

Personal reflections on the outlook for SPARC

The recent SPARC General Assembly in Kyoto was stimulating in many ways. Most notable were the number of attendees, the quality and enthusiasm of the presentations and discussions, and the keen interest in SPARC's future and its role in climate science. The fundamental health and vitality of the truly international SPARC community was apparent to all.

The final weekend of the General Assembly coincided with the release of the IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels. The IPCC findings made clear the urgency of starting to reduce the emissions of all greenhouse gases as well as the need for accurate climate information to support strategies for adaptation and mitigation. This report was followed by the UN's COP-24 conference which amid much political posturing did agree the rules for implementation of the Paris Agreement. Based on the experience with the Montreal Protocol, agreeing these rules is a real step forward, which coupled with the periodic revision of the targets, gives hope that the Agreement might succeed. There is a long, long way to go before we know if that is the case.

The new WCRP Strategic Plan is a great opportunity to make a real contribution to achieving that. The implementation of the plan is now under discussion, and it is still far from clear whether that will involve a complete make-over of WCRP or whether WCRP can evolve to meet the new challenges. Our strongly held view is that WCRP must be allowed to evolve, as a root and branch reform aimed at producing a theoretically logical structure could set back scientific progress in WCRP by several years and leave it side-lined in the public climate debate.

An evolutionary approach would allow the communities in the core projects, grand challenges and other facets of WCRP to use their expertise to work out how best to implement the new, more integrated strategy. An increase in the number of collaborative activities building

on existing strengths and developing new ones is essential, and our discussions indicate that there is a general willingness to make this happen. Maintaining core strengths is also required.

Atmospheric sciences should be a vital component of this approach as they are required to improve predictability, to understand changes in composition, and to understand the decadal changes in past climate. We thus envision a period where SPARC scientists are actively involved in WCRP-led collaborative programmes that address key climate questions (e.g. a holistic understanding of convection). In parallel, a number of activities of similar size and ambition to our current ones would be maintained. SPARC would continue to support the Montreal Protocol process and help WCRP make the Paris Agreement as successful. In this way SPARC and WCRP more broadly could continue to contribute most effectively to the on-going climate debate.

Early career scientists should contribute fully to this debate and to influencing the future role of SPARC and WCRP more broadly. Their generation will be implementing the Paris Agreement and so they will need to monitor the success or otherwise of the measures taken. The earlier the young scientists take responsibility, the better. We urge them to participate in SPARC activities and to take leadership of the ECS forum we are developing.



*Neil Harris and Judith Perlwitz
(SPARC co-chairs)*