

Status of Implementation of the JSC-34 Action Items

(based on the outcomes of the JSC Teleconference of 16 September 2013)

NB: The Table below contains numbers of JSC-34 actions pertaining to WCRP Working Bodies and individuals. Bold numbers indicate the overall responsibility or co-lead for the action or for the initiation of the action. The actions are listed after the Table.

WCRP Working Body, Responsible Group, or Person	Action Number(s)
JSC Members	2, 17, 21, 22, 58, 62
JSC Chair	40
Anne Cazenave	23
Hugo Berbery	48
D/WCRP and JPS	2, 4, 6, 11, 12, 13, 24, 26, 27, 28, 30, 31, 33, 38, 39, 40, 45, 56, 59, 60, 61, 63, 64
CliC SSG Chair and Director CliC IPO	8, 14, 15, 17, 18, 19, 20, 24, 26, 34, 43, 45, 46, 47, 52, 58, 59
CLIVAR SSG Co-chairs and Director ICPO	1, 3, 8, 14, 15, 17, 19, 21, 22, 23, 24, 25, 26, 34, 37, 38, 39, 41, 42, 43, 44, 52, 57, 58, 59
GEWEX SSG Co-chairs and Director IGPO	1, 3, 8, 14, 15, 11, 17, 21, 22, 24, 26, 32, 34, 37, 39, 43, 44, 48, 49, 52, 58, 59
SPARC SSG Co-chairs and Director SPARC IPO	3, 14, 15, 17, 19, 34, 43, 44, 51, 52, 54, 58, 59
SOLAS SSC Chair and Head of SOLAS IPO	37, 58
WMAC Co-Chairs	27, 28, 58
WDAC Co-Chairs	3, 5, 28, 32, 34, 35, 36, 37, 50, 58
WGCM Co-Chairs	1, 3, 14, 15, 17, 23, 29, 30, 46
WGNE Chair	1, 37, 43
WGSIP Co-Chairs	1, 14, 15, 17, 18, 19, 46, 53
WGRC Co-Chairs	1, 8, 9, 10, 14, 15
CORDEX SAT	1, 9, 10, 15
PCPI Co-Chairs	1, 19
LAC (Montevideo) Conference SSC	11, 12, 13
Africa (Arusha) Conference SSC	12, 13
Task Team on GC on Climate Extremes	21, 24, 25, 26, 52, 58
Task Team on GC on Water Availability	22, 24, 25, 26, 52, 58
Task Team on GC on Regional Sea Level	23, 24, 25, 26, 52, 58
Task Team on Regional GC (once established)	24, 25, 43, 52, 58
Task Team on Cryosphere GC (once established)	24, 25, 52, 58
Leads of Climate Sensitivity GC	24, 25, 43, 52, 58
Leads of SPARC/IGAC CCMl	51
CMIP6 Planning Group	52
Co-Chairs of S2S Project	1, 54, 55

WMO and Global Framework for Climate Services

Action 1

WCRP JSC and its constituencies to engage in implementation of the Research, Modelling and Prediction component of GFCS, for which WCRP has the lead; engage in this work National Hydrometeorological Services; and make an effort on achieving successful outcomes during the initial stage of GFCS implementation, particularly in the activities of the Compendium of GFCS activities with WCRP responsibilities, focussing on GFCS initial priorities: water resources management, food security and agriculture, disaster risk reduction, and human health protection.

Deadline: Workplans to be determined by the end of 2013

Status: 9 from 15 activities proposed in the Research, Modelling and Prediction Annex of the GFCS Implementation Plan were included in the Compendium of initial GFCS activities. CLIVAR flagged GFCS as an important customer to all its working bodies. GEWEX has asked for further guidance on how GEWEX could contribute to GFCS. One avenue, as suggested by JSC Chair at the teleconference in September 2013, is linking corresponding research and operations on national level in as many countries as possible and, for GEWEX, a natural course of action would be related to development of climate services in the area of water resources. WMAC could consider coordinating corresponding modelling and prediction activities of WCRP and its three modelling groups (WGCM, WGSIP and WGNE). WGSIP is actively involved in GFCS (European SPECS project, joint meeting with WMO ET-OPSLs, etc). Similarly, the Joint WGCM/WGSIP Panel on Decadal Climate Predictions has close connections with the pre-operational Decadal Forecast Exchange initiative led by UKMO. WGSIP is actively involved in GFCS (European SPECS project, joint meeting with WMO ET-OPSLs, etc) and has some relevant regional activities.

However, the overall level of WCRP engagement in GFCS implementation is much less than required. New activities proposed in the Research, Modelling and Prediction Annex are not starting.

ICSU and Future Earth

Action 2

WCRP JSC to review the draft design report of the Future Earth Transition team, provide comments and suggestions on its content and text to D/WCRP. D/WCRP to pass WCRP comments and suggestions on the Report to the Transition Team.

Deadline: As soon as the report is available

Status: Done, WCRP continues the dialogue with the Future Earth on contribution of WCRP to its goals. WCRP has taken part in several Future Earth meetings. Sponsors are involved in a similar discussion.

Action 3

WCRP projects and constituencies WCRP engaged in joint activities with IGBP (such as IGAC, iLEAPS, AIMES, IMBER, PAGES, SOLAS) to monitor their status and continuity.

Deadline: report on status and progress of joint activities at JSC-35

Status:

CLIVAR works in close cooperation with PAGES and IMBER. CLIVAR will participate in the "Future Ocean" conference next boreal summer, which is led by IMBER.

GEWEX has strong collaboration with iLEAPS. Collaboration with IGAC in the area of aerosols was on the agenda of the GEWEX SSG in Boulder in November 2013.

SPARC has both new and ongoing collaborations with IGAC and some joint activity with iLEAPS. Ongoing communication is healthy and included a meeting with IGAC director Megan Melamed to discuss our joint work through CCMI and the emerging ACAM (Atmospheric Composition and the Asian Monsoon) activity. A joint CCMI meeting was held in Lancaster, UK, on 20-22 May 2014.

WGCM held a joint session with AIMES at the WGCM meeting in early October 2013. One of the main topics was cooperation in formulating CMIP6. A workshop on GC on Sensitivity was held in March 2014 in Hamburg and IGBP-affiliated speakers participated.

WDAC-3 was held in Galway, Ireland, hosted by Brian Ward (SOLAS), and this will help WDAC to strengthen connections with SOLAS and the IGBP community. WCRP JPS works in close contact with SOLAS SSC.

NOAA

Action 4

D/WCRP to send a letter to NOAA thanking Administration for many years of supporting CLIVAR and GEWEX.

Deadline: at the time of the CLIVAR IPO closure in Southampton

Status: to be done.

CEOS, CGMS

Action 5

WCRP to consider ways of participating in and contributing to the CEOS Strategy Report on Climate Monitoring Architecture and provide to CEOS Working Group on Climate a list of working groups that are in position to contribute to inventory of data and data products such as FCDRs and assessment of ECVs. To make an effort to include data and products based both on Earth observations from space and on in-situ observations.

Deadline: depending on the timing of the Report

Status: Done. WDAC is working closely with the new Chair of WG – Climate (John Bates) on the CEOS/GOSIC inventory. WDAC has fostered development of a joint CEOS/GOSIC satellite/in situ inventory tool. The issue of the WG – Climate's sponsorship is developing. CEOS/CGMS joint sponsorship of the group has since been endorsed by CGMS and CEOS and a first joint session was held 5-7 March 2014 in Darmstadt. A joint CEOS/GOSIC Inventory questionnaire has had preliminary review and is moving forward to implementation. WDAC is also working on bridging the communities cataloguing the datasets and those actually working on making them available, such as the ESA Climate Change Initiative Phase 1.

EUMETSAT

Action 6

In partnership with EUMETSAT, GCOS, CEOS, and CGMS, WCRP to continue preparations of the conference "Climate Research and Earth Observations from Space: Climate Information for Decision Making" with a view to contributing to co-design of an effective future climate space monitoring architecture. To include the information requirements of WCRP GCs on the agenda of the Conference, taking into account not only space but also in situ observations.

Who: JPS to lead

Deadline: continuously, report progress at JSC-35

Status: The work continues together with EUMETSAT. The conference was renamed into a Symposium. WCRP GCs are at the top of the Symposium agenda. A report on the status of the symposium will be given at the JSC-35.

Regional Grand Challenge

Action 7

To approve the modifications of the ToRs of WGRC.

Status: Done, ToRs are in the Appendix D of the JSC-34 Report and have published on the WCRP webpage. WGRC-2 took place in conjunction with the LAC Conference in Montevideo in March 2014.

Action 8

Ensure that members of WGRC representing projects not only work within WGRC but also serve as active liaisons between WGRC and project regional activities, especially GEWEX GHPs, and that they participate in corresponding project meetings such as SSGs. Recommend to GEWEX- and CLIVAR-affiliated WGRC members to participate in the 2014 Pan- GEWEX and CLIVAR meeting.

Deadline: continuously, start immediately after JSC

Status: Done. Further discussions are expected at the Pan-GEWEX and CLIVAR meeting in The Hague. The WGRC co-chairs expect to attend these meetings.

Action 9

CORDEX SAT to develop for consideration by WGRC and endorsement by JSC a mechanism for proposing and endorsing new CORDEX domains and review a need for such domains.

Deadline: progress report at JSC-35 after CORDEX SAT1 meeting in May 2014.

Action 10

CORDEX to report on status and advances of activities in major domains and lessons learnt.

Deadline: progress report at JSC-35

Latin America and Caribbean (LAC) Workshop

Action 11

To ask Carolina Vera to continue to serve as a JSC liaison to the LAC Conference SSC. D/WCRP to inform the SSC about this nomination.

Deadline: July 2013

Status: Done, report at JSC-35.

Africa Climate Conference

Action 12

To request Scientific Organizing Committees of the African and LAC Conferences to include issues related to WCRP Grand Challenges, especially Regional GC and GCs on water availability and extremes, on the agenda of the Conferences and target Conferences outcomes towards identifying means and opportunities for GCs implementation. D/WCRP to inform the SSCs of this recommendation.

Deadline: ASAP.

Status: Done, report at JSC-35.

Action 13

To establish contacts, compare notes, exchange information and ideas on the LAC and African Conferences.

Deadline: July-August 2013

Status: Done.

Intraseasonal to seasonal and interannual prediction, decadal**Action 14**

To prepare an expanded contribution on interannual – decadal predictability research to the Regional GC white paper and include in it contribution from all WCRP Projects, with emphasis on tractable opportunities for regional predictability research. To include an analysis of opportunities to involve research on modes of climate variability as a contribution to this white paper. To brainstorm on this problem, and particularly on the idea of focussing on science versus services and on moving ahead as a series of smaller initiatives under the GC focus of the provision of climate information on regional scales.

Deadline: Approach/strategy to be reported to JSC-35

Status: CLIVAR is developing implementation strategy. The DCP (joint between WGCM and WGSIP) has formulated an experimental design for the next set of coordinated decadal climate prediction experiments under CMIP6. This plan is being considered by the community, and input has been solicited via the CMIP6 process.

Action 15

To identify optimal choice of leadership for the WCRP research work on provision of skilful/action-oriented regional climate information on interannual to decadal time scales.

Deadline: report at JSC 35

Status: in progress. WGCM recommends the chair of the DCP (George Boer) to be included in the corresponding leadership team.

Action 16

All WCRP Core Projects to consider involving NMHS, as appropriate, in the research on Grand Challenge and invite them to participate in regional topical science conferences.

Deadline: Continuing

Status: WCRP has included information on its plans with regard to GC in all reports to WMO and its constituent bodies such as regional associations and technical commissions.

Cryosphere in a Changing Climate**Action 17**

JSC, WGCM, WGSIP, core Projects to provide input to CliC on the structure, goals, and objectives of the Cryosphere GC workshop and strongly encourage participation in the workshop of their affiliated scientists.

Deadline: July 2013

Status: WGCM's interests in this workshop are in the modeling of sea ice, land ice, and permafrost. The workshop outcomes were discussed at the WGCM meeting to encourage participation. An email was sent in September 2013 to each GC leader (including the Cryosphere GC) to advise WGCM and the CMIP panel about the science questions that

CMIP6 should help to address. Several projects and working groups were represented at the Cryosphere GC workshop and at the CliC SSG. Connections and linkages continue to be developed.

Action 18

WCRP to seek opportunities of contributing to or strengthening international research on the role or declining Arctic Ocean sea-ice in climate predictability and on its impact on the atmospheric circulation. CliC and WGSIP to discuss how to organise effective cooperation of research on cryosphere, especially sea-ice and snow, on predictability on time scales of relevance for WGSIP, and take advantage of the Cryosphere GC Workshop.

Deadline: To report the Workshop outcomes to JSC-35

Status: WGSIP is in contact with PPP, which, among other things, is developing a Year of Polar Prediction. WGSIP intends to involve S2S in these activities because at present S2S is mostly focussing on tropical regions. WGSIP wishes to make the most of PCPI, too. There is a wish to conduct common experiments on seasonal to interannual scale. A WGSIP expert attended the Cryosphere Workshop in Tromsø. There is currently a promise with respect to using the sea-ice data, especially on its thickness, in climate prediction. PCPI is going to capitalize on these developments. As an example, the new ESA data, which is available now, may help to use sea-ice models to initialise long-range forecasts. This will also be a topic for the newly-initiated CliC Sea-Ice and Climate Modelling Forum. This topic is also covered to some extent under the CliC/SCAR/IASC ISMASS activity on Polar Jet Stream Variability and Extremes.

Action 19

CliC to focus efforts on strengthening sea-ice and ice-sheet modelling research in support of WGSIP, WGCM and WGNE

Deadline: report at JSC-35

Status: CliC has initiated a Sea-Ice and Climate Modelling Forum to promote more effective communication and collaboration amongst those involved in sea—ice model development and analysis in global climate modelling centres. One initial task will be to work with WGCM/CMIP panel on sea-ice data request and analysis activities connected to CMIP6. CliC has also initiated two new targeted activities: one on modelling of the West Antarctic ice sheet/ocean interactions (workshop in Abu Dhabi in Fall), and one on ESM Ice Sheet model intercomparison with links to WGCM/CMIP6 (workshop at NASA GSFC in Summer). CliC is also organizing a teleconference to coordinate with some other proposed activities on aspects of ice sheet modelling (Greenland, and grounding line). In addition, activities related to sea-ice and climate prediction are underway within PCPI and the CliC Arctic and Antarctic Sea Ice Working Groups.

Action 20

CliC to update Chair of JSC on structure, goals, and objectives of GC Cryosphere Workshop.

Deadline: 1 August 2013

Status: the agenda was laid out with the Steering Group for the meeting based on the GC white paper and trying to arrive at an action oriented planning document. Approximately 30 people were in attendance representing all elements of the cryosphere. Outcomes of the Workshop were summarized in a report and form a good basis for implementation of this GC. The report can be found here: http://www.climate-cryosphere.org/media-gallery/974-2013-10-21-wcrp-cryogc-report?album_id=43

Science Underpinning the Prediction and Attribution of Extreme Events

Action 21

Request the GC Task Team, in cooperation with CLIVAR and GEWEX, to update the GC white paper on extremes and include in it, inter alia, a definition of (climate) extremes, characteristics of their scales in space in time, etc. Develop implementation strategy for the GC.

Deadline: October 2013, JSC to comment by 1 January 2014

Status: a new version of the white paper has been published on the WCRP webpage: http://www.wcrp-climate.org/images/documents/grand_challenges/GC_Extremes_v2.pdf.

Discussion on the implementation strategy as well as role of ETCCDI will take place during the meetings in The Hague. An ICTP/WCRP summer school on extreme events will take place in Trieste in July –August 2014.

Changes in Water Availability

Action 22

Request the GC Task Team, in cooperation with CLIVAR and GEWEX, to develop a white paper on the GC that would include implementation considerations for the GC.

Deadline: end 2013 for JSC review within 2 months

Status: A workshop on GEWEX Science Question (GSQ) 1 (precipitation) was held in Fort Collins and a Workshop GSQ 2 (water resources) was held in Saskatoon. Significant work on preparation of the GEWEX Science Conference has been completed (24 scientific sessions already laid out) and it has a bearing on the Grand Challenge. Preparation of the white paper is in progress.

Regional Sea Level

Action 23

To consider opportunities and benefits of a MIP for regional SL models that would use historical information and benefit from constantly improving datasets, especially SL observations from space and tide gauges.

Deadline: report to JSC-35

Discussion on All Grand Challenges

Action 24

To establish communication (telecons) between GC, invite GC leaders to the JSC session, and take advantage of the Pan-GEWEX/CLIVAR meeting in establishing cooperation and communication between the WCRP GC teams.

Deadline: once the leads are in place

Status: in progress, however no telecons have been organized.

Action 25

To recommend to all GCs to *consider* the benefits of including within their activities, if feasible, the approach of U.S. Climate Process Teams (CPTs), which are, as a rule, built around the idea of using observations to motivate climate model improvements, take advantage of regular meetings, e-mail discussions, and telecons, and involve a number of full-time post-doctoral researchers. CLIVAR IPO to send information to GC leaders.

Deadline: once leadership of GC is determined

Status: CLIVAR communicated this recommendation to its constituencies. The approach is also used in the initiatives of the GC on “Clouds, Circulation and Climate Sensitivity” led by WGCM.

Action 26

All Projects to develop and articulate implementation considerations for the GC that they host/lead for the year ahead, i.e. until the JSC-35 in July 2014. JPS provide a template for such a document that would also include a request to identify GC modelled and observed data and information requirements. SSG Chairs and identified leads of GCs to respond by deadline

Deadline: 31 August 2013

Status: the template was not sent, and a discussion of the utility of such a template and specifying requirements for a broad and diverse GC has to be revisited at JSC-35.

WMAC

Action 27

To initiate a WCRP Early Career Scientist Model Developer Prize. WMAC in coordination with JPS to develop the necessary arrangements and conditions for competition.

Deadline: As soon as possible

Status: low progress with regard to the prize. A summer school in June 2015 is being organized at MPI in Hamburg by Christian Jacob. The main focus will be on parameterizations. WGNE stands ready to contribute to any WCRP activity aimed at supporting model development.

Action 28

JSC to endorse ESGF as a WCRP-recommended platform for data/information exchange and access. D/WCRP to prepare an announcement to be distributed to ESGF supporting parties, relevant partners, and a press release.

Deadline: July 2013

Status: a formal announcement was not been prepared but statements that WCRP recommend ESGF were made to several WCRP meetings, e.g. to WGCM, WGSIP, WGNE, CORDEX, WDAC, SPARC and CliC SSG sessions, etc., and at other occasions (AOPC, TOPC, WGClimate, etc).

Action 29

Co-Chairs WGCM to send to JSC via D/WCRP documentation on rules of participation in / joining CMIP6 to be sent.

Deadline: as soon as such documentation is available for CMIP6

Status: Done. WGCM organized an Aspen Global Change Institute session on this topic. One of the outputs of the session was a proposal for CMIP6 that involves a new distributed organization that will open participation/joining to any interested scientist. The CMIP Panel has circulated such documentation widely and inputs are welcome, preferably by 15 Sep.

Action 30

Develop guidelines on documenting model tuning information and consider making such documentation a requirement for CMIP6.

Deadline: by JSC-35

Status: A WGCM recommendation at its session last year was for WMAC to organize a model tuning workshop (because model tuning spans all three WCRP modeling working groups: WGCM, WGSIP and WGNE). However, at the WMAC meeting in conjunction with the JSC meeting in Brasilia, WMAC preferred that WGCM itself organize this workshop. WGCM will thus organize it, and the focus will be on the tuning of CMIP5 participating models (the focus would probably have been broader if it had been organized by WMAC). The meeting will be held 6-8 Oct in Grainau, Germany, back-to-back with the WGCM18 session held later the same week.

Action 31

Request WWRP to consider nominating a person to WMAC, for example the WWRP Chair.

Deadline: July 2013

Status: no formal nomination has been forwarded. This may be discussed during the WMAC briefing to JSC35.

WDAC

Action 32

To summarise best practices on process of publishing datasets and their endorsement. Request a white paper on this subject from projects starting with GEWEX. WDAC to coordinate development of a WCRP-wide dataset assessment process.

Deadline: WDAC to request the paper from GEWEX in July-August 2013, GEWEX to complete the white paper by the end of 2013. WDAC to distribute it to other Core Projects for input/comment in March-May 2014

Status: The white paper has been produced and will be further complemented with an obs4MIPs section in the next few months before final WDAC, WCRP core projects and GCOS panel review.

Action 33

D/WCRP to send the report of the WCRP/GCOS dataset meeting in Frascati to JSC

Deadline: As soon as possible after the JSC-34

Status: The report is available at

http://www.wcrp-climate.org/documents/ECV_Wksp_WCRP_Report.pdf.

Action 34

To develop guidelines for submitting datasets to ESGF. Core Project data sets will be considered as early entrants to ESGF. Core Projects and other entities represented on WDAC should nominate datasets (both old and new) for inclusion in the ESGF by next WDAC meeting.

Deadline: continuously starting in July 2013

Status: WDAC has established an obs4MIPs Panel. It was tasked to look into all these issues (new entrants, maturity index, etc). A first meeting was held 29 April – 1 June at NASA HQs. Further details are available at <https://www.earthsystemcog.org/projects/obs4mips/>.

Action 35

JSC asks WDAC to consult as early as possible with JSC Chair on draft agenda of WDAC-3 so that options for inclusion of WCRP data-related interests and concerns could be made a priority for that session.

Deadline: as early as possible before WDAC-3

Status: WDAC provided the JSC Chair the final agenda in January 2014.

Action 36

Following the lead of SPARC, WDAC to consider the use of open access journal citations for data sets via use of DOI across the whole of the WCRP. WDAC to discuss and draft a recommendation to the JSC on using DOIs as a way to document data sets from Core Projects. This topic to be discussed at WDAC-3.

Deadline: Report to JSC 35

Status: This was an item of a special session at WDAC-3. A draft recommendation on DOI will be circulated to the JSC post WDAC-3.

Action 37

To evaluate WCRP efforts on surface fluxes relative to the Action Plan developed by WOAP in consultation with across CLIVAR, GEWEX, WGNE, and SOLAS, as posted on the WCRP website. Core Projects to nominate representatives to surface flux discussion in early 2014. GEWEX and CLIVAR to consider joint session making scientific progress on surface fluxes at 2014 Pan-GEWEX/CLIVAR meetings. WDAC to include a specific agenda item on fluxes at its next session and seek ways to reinvigorate this effort.

Deadline: Report to JSC 35

Status: Flux discussions were a strong component of the WDAC-3 agenda (a full day session). The ESA/CLIVAR Initiative on "closing the heat budget" for the ocean was an aspect of this discussion. WDAC will report on outcome of WDAC-3 deliberations to JSC 35.

CLIVAR

Additional update: as a followup of the ESA-CLIVAR July 2013 consultation on ocean and planetary heat budget, the CLIVAR tiger team is developing 6 or 7 corresponding research opportunities. At the Pan-CLIVAR meeting in July 2014 the implementation activities will be discussed.

Action 38

Inform IGBP and PAGES on discontinuation of CLIVAR/PAGES Panel.

Deadline: July 2013

Status: Instead of writing a formal letter on discontinuation of the Panel, CLIVAR requested all its groups to determine how they would like to develop aspects of paleo research in their domains of interest. PAGES have sent a letter to WCRP asking WCRP to consider sponsoring it. The letter has to be reviewed a decision taken, possibly after consultation with JSC.

Action 39

To inform CCI and JCOMM that GEWEX was accepted by WCRP as a cosponsor of the CLIVAR/CCI/JCOMM ETCCDI and to invite CliC to provide to ETCCDI an expert with cryospheric expertise.

Deadline: July-August 2013

Status: A communication was forwarded to CCI informing of the new approach to membership whereas the WCRP members would come no longer only from CLIVAR but also from GEWEX. Cryospheric expertise needs to be added, too.

Action 40

Encourage JSC members to participate in the Pan-GEWEX/CLIVAR meeting of 2014 and act as conveners.

Deadline: in the course of the meeting preparation

Status: Contribution of CLIVAR to GEWEX activities is being considered.

Action 41

CLIVAR to review ToRs for all its groups.

Deadline: to report at JSC-35

Status: in progress, a review is expected at the Pan-CLIVAR meeting.

Action 42

CLIVAR to develop an implementation strategy for the Regional GC pertaining to regional predictability on time scales from seasons to decades.

Deadline: once feasible

Status: In progress, seasonal and decadal initiatives in active development, overall approach to be reviewed at JSC35.

Action 43

CLIVAR, GEWEX, SPARC, WGNE, CliC, Regional GC and GC on climate sensitivity to propose a solution with regard of the gap in the WCRP structure in the domain of research on atmospheric dynamics. CLIVAR to take the lead in organising this discussion.

Deadline: to report at JSC-35

Status: A document for JSC35 consideration will be prepared based on initial document prepared by CLIVAR, and CLIVAR prefers to call this area climate dynamics.

WGNE: keen to be involved.

GC on "Clouds, Circulation and Climate Sensitivity": Atmospheric circulation will be a main focus of this GC (justifying the addition of the word "Circulation" to the name of this GC). Several initiatives of this GC will aim at fostering research on this topic, especially around the interaction between clouds and circulation and the understanding of circulation changes that underlay regional patterns of climate change. These initiatives will be led by Ted Shepherd (who will also ensure the active participation of SPARC on this topic), Adam Sobel (who leads the GEWEX/GASS project on WTG, which is a new approach to understand tropical dynamics), Pier Siebesma (who has long been involved in GEWEX), and Dargan Frierson (from the Univ. Washington, who has a strong interest in the interpretation of large-scale dynamical biases of climate models). Another initiative of this GC will be about the improvement of models, and the improvement of the representation of atmospheric dynamics in particular (e.g. the double ITCZ problem). This initiative is led by Christian Jakob (former co-chair of WGNE) and Masahiro Watanabe (Univ. Tokyo). WGCM will organize on 24-28 March 2014 a workshop to discuss, sharpen and prioritize the key science questions to be addressed by this GC (<http://www.mpimet.mpg.de/en/science/the-atmosphere-in-the-earth-system/workshop.html>). Stellar dynamicists such as Brian Hoskins or Isaac Held will be among the participants. The connection to CLIVAR will be ensured through various participants.

SPARC: has been actively filling "the gap" in atmospheric dynamics in part by recent additions of primarily tropospheric dynamicists to our SSG. These include Julie Arblaster and Adam Scaife, and new members for 2014, Carolina Vera, Seok-Woo Son, and Thando Ndarana. The upcoming SPARC General Assembly programme is a broad one and includes invited talks from several well-known dynamicists (including Gerry Meehl, Gil Compo, David Karoly, Carolina Vera, and Seok-Woo Son).

SPARC is also actively working on gaps that involve atmospheric dynamical links to other traditionally separate disciplines. In particular, SPARC is working within the Grand Challenge on Clouds, Circulation and Climate Sensitivity especially through the “changing patterns” initiative lead by Adam Sobel and Ted Shepherd. SPARC thinks that the “gap between physics and dynamics” for example should be addressed through this GC. SPARC would like to help organize a workshop on that topic and/or on “physical/dynamical interactions across scales” involving participants in that GC. The main brainstorming workshop for that GC will be next March. SPARC is also developing an idea for a workshop on “Large-scale modes of atmospheric variability” with a sub-focus on regional climate and regional predictability and welcomes collaboration with other projects (particularly CLIVAR to ensure this will be relevant to seasonal-to-decadal predictability).

Regarding any “atmospheric dynamics gap” a relevant question is: if there is a programmatic gap in WCRP, what is it exactly? Is it something that WCRP had in the past, but lost? Or is this gap something new that has arisen out of new scientific needs? It seems most productive to first define “the gap” and then decide the best way to address it. The developments mentioned above will build bridges between separated disciplines. They should be supported and perhaps broadened. SPARC is concerned that setting up separate competing structures like a new panel might take energy away from these productive activities and retard their progress.

JSC comment: this process has to be as inclusive as soon as possible in view of similar developments in other WCRP Projects than CLIVAR.

Action 44

CLIVAR and GEWEX to co-develop strategy for management and oversight of the Monsoon Panel.

Deadline: to report at JSC-35

Status: in progress, active discussions (including with CLIVAR and GEWEX) underway, to be reported to JSC-35.

CliC

Additional update: CliC SSG-10 reviewed initial ideas of CliC development that were spawned at CliC SSG-9. The discussions at the Cryosphere GC Workshop have also helped to shape CliC Activities. An implementation Plan document is in preparation.

Action 45

Better define the role of CliC in involving Arctic Ocean research communities in addressing WCRP priorities. Involve key partners such as IASC.

Deadline: to report at JSC-35

Status: on 12 and 13 September 2013 at ESSIC a workshop of the U.S. National Academies of Sciences on links between the Arctic and mid-latitudes was held. Cecilia Bitz was on the organizing committee. CliC and IASC have a memorandum of understanding regarding cooperation and collaboration. Some discussion of CliC role in Arctic Ocean research, but no definitive plans so far. Oceanographic research coordination is not really within CliC mandate.

Action 46

CliC, WGSIP, and WGCM to develop proposals on facilitating their interactions. WGSIP and WGCM are invited to participate in the Tromsø Workshop on the Cryosphere GC.

Deadline: August 2013, details to be decided before WGCM session in October 2013 in Victoria, BC, Canada

Status: in progress, see Actions 17 and 19. WGSIP and WGCM are involved in DCP, which also involves CLIVAR, and after the Aspen meeting they are trying to poll the community and to decide on developing the concept of a decadal prediction project as part of CMIP6. George Boer made a presentation on this topic to the WGCM meeting in Victoria. Much of this interaction will occur naturally through PCPI, particularly with WGSIP community. Scientists involved in climate modelling and climate prediction were involved in Cryosphere GC workshop, though space limitations prevented invitation of specific Working Group representatives, however online participation was available and encouraged. Newly-established CliC Sea-Ice and Climate Modelling Forum is intended to facilitate interactions with WGCM and the broader climate modelling community. Specific targeted activities such as the ESM Ice Sheet Model Intercomparison and the ESM Snow Model Intercomparison will also strengthen interactions between CliC and WGCM/CMIP6. CliC Co-Chair (Greg Flato) hosted WGCM meeting in Victoria.

Action 47

CliC Chair to develop a plan for development of sea-ice and ice sheet modelling to present at JSC-35.

Deadline: to report at JSC-35

Status: Improving connection between CliC and the climate modelling community was a central theme at the two recent CliC SSG meetings. It is also something that will arise naturally via PCPI. Specific activities include initiating the CliC Sea-Ice and Climate Modelling Forum, aimed at improving connections between those involved in sea-ice model development, and analysis of sea-ice model performance, at global climate modelling centres, allowing for better sharing of experience and methods, and providing a more coherent contact with WGCM/CMIP panel. Two CliC targeted activities have also been launched: one on Antarctic Ice Sheet/Ocean interactions, and one on ESM Ice Sheet model intercomparison. These are specifically intended to foster improved coordination in model development and evaluation.

GEWEX

Additional update: significant progress in preparations of the GEWEX Science Conference 2014.

Action 48

Request GEWEX Chair, the GDAP/GHP Chairs, and Organising Committee of the LAC Conference to ensure that the outcomes of the forthcoming (September 2013) GDAP/GHP meeting in Rio de Janeiro contribute to the successful conduct of the Montevideo LAC Conference. To request the GEWEX Panels to adjust agenda of the meetings in Rio to include issues of importance for LAC Conference.

Deadline: September 2013

Status: a talk on LAC (Hugo Berbery) was given at the GEWEX GDAP/GHP meeting in Rio de Janeiro. GEWEX noted strong focus of LAC Conference on adaptation. LAC call for abstracts was redistributed by GEWEX. Potential to develop themes of precipitation and extremes is high. A Working Group on High Elevation Precipitation (co-chaired by James Renwick and John Pomeroy) was established by GEWEX in the result of the Rio meeting following a presentation from the meeting participant from Columbia. It would need a connection to CliC. GEWEX is asked to provide information on this group to CliC.

Action 49

Request GEWEX SSG to consider strengthening GEWEX SSG expertise and ways of expanding GEWEX activities in the domains of applications of climate knowledge in water resource management and research in the land-atmosphere interactions, near-surface hydrology, climate effects of subsurface topography/properties, etc.

Deadline: to report in advance of JSC-35

Status: current SSG has such expertise and necessary attention is paid to maintaining it in the future.

SPARC

Action 50

With respect to commendable work of SPARC with regard to open access journals and on the arena of improving open access to datasets and their citation, Recommend WDAC to consider SPARC practices as an example to be followed.

Deadline: continuously

Status: WDAC-3 had a session on reviewing SPARC best practices for open access publications at WDAC-3, as well as DOIs, etc.

Action 51

SPARC and CCMI to consider a new initiative on the role of aerosols in regional climate forcing as a part of or building upon SPARC/IGAC CCMI. SPARC to report on the issues and perspectives of research on the role of tropospheric chemistry in climate to JSC-35.

Deadline: to discuss at SPARC SSG in 2014 and to report to JSC-35

Status: The SPARC/IGAC CCMI activity is working to build closer ties to AeroCom. It hopes to include their aerosol forcing datasets in some experiments and to develop regional climate diagnostics. Goals for the phase II of CCMI include development of models with interactive aerosols. SPARC is collaborating with IGAC on a new emerging activity called Atmospheric Composition and the Asian Monsoon (ACAM). Foci for ACAM are fourfold: 1. Emissions and air quality in the Asian monsoon region; 2. Aerosols, clouds, and the Asian monsoon; 3. Asian monsoon convection and chemistry; 4. UTLS response to the Asian monsoon. This new joint project with IGAC is also building ties with and among the Asian nations in the region and will address regional aerosol-cloud-climate issues.

WGCM

Action 52

WCRP GCs to inform CMIP6 of their scientific questions and resulting research requirements. WGCM and its CMIP6 planning group and leadership of GCs to define optimal means of interaction.

Deadline: As soon as possible for GCs leading teams in formation; in September 2013, i.e. before the WGCM Session in Victoria, BC, Canada, for existing GC leading teams; responsible projects for GCs teams that are not yet in place

Status: Not done to the extent required. Vice-versa, CMIP has fully integrated the GCs as the key issues to be addressed.

WGSIP

Action 53

To consider WGSIP plan/decision on engagement in ESGF.

Deadline: to report at JSC-35

Status: WGSIP can report some progress on adapting CMOR2 (Climate Model Output Rewriter version 2) for the needs of the community involved in seasonal and decadal prediction. Documentation for this patch is being developed and will be available from PCMDI. Under the EU SPECS project and with support from WCRP, tests will be conducted in summer 2014 to initiate migrating CHFP into the ESGF. Initial tests will be publically

available from BADC. On the long-term, S2S will be able to make common repositories of their quasioperational subseasonal products in an ESGF-compliant NetCDF format, which is a large change from the GRIB-based data representation that they were previously using, most in association with TIGGE.

WGNE

Update on activities: With regards to GFCS, WGNE can help linking to NMHSs in the area of modelling and prediction and help WMAC in the overall issue of model development. Two workshops of significance for WGNE happened just before the JSC-34. They were the workshops on coupling and systematic errors. There is large work underway on a continuum of time scales, from weather to climate and vice versa. However, the progress on systematic errors is slower, and the same longstanding issues that were identified for CMIP3 still exist in CMIP5. The work needs to continue. Several specific projects will help: progress can be reported on TransposeAMIP, aerosols, drag on weather and climate scales, and there is interest in contributing to research on QBO, which requires links to DynVar. Engagement is close with the follow-on project from Thorpex, S2S, and the Polar Prediction Project. On S2S scales there is interest in the model physics errors in simulating monsoons. WGNE will actively participate in the WWRP OSC in Montreal in August 2014. WGNE will strive to have WCRP fully engaged in the S2S and PPP and other WWRP activities.

S2S project

Action 54

To add SPARC-SNAP to list of primary S2S contacts.

Deadline: Immediately

Status: The SNAP activity leader Andrew Charlton-Peres is in communication with Frederic Vitart. Andrew also plans to promote the use of the S2S dataset by the SPARC community through a SPARC newsletter article, and SNAP attended the S2S project meeting in February 2014.

Action 55

To continue to appraise JSC and WGSIP on seamless model development and progress in prediction verification activities.

Deadline: continuously, to report to JSC-35. There are strong synergies between WGSIP and S2S.

GCOS

Action 56

D/WCRP to pass to GCOS a message on importance of having sufficient expertise in deep ocean hydrography on the renewed OOPC.

Deadline: July 2013

Status: not known

Action 57

CLIVAR to review engagement of CLIVAR basin panels in renewed GOOS/OOPC and their new structure.

Deadline: when feasible

Status: there is active communication between CLIVAR and OOPC on this subject.

WCRP Contribution to IPCC

Action 58

Recommend WCRP communities to develop synthesis papers in advance of IPCC assessments.

Deadline: as appropriate

Status: [this message has been communicated to several WCRP communities.](#)

WCRP Communications and Capacity Building

Action 59

Update information on WCRP and Core Project websites, especially with regard to membership of working bodies, calendar of meetings, and other current information.

Deadline: As soon as possible

Status: more work on CLIVAR website is anticipated in relation to the office move. Complete remake of the GEWEX website is underway. The SPARC office has worked through our JPS liaison Vladimir Ryabinin to complete the connection of the SPARC website to WCRP. The SPARC website is continually updated and in good condition. The office gave the site a major facelift just last year. CliC IPO Director has been very active in developing the CliC web site, keeping it up-to-date, and adding new content, and also in fostering communication through social media, web-casting, meeting/project web hosting, tele-conference and video-conference support, etc., and in helping WCRP as a whole develop tools to automatically share information between project websites.

Action 60

The WCRP Communications and Capacity Development team to prepare a report on progress, lessons learnt, and efficient practices of working with/supporting ECSs and in the area of outreach and share it within the whole WCRP.

Deadline: 2013

Status: [to be reported at JSC-35](#)

JSC Activities

Action 61

To organise a teleconference of JSC in the middle of intersessional period.

Deadline: in the middle between JSC-34 and JSC-35

Status: [done \(17 September 2013\), and another teleconference will be organized in 2014 before the next JSC Session.](#)

Action 62

To establish JSC liaisons to WCRP constituencies, as follows:

CliC – James Renwick

CLIVAR – Stephen Belcher, In-Sik Kang

GEWEX – Frederick Semazzi and Soroosh Sorooshan

SPARC – Teriuki Nakajima, Hong Liao

WMAC – Stephen Belcher

WDAC – Anny Cazenave

WGRC – Filippo Giorgi, Rodney Martinez

As a rule, these liaisons are expected to participate in SSG sessions of Core projects, relevant email deliberations, or meetings of Councils or working groups.

Other JSC members may be chosen for participation taking into account location of the meetings. More than one JSC member may serve as a liaison to Projects.

Status: liaisons established but the joint work with them has to pick up momentum.

Action 63

To ensure that background documents before the JSC session are available on the meeting website at least one month before the meeting and to inform JSC members once they are available.

Deadline: at least 1 month before JSC-35 and future JSC sessions

Action 64

To introduce a practice of organizing an executive session of JSC for available members immediately after the end of the meeting of JSC Officers. To continue optimization of the JSC Agenda taking into account the proposal of WMAC for shared sessions at the beginning of the JSC Sessions and the merit of having Project reports presented earlier than the GC reports.

Deadline: starting with JSC-35 and then continuously