite number of samples". This idea was not supported by SSC. De Deckker asked about alternatives to RC-dating; Singhvi pointed out that other methods (OSL) are not cheaper, but that some labs in Africa will be able to produce them in due time. Indian AMS dating may be a cheaper option.

IDEAL (and all sub-Saharan Africa lake research) needs a central secretariat, which would also serve as a data center (the meeting was back to back with a meeting of GEF, which might support this.). There also should be a state of the art research center in the region, so as not to have to analyze everything abroad. An African Lakes Foundation for providing small grants was also discussed.

Brigham-Grette suggested central archiving of the cores. This had not been a topic in Malawi.

Wasson enquired about socio-economic research in IDEAL and its coordination with LUCIFS and LIMPACS. Olago explained that this is just in the conception stage. He will liaise with Battarbee and Wasson for coordination.

#### 4.3 LIMAPCS

Oldfield wasn't at the recent LIMPACS-meeting, but reports: The main outcome will be an implementation plan published in the PAGES workshop series. He hopes for a stronger involvement of the Southern Hemisphere in LIMPACS. He will introduce Olago as a contact.

Bradley missed the paleo perspective in LIMPACS, "Future development and human impact on aquatic ecosystems" being the main focus. Pedersen argued that paleoscience is an important part of the project, the future mainly being the rationale. Oldfield saw this as a very important fundamental question. Interaction between paleo- and present research is very important (e.g. PAGES-CLIVAR). He deplored a lack of understanding for Focus 3 science in the SSC, having to establish its rationale time and time again. There should be people with the appropriate background in the SSC. Pedersen objected that SSC has learned a lot over the years. Chen wanted to base his opinion on composition of the LIMPACS-SC (which according to Oldfield is dominated by paleolimnologists). Pedersen and Briffa both plead not to narrow the PAGES focus too much. Oldfield and Messerli reported from a recent conference in Bonn that collaboration between IGBP and IHDP is still difficult. Markgraf and Raynaud considered this mainly a wording problem, not a principle disagreement.

Oldfield pointed out that LIMPACS reflects the new possibility in limnology of proofing changes not only in terrestrial and fluvial, but also in the aquatic systems themselves.

Markgraf inquired about links to PAGES-CLIVAR? According to Oldfield LIMAPCS concentrates more on human impacts than on climate variability. Pedersen suggested that CLIVAR should at least be informed. Battarbee to contact CLIVAR.

Wasson suggested a discussion on PAGES and prediction in item 11 (future of PAGES).

Ono pointed out that LIMPACS is very American/European centered, even though Asia has records of much longer human impacts. He hopes that these will be represented too.

Oldfield will report the results of this discussion back to Battarbee, to hopefully be included in the evolving program.

#### 4.4 LUCIFS

Wasson had problems finding funds for the meeting, but eventually it will now take place in Bonn, thanks to the German Global Change committee. LUCIFS wants to document different trajectories of areas around the world, which tell much more than static models. 22 case studies all over the world have been started; they should result in new global models. The meeting is aimed at forming a community from the many individuals.

Chen wished to include fresh water flux into the Ocean as a part of LUCIFS, to find out about deposition/upwelling relations. Wasson replied that there are no convincing proxies available, but that this question could be tackled with shallow drilling, mentioned above. Pedersen to include this in his message to COMPLEX. Labeyrie pointed to estuaries as data sources, but Wasson believes they're very difficult to deal with. Oldfield remarked that the drilling people are more interested in the downstream than the upstream. In any case, Wasson is in contact with LOICZ.

Brigham-Grette wished a better inclusion of US Arctic system modelers. Wasson thought that they might not do enough paleoscience to fit in LUCIFS but he will keep contact.

Singhvi noted an overlapping schedule of the LUCIFS and FLAG meetings. Their science also has some overlaps.

It was regretted that the Nile and Amazon are missing from LUCIFS due to missing research groups.

#### 4.5 PEP II

Guo presented the PEP II report. The synthesis meeting will mainly focus on monsoon, the themes and the participants mentioned in the report are yet pre-final.

Singhvi was missing the Indian component. Guo replied that it will be there, the participant list has yet to be worked on, suggestions are welcome. Ono mentioned HIPP as another Indian involvement; longer timescale research in India is not so well linked in, that has yet to be improved. Labeyrie mentioned that Ramesh is in the IMAGES-SEAMONS WG, so India is not completely excluded, but integration can be improved.

Brigham-Grette enquired about the Eastern Russians. They seem to be ignored in Russia as well as in PEP II, but there's good research available. Guo mentioned BDP. Ono pointed out that by focusing on the monsoon the northern part of PEP II is a bit neglected. In general PEP II is well including Russian science (e.g. Okhotsk Sea and Kamtchaka projects) Bradley reminds that originally the PEPs were planned as a

vehicle to join research communities along regional transects – this not necessarily meant that the environmental systems fit together well. So there might have to be meetings on regional systems as well. Labeyrie mentions that there will also be a IMAGES-meeting on Okhotsk-Arctic interaction in Moscow.

Jouzel wondered about the inclusion of Ice cores from Antarctica and the Himalayas. Ono mentioned Dome Fuji, but those people are not so interested in PAGES. Japan has structural problems (e.g. Baikal researchers refuse to participate in PEP II). In addition, Japanese work in the Himalayas was not a PAGES-program, so it's now difficult to integrate.

Dodson seems to have problem finding enough time for PEP II leadership. He should have a steering committee assisting him for the meeting. SSC agreed that the existing PEP II steering group be reinforced with Brigham-Grette (Russia), Singhvi (India) and De Deckker. The latter might step in Dodson's shoes if he chose to step down.

SSC discussed the proposed meeting not really being the synthesis meeting originally envisioned. The Fremantle meeting had identified the Monsoon as a key element of PEP II, so the meeting would fit in the PEP II synthesis. Opinions differed on the question whether PEP II should go for a writing workshop (smaller group) or a major open meeting. SSC agreed that the PEP II meeting should be more of a synthesis meeting, if possible including the northern and southern ends of the transect. This change will probably delay the conference. The PEP II members present discussed this overnight and decided that there will be a planning meeting in Japan in September 2000 organized by Ono, and the actual Synthesis writing meeting will then take place in 2001, probably still in Singapore.

SSC decided that the product of PEP II synthesis should be published in a widely accessible journal and not in the proposed one from Singapore.

**After the Meeting John Dodson agreed to those decisions. He is making the necessary arrangements with Singapore University. The PEP II Synthesis will probably be published as a book with Blackwells.**

#### 4.6 PEP III

Oldfield reported that the HOLIVAR proposal to EU for a workshop series is well on track. Unfortunately a good funding opportunity for a multi-proxy database was missed due to the inability of MEDIAS (France) and PAGAEA (Germany) to cooperate, because of both personal and systematic differences.

Labeyrie reported that IMAGES is cooperating with PANGAEA. Their primary database for archiving is still WDC-A in Boulder, but PANGAEA delivers value added by nice web-based tools for data integration and display. There is a problem that PANGAEA does not reference all data properly and needs to be leaned on to do better. Labeyrie will coordinate IMAGES, CAPE, PAGES and all the PEPs to write a letter to PAGAEA. Messerli suggests to cc the German Global

Change Committee and DFG, they are interested in true cooperation.

Organization of the PEP III synthesis conference in August, 2001 (Aix, France) is on track. Both Battarbee and Gasse are planning to step down as PEP III leaders after the meeting. Alverson enquired about the after-conference publication: how will this happen if Battarbee and Gasse quit? Oldfield has no worries in this respect, but will discuss the issue with the two. Further discussion of the future development of PEP III leadership is best included in the restructuring of PAGES tasks and activities (see 11).

2000 will see three regional meetings in the UK, the Czech Republic and Nigeria.

#### 4.7 ANTIME / ITASE / PICE (GLOCHANT-SCAR Book)

Raynaud explains that this is a sort of GLOCHANT Antarctic synthesis. It's more time-series than thematically oriented. SSC agrees to wait and see where GLOCHANT is heading. PAGES can state its enthusiasm and if needed endorse the book. Raynaud will represent PAGES at the next GLOCHANT meeting in March.

#### 4.8 IMAGES

Labeyrie reported on the status of all Working Groups and their relevance to PAGES.

Future cruises of the *Marion DuFresne* will include the N Indian Ocean (2000), the NW and NE Pacific (2001; needs input from interested scientists) and the Southern Ocean (2002). A possibility for 2003 is around S America (needs links)

De Deckker reminded of his earlier proposal regarding fellowships for students to go on IMAGES cruises. Labeyrie informed that IMAGES has funds available for such a scheme. SSC strongly supported PAGES endorsement of this idea. Labeyrie and IPO will organize and advertise the program.

Pedersen congratulated Labeyrie on the great progress of IMAGES science during his directorship. The new director is Sarnthein in Kiel (Germany). Labeyrie is now chair of IMAGES-SC.

#### 4.9 PICE / ITASE

Raynaud reported recent developments in the Antarctic: Siple dome is a 1000m core drilled by the US. There are plans for drilling at Byrd to find out about West Antarctic Ice sheet stability. Dome Fuji in Eastern Antarctica will see new drilling next year, focusing also on biological research. EPICA has drilled 700m at dome Concordia. China also has a drilling project.

In Greenland North GRIP attempts to resolve the Eemian disagreement between GRIP and GISP. They drilled 1700m in one year, after first having been stuck.

Raynaud now has a strong focus on the Holocene, he's planning a joint HIHol workshop with Briffa. In the light of PAGES Task and Activities restructuring (see 11) he's not convinced whether PICE should continue as it is: the "P" might have to be removed, it should be

global Ice research, including tropical ice cores. The timescale should be increased to several glacial cycles, but also have a strong Holocene focus.

## 5. IPO Report, 1999 and 2000 finances

Oldfield explained that the roles of the office staff have evolved and are therefore spelled out in the IPO report, also for future reference. The PAGES Website and Newsletters are the two products most successful with the community. Financial reporting is now more detailed than before and allows better control. Presenting a budget for 2001 is rather premature at this stage, but there are already a few proposals for discussion.

He commented the already committed workshop funds for 2000:

- 17k for Synthesis will very probably not be sufficient for our planned activities this year. There's a pending request to IGBP for 20k of additional funding pending, but the success of this is not very probable. Success of Synthesis will be in danger if that amount can't be found somehow. Maybe some can be drawn in advance from 2001 funds. Morais can't give a more optimistic assessment, in the light of the financial situation of IGBP.
- 20k for BIOME300/HITE will entirely be funded by the Dutch Science Foundation
- 10k for PAGES-CLIVAR will probably not have to be spent
- 20k PEP II: will only spend 7k in 2000, 13 carried over to

These adjustments leave a maximum of 40k for additional workshops. The requests received total 60k+.

De Deckker inquired about the financial and scientific reporting of PAGES-funded workshops. The IPO staff replied that Swiss NSF needs full financial proof for the auditing of PAGES finances. Scientifically there should be at least a report in the PAGES Newsletter or – even better – a paper in a peer reviewed publication. Not all workshops in the past have met this, but the increasing profile of the Newsletter has improved the situation.

PAGES is buying 100 copies of the hardback version of the QSR special issue. Each lead author, both funding agencies, the IGBP Secretariat and all IGBP core projects will receive a copy. The remaining 50 copies will go to libraries and individuals in developing countries. There are already 50 suggestions in the office, but additional suggestions are welcome. Singhvi mentioned a plan of Jim Rose's to make the full 2000 volume of QSR for only 35\$ available to members of some quaternary science associations. IPO to find out details and inform community.

## 6. Workshop and Publication Program for 2000/01

The new requests for workshop support were discussed.

**6.2 APD:** The information supplied at this stage was not regarded sufficient for a PAGES grant. SSC agreed moral support. Oldfield to contact Hoepfner and ask for additional information and also suggest the inclusion of vegetation reconstructions additional to climate reconstructions.

**6.3 CAPE, 6.5 EPILOG and 6.6 IMAGES Ice Sheets** were discussed together: Pedersen found a lot of overlap between 6.3 and 6.6. Labeyrie agreed and asked whether they could be merged. Brigham-Grette added that the CAPE meeting nearly clashes with a similar meeting in England. Oldfield was bewildered with the proliferation of different Arctic programs and hopes that CAPE can get some coordination/structuring into all this. Saarnisto and Brigham-Grette refuted this concern. Alverson reminded that CAPE had been asked to rework their proposal at the last SSC-meeting – resulting in this new proposal. EPILOG, on the other hand, had already been funded in 1999.

The CAPE-proposal consists of 5k for organizational cost and 5k for travel support. SSC agreed to give 5k for supporting participants with no own funds available.

IMAGES already has 8k available for "several" workshops in 2000, but the EPILOG meeting is a first priority to Labeyrie (IMAGES is paying 15k, NSF 30k). SSC agreed to pay 4.5k (1.5k each for 3 participants from Eastern Europe) directly to the respective participants.

Pedersen suggested that IMAGES Ice Sheets should be held in conjunction with the CAPE meeting in Iceland due to the thematic and personal overlap. Labeyrie explained the scientific rationale for this meeting. IMAGES has not yet agreed any funds for this and wants to know the PAGES opinion first. Brigham-Grette pointed out the distinctive difference between the two agendas (ice sheet dynamics vs. sea ice) but supported the idea of holding them together. SSC agreed to allocate no money. Oldfield to inform John Andrews of this outcome in a very constructive and encouraging way. Raynaud recommended that ice sheet modelling should be better represented in the initiative.

**6.4 Czech PAGES.** Oldfield reported that there had been a meeting in 1995, which had produced a book that was not useful in PAGES terms. For this new meeting there has been longer discussion with the organizer Kadlec. At this stage they ask primarily for endorsement, not for money. The way the meeting has been announced has caused quite some confusion, (some people took it for the next PAGES OSM, because the regional character was not mentioned). Several members opposed financial support due to financial constraints and since the organizers came through the back door, using the PAGES name (with a different logo, though) without contacting the IPO in advance. Markgraf hoped that the meeting could help them establish better links with PEP III. Pedersen

suggested to contribute a little money to keep registration fees low, under the condition that they liaise with PEP III leaders. Labeyrie suggested to just support a PAGES representative's travel so he/she could judge the quality of the meeting. Oldfield mentioned the Executive Director's "discretionary 3k" which is available to be flexible at the IPO. He wishes to keep that possibility open, mainly because he doesn't want to turn down flat a request from Eastern Europe. SSC supported that view, and at the same time wanted to make sure that PAGES be represented.

**6.7 Isotopes in treerings.** An additional 1.5k to the 5k agreed in 1999 was rejected.

**6.8 LIMPACS report** (PAGES Workshop series 2000–1). SSC discussed whether a printed document is really needed. Alternatives would be distributing over the Internet and/or an executive summary as a Newsletter supplement. The example of the ARTS report has proven that a booklet can be a very useful and successful item. It has also to be considered that Internet access of the needed quality is limited in many regions (e.g. Russia, Africa). The volume (and as a direct consequence of that the price) of the report was also discussed: Does an implementation plan need to be 50 pages long? Eventually SSC agreed to the proposed printing cost of 7k, hoping that the actual expenditure will be less.

**6.9 Mineral dusts.** Oldfield pointed out that the support is aimed at participants from developing countries. Endorsing this meeting would also reaffirm that PAGES has a stake in aerosol research. Markgraf questioned one participant from Argentina who is more a politician than a scientist. Oldfield was glad for this information and encouraged SSC for more feedback of that kind when appropriate, to make sure that PAGES only goes to worthy people. Singhvi supported the proposal, since it will deliver a good product and PAGES funds will trigger additional money from other sources. Bradley regretted the current quality of the DIRTMAP-database and encouraged that they use WDC-A in Boulder instead of developing their own system. Singhvi clarified that the purpose of the database is drawing maps and that Boulder will be used for data storage. SSC agreed the 5k under the condition that data is stored at WDC-A, and the money only goes to practicing scientists.

**6.10 Paleograsslands.** SSC agreed to support 4 out of the 5 proposed participants with a total of 8k (the Brazilian is eligible for IAI funding). PAGES will not pay a block sum, but directly to the participants.

**6.11 Paleopedology.** Guo supported this proposal in order to strengthen links between Paleopedology and PAGES. Oldfield explained that the initial proposal had had very little paleo component and participation, and that his subsequent request to meet PAGES criteria was only vaguely responded to. The initiative should be supported but only under very clear directions to comply with PAGES guidelines, maybe PAGES should fund the participation of Guo to represent PAGES and direct the group nearer to PAGES goals. After an extended discussion of the pros and cons of paleopedology in general and this INQUA group in particular SSC decided not to fund

this meeting, considering that there are proposals closer to the PAGES goals competing for the tight funds. Oldfield to write a diplomatic letter and again point out PAGES guidelines.

**6.13 SCOR-IMAGES.** 7k were agreed by EXCOMM in January in response to a request at very short notice.

**PEP II Synthesis.** As a consequence of the changed plans (see 4.5) only 7k are needed in 2000, 13k are reallocated to 2001 budget.

**PEP III: Conference (6.16), Nigeria Meeting (4.5) and Mediterranean (6.17).**

SSC agreed 2.5k for the Nigeria meeting.

Oldfield explained that the Aix conference needs to be well enough funded to pay back investments Battarbee's group has made into PEP III. PAGES funds should ensure that the conference fee is not prohibitively high. Markgraf affirmed that a synthesis meeting needs the maximum possible support: To reach the scientific goal one needs the means to get the right people to the conference. PAGES funds should serve as seed money, to be matched by funding Agencies. Labeyrie supported this and mentioned the availability of conference funds in France, e.g. from CNRS. Gasse has plenty of financial resources at her new lab and good connections to the ministry, so she should be able to get sufficient funds. SSC confirmed 20k for the Aix conference. Oldfield to contact PEP III confirming PAGES funding, suggesting to use it as leverage for additional support.

The Mediterranean meeting is meant to be a preparation for the Aix conference. Considering the tight finances and the priority of the PEP III synthesis meeting, SSC decided to only morally, but not financially support this event. Otherwise the other regions might also want funds for their preparation. An alternative would be an e-mail conference.

**6.14 Law Dome:** Raynaud informed that this is not a synthetical meeting, but an Australian national workshop – not a top-priority PAGES funding target. Briffa didn't want to give a bad signal to that community, considering their very important work. . They should be encouraged to attend the HIHOL meeting. Raynaud and Briffa to help Oldfield draft a letter.

**REDIE:** Of the annual 10k at the discretion of EXCOMM, 3k will be used for the distribution of QSR-volumes (see 5). The remaining 7k should not be allocated to any of the above-agreed grants but remain freely disposable.

Overview of PAGES Workshop support 2000/01 (all figures are in kUSD):

**2000**

IDEAL, Lake Malawi, Malawi	15
PAGES Synthesis Appenberg	13
South Asian Paleoenvironments	10
BIOME 300 / HITE (external funding)	0
SCOR-IMAGES, Trins, Austria	7
Isotopes in Treerings	5
IMAGES, several	8
LUCIFS	5
PEP II Synthesis	7
LIMPACS	5

Treerings	8
REDIE (at discretion of EXCOMM)	10
HIHOL / PICE	15
PAGES / CLIVAR	10
CAPE	5
<b>Czech PAGES</b>	<b>5</b>
IMAGES–EPILOG	4.5
LIMPACS Publication	7
Mineral Dusts	5
Paleograsslands	8
PEP III Nigeria	2.5
PAGES Synthesis Bern / Kandersteg	17
<b>Sediment transport (LUCIFS, IGBP water)</b>	<b>3</b>

Total 175

**2001**

PAGES-CLIVAR	10
PEP II Synthesis	13
PEP III Conference	20

Total 43

Oldfield will inform all applicants of the outcome and the consequences.

Markgraf suggested that for future SSC-meetings it would be important to have more information about the proposed workshops. Especially a participant list would be very helpful. IPO to adjust submission guidelines.

**7. Status of PAGES Synthesis**

Pedersen reported the result of the January writing week in Appenberg. It was tremendously effective, there were a lot of discussions about the science, internal to and between chapters. First chapter drafts should be ready by April, after that there will be 1 or 2 subgroup meetings. Another joint writing week is planned for June. This will have to produce chapter 8 and the brochure. After this there might have to be one or two small editorial meetings. Bradley and Pedersen will be the Editors of the synthesis book, which will be published with Springer. **Chapter 2 and 3 meetings will take place in Bern, May 15–17, the writing week will be in Kandersteg (Switzerland), July 1–4.**

In addition to the writing team, volunteers for internal review are needed: Everybody has to read chapter 1, Singhvi, Stocker and Jouzel will cover chapter 2, Brigham-Grette and Guo chapter 3, De Vernal, Chen and De Deckker Chapter 4, Markgraf and Stocker chapter 5, Saarnisto and Boninsegna chapter 6 and Olago chapter 7. Chapter 8 will again have to be reviewed by all of SSC. The reviews will have to be sent back to the authors. There will also be external reviewing in a second stage. The reviewers will be mentioned in the book.

**8. Special Reports / New Developments**

**8.1 PAGES / CLIVAR**

Jouzel wrapped up the history of this project, the latest achievement being the 1999 Venice meeting. CLIVAR doesn't do it's own paleo work, it relies on PAGES for it. CLIVAR focuses on the variability of the last millennium (especially the last 400 years), abrupt changes, climatic variability of the Holocene and the previous warm period and on paleoclimate modeling (PMIP).

De Vernal suggested a PAGES-CLIVAR presence at the next PMIP meeting. Stocker pointed to the difference between PMIP (technical intercomparison at 2 time stages) and PAGES–CLIVAR (PAGES supplying high-resolution data), PAGES shouldn't obscure the high profile gained lately with the CLIVAR community by including lower resolution data. Jouzel clarified that PAGES still has "ownership" of data shared with CLIVAR.

Labeyrie inquired what PAGES scientists have to gain from this cooperation. In Briffa's opinion it has been extremely valuable in fundamentally changing the modelers perception of paleodata.

Raynaud addressed PAGES-CLIVAR's Holocene focus. This should be concerted with the HIHOL meting.

Labeyrie complained that the PAGES-CLIVAR meetings were not well enough announced. He asked Alverson to keep close ties between PAGES-CLIVAR and IMAGES.

Bradley addressed the overlap between HIHOL, PAGES-CLIVAR and the SCOR-IMAGES meeting in the abrupt change question. Stocker agreed there was some inevitable overlap, but abrupt change is only one part of PAGES-CLIVAR.

Oldfield expressed his conviction that PAGES benefits enormously from the PAGES-CLIVAR-Intersection, it is important for PAGES' reputation in the Global Change community. Some of the delays in announcing the proposed meetings are caused by pending proposals for external funding. He rejected Labeyrie's criticism, communications had been good.

**8.2 HITE**

Oldfield reported from a successful meeting. A steering committee with the right people has been set up: Bugmann, Dearing and Gaillard. The upcoming BIOME 300 meeting with 50 participants is externally funded. Hopes for strong SSC endorsement of the initiative and at the same time fears that there will be no Focus 3 person on the 2001 SSC. Brigham-Grette inquired about PARC involvement – she will contact the respective people. Pedersen regretted that Focus 3 had so far been a bit neglected by SSC. It is becoming increasingly important, especially in collaboration with other Programs (e.g. IHDP).

**8.3 LUCIFS**

See 4.4.

### Mountain Initiative

Messerli described the necessary diplomacy to coordinate three IGBP core projects and IHDP. Finally a IGBP-backed initiative for setting up a project office in Bern was devised. An inquiry to Swiss NSF for support received a negative reply, in the light of the also pending PAGES-CLIVAR proposal. They don't want to spend too much on coordination efforts. He's now trying to find other sponsors – it's a difficult situation, but more of a pause than a stop. Time is becoming short for producing something for the year of the mountain 2002.

Raynaud asked whether there will be a PAGES mountain activity – this will have to be included in the task and activity revision (11)? Messerli explained the complicated structure of an “inter core project”, it will only integrate existing research in other tasks and activities.

Alverson tabled the low end solution discussed in 1998 of just compiling some PAGES research for a special issue of a journal. Somebody would have to be found to do it. Oldfield was unhappy to say that the IPO will not be able to handle it. Maybe Luckman would do it? Markgraf and Alverson to find somebody, Boninsegna to bring it up the question at the Mendoza treering meeting.

### 8.4 Late Holocene Sea-Level Change

Oldfield reported from this project. November 1999 saw an agenda setting meeting with LOICZ, which was very promising. Goodwin, the PAGES leader for this initiative, is very committed in ANTIME and ITASE but will reduce those engagement in order to prioritize this new activity. SSC endorsed this activity and is looking forward to a more detailed science plan. Oldfield to inform Goodwin to go full steam ahead. In organizational terms it's home in PAGES tasks and activities is yet unclear and subject to the task/activity revision (11). In addition, an acronym has to be found (RIDGE? SLOP?).

The project is only focused on the Tropics in so far as that some of the best high-resolution archives are in the tropical oceans. Brigham-Grette mentioned an Arctic meeting on the same topic.

### 8.5 REDIE / Outreach

Olago presented the situation in (mainly sub-Saharan) Africa and the Nairobi Pan African START secretariat (PASS). Communication structures in Africa are disparate. Journal access is difficult and the same applies for online databases. The best place for sending reprints is PASS, which runs a distribution service. WDC-A has set up a mirror of its databases at PASS: <http://wdc.uonbi.ac.ke>.

At the successful IDEAL meeting in January a number of suggestions for REDIE activities were discussed: summer schools, infrastructure support and fellowships. These activities should be led by REDIE. START would be ready to top up the annual 10k with additional 6–8 k. Linking with IDEAL, Mac Arthur Foundation, NORAD and CEF would be useful. Oldfield was glad to hear that if dealing through PASS cooperation with START will improve.

Labeyrie enquired about connections of PASS to North and South Africa. Olago explained that although North Africa falls into the Mediterranean START region, there are links. Contacts to South Africa are also ongoing.

Bradley suggested putting a call for unused equipment (books, microscopes, computers...) in the Newsletter. IPO will do that

Taking Olago's arrangement with Harrison (see 4.2) as an example, Alverson stressed that contacts between developing and developed institutes can be very helpful and should be fostered by the publication of requests in the PAGES Website and Newsletter.

Oldfield reminded that Africa is not the only needy region, Asia also has to be included in REDIE activities. South America is covered by IAI.

Stocker reported that a Summer school needs considerable organizational and financial resources. He recommended using a location cheaper than Switzerland.

### 8.6 Inter-PEP

Markgraf reported that funding of PEP I coordinator Geoff Seltzer could be secured for the next 3 years. The synthesis book from the Merida meeting is in its finishing stages.

The results from the 1999 Inter-PEP meeting will be published in the next but one Newsletter. She requested feedback and more input from all participants and SSC on the draft document. Is this an important initiative, should it be continued? Inter-PEP is meant to strengthen the PEPs. On the other hand, are there overlap problems (e.g. ENSO is also important in PAGES-CLIVAR). Everybody to respond to Markgraf by the end of March.

Brigham-Grette supported the cross-link approach of Inter-PEP.

Bradley didn't support further specific Inter-PEP meetings, linkages can also be made at existing meetings. He suggested holding a PAGES Open Science Meeting in 2002 with PANASH as a very “interpeppy” leading theme. By then the PEPs should be mature.

### 8.7 PMIP

Anne de Vernal presented the results from the 1999 meeting: PMIP is at a turning point. The next step will be moving to coupled models. The 2001 meeting will take place in Europe (10<sup>th</sup> anniversary).

Markgraf inquired about the inclusion of data people, which according to de Vernal is actually happening at the PMIP meetings.

Stocker enquired about transient simulations in addition to just time slices. This is a goal of future PMIP activity.

Wasson raised the question of including recent anthropogenic impacts. He suggested tackling this in cooperation with BIOME 300.

Alverson mentioned that PMIP is opening its database to the public. In this respect he suggested coordination with WDC-A and contacting IGBP-DIS.

Labeyrie suggested setting up a data synthesis project in PAGES. He will submit a written suggestion for the Task/Activity discussion (11).

## **9. Rotation of SSC membership**

This item was dropped and left to EXCOMM due to time constraints.

## **10. Replacement of Executive Director**

Pedersen reported that there had been 28 Applications, which had been reduced to a shortlist of 4: Keith Alverson, Tom Edwards, Patrick De Deckker and Malcolm Hughes. A decision will soon be made.

## **11. Planning the Future of PAGES**

Oldfield described 2000 as the most important year for PAGES since it started. At the same time as the ongoing Synthesis and Task/Activity structure discussions IGBP as a whole is also undergoing major changes, and the funding agreements with Swiss and US NSF need to be renewed. PAGES future will have to be the foremost topic of the next SSC meeting, including a preparation process. He introduced his draft document (11.1) on how to review and restructure PAGES tasks and activities. In his view PAGES should remain responsible only to IGBP.

Pedersen thanked Oldfield for all the thinking that went into the paper. PAGES' success is no excuse for resting on the laurels.

Wasson reported that IGBP-SC wants to balance bottom-up initiatives and program wide steering. IGBP reorganization will come from intellectual needs, not just for the structural changes' sake. Filling existing gaps should not cause new bureaucracy. IGBP's cross-cutting synthesis themes are the carbon cycle, food / fin / fiber and water. How does PAGES react to the two latter ones (carbon seem clear)?

Raynaud queries the relationship between IGBP (geochemical cycles) and WCRP (physical dynamics).

He isn't sure of PICE's future (4.9) because WCRP-CLIVAR now has its own ice activity (CLIC), with which he cooperates.

Raynaud also proposed altitudinal structuring of PAGES activities as an alternative to the PEPs.

Oldfield saw Focus 4 and 5 offering interesting cross-cutting themes, but they have never had strong leadership and not taken off. Strictly hierarchical structuring should be reduced in favor of more thematic approaches. In addition the number of tasks and activities should be significantly reduced.

Pedersen made clear that the restructuring process will require tough decisions. Everybody has to carefully read Oldfield's paper and comment until March 1 and also send in their independent views on the strengths and weaknesses of PAGES and their vision for the future.

Messerli suggested to hold a one day "PAGES future" meeting before submitting the new proposals to the funding agencies. **This will happen on July 5, after the Synthesis writing workshop.**

## **12. Next meetings**

Pedersen explained that the next SSC meeting has to be early in 2001 because of the IGBP open science meeting. Possible locations include Helsinki / Lamni (Saarnisto, Russian contacts). Alverson suggested to hold a cheap meeting to save money for Synthesis (Bern? Montreal?) IPO to find a money-saving venue, Russian contact is postponed to 2002.

Oldfield pointed to the problem of devising a mechanism for distribution of 2001 workshop funds. He suggested a June 1 deadline for submissions, which will then be put to EXCOMM and subsequently SSC.

**Subsequently EXCOMM has decided to tie SSC 2001 to the IGBP OSM in June. EXCOMM will hold a meeting on July 6.**

*Niklaus Schranz, April 2000*