WGI Questionnaire for WGI AR5 Authors and Review Editors

Synthesis of Results

Introduction

On 25 April 2014, the IPCC WGI Co-Chairs and Technical Support Unit (TSU) invited all WGI Coordinating Lead Authors (CLAs), Lead Authors (LAs) and Review Editors (REs) to complete an online questionnaire about their experience of working on the WGI contribution to the IPCC Fifth Assessment Report (AR5), their views on the scope, size and frequency of IPCC assessment reports, the scale of the task, the assessment process itself and cross-WG interactions.

The questionnaire contained a combination of multiple-choice, scaled and open-ended questions that allowed the authors to critically assess their experience in the activities of the last four years and to express their opinions about future assessments. It was anticipated that the results and feedback received would not only provide valuable learning for the next IPCC Co-Chairs and TSUs working with the WGI community, but also help inform the work of the IPCC Task Group on the Future of IPCC. This document provides a synthesis of the results and a summary of the reoccurring comments and responses. It is not a compilation of all comments received. Individual views and experiences transmitted through the open-ended questions and general comments have been taken into consideration, but have not been included in the written synthesis if not given by more than one respondent.

The WGI AR5 team included 255 experts serving as CLAs (29), LAs (176) and REs (50). Of the 255, 47 are women and 60 reside in developing countries. A total of 172 responses were received, which is 67% of the combined total for the chapter teams. The rate of return was higher for CLAs (83%), but very similar across the other two roles (LAs: 65%; REs: 66%).

All responses were anonymous with the identifying information limited to chapter, role and country of residence. WGI Bureau members were requested to fill in the questionnaire considering their role as an RE, rather than their broader Bureau role. Where possible, feedback submitted as ‘general comments’ has been incorporated into the relevant subsection summaries. All pie charts are given based on the total number of respondents (100%=172). All bar charts are given in absolute numbers.
Section 1: Experience of Working on the WGI AR5

This section included questions about their experience working on the WGI AR5, the best and most challenging aspects of it, how it could have been improved, and if they would be willing to do it again.

Please rate your overall experience working on the WGI AR5. [169 responses]

All but 3 of the 172 respondents to the questionnaire answered this question, with none rating their experience as poor and only 13 rating their experience as fair, while 138 describing it as excellent or very good. (right)¹

When breaking down the responses by role the results indicate that those who were less satisfied with their experience were more likely to be an RE, with 62% of the fair ratings coming from that group. However, there was a wide range of response within the role as well. (below)²

What was the best aspect about being a WGI AR5 Lead Author or Review Editor? [168 comments]

Authors and REs alike from all backgrounds and levels of expertise appreciated most the opportunity to work with colleagues from around the world, to engage in lively scientific discussion often of difficult topics, to learn from one another, including by being exposed to different areas of science from their own, and to be part of an activity with a worthwhile product of value to society. Many responded that they had gained a wider and deeper understanding of the field of climate science and had found it intellectually rewarding.

What was the most challenging aspect about being a WGI AR5 Lead Author or Review Editor? [168 comments]

The two aspects mentioned most often—even by those who rated the experience as excellent or very good—are the sheer amount of work involved and the challenge of managing the time to meet the demands of the work on the assessment and their normal work and other responsibilities, which was considered more extreme for the CLAs. This was alleviated to some extent where there was support for the author from their institution or government and aggravated for others who had no support. Multiple respondents cited the large amount of literature to be assessed to be difficult and it took time for many authors to come to terms with conducting an assessment rather than a literature review. Working to deadlines was challenging, and some authors expressed frustration at finding others less engaged or even unreliable.

¹ All pie charts are given based on the total number of respondents (100%=172).
² All bar charts are given in absolute numbers.
The review process, and specifically the very large number of review comments received, was also cited by many respondents as being the most challenging aspect of their experience. This comment was provided by authors and REs alike. However, REs responding to this question also noted frustration with their limited role and/or the constraints of the process as the most unsatisfactory aspect of their experience.

### How could your overall experience working on the WGI AR5 have been improved? [146 comments]

The things that can be improved for most respondents follow directly from what they personally found the most challenging aspects. The most consistent comment was a call for more support for authors, LAs as well as CLAs, particularly for university-based researchers who may have more difficulty in securing this. Other common responses mention preference for smaller, more focused chapter teams with additional contributing authors, more time for the chapters to meet in order to exchange ideas and discuss substantive issues more broadly, and more cross-chapter sessions rather than plenary sessions at LA meetings.

Several authors thought that they would have benefited from more time between the literature cut-off date and the draft submission deadline. Varying suggestions regarding changes to the review process were made (e.g., more focused review comments, better defining an ‘expert reviewer’, or the introduction of some sort of screening of comments). Several REs felt that this role should be re-defined and clarified and that the timing of versions and the opportunities for interaction between the REs and the authors could be improved.

More convenient locations for LA meetings was mentioned by several respondents. Reducing the routine work required of the authors in keeping track of references and document versions was requested, perhaps by the development of better tools. The problems of using email as a discussion mode were also mentioned. Several authors suggested having more help with figures, including having a professional graphics specialist in the TSU.

### Given what you know now, and assuming that the mode of operation and procedures defined by IPCC were the same, would you be willing to serve again as a WGI CLA, LA or RE? [152 responses]

Of the respondents who provided an answer to this question, 117 said yes and 35 said no.

When the responses are broken down by role, LAs were slightly more willing than CLAs or REs to agree to serve again.

### Please specify why or why not. [158 responses]

Of those who said that they would not be willing to serve again, several noted that they had been involved in more than one assessment cycle already and felt that it was time to step back to allow fresh people to become more involved. However, a number of respondents cited the burden of work in addition to their ‘day job’, in particular where there is little support from their home institutions. In addition, a number of respondents called for changes in the procedures before
continuing, whether it be by reconsidering the WG structure, reducing the size and limiting the scope of the WG reports, or reconsidering the deliverables and their timeline.

Even among those who would do it again, some reservations were expressed due to the time commitment required and the lack of support by their governments or home institutions. The overall response from the authors is that working on the WGI AR5 was indeed very demanding and time-consuming but was also important and worthwhile as well as extremely rewarding in terms of the knowledge and experience gained.

Among those who chose not to provide a definitive answer to the previous question, 2 CLAs, 10 LAs and 5 REs still provided specific comments. The respondents were either undecided or their return would be contingent on a change in procedures (e.g., the role of RE) or an assurance of support from their government or home institution.

Section 2: Report Scope / Size / Frequency

This section included several issues relevant to the future of the IPCC, including the structure of the WGs, future products and the timeline for their development. The options and questions were developed based on the recent discussions within the IPCC Panel Sessions and its Task Group on the Future of IPCC.

Responses covered the full range of options proposed (see chart).

127 respondents expanded on their response by providing comments. Comments supporting large, comprehensive assessment reports at an interval of 6–7 years noted its impact on policymakers and public, the opportunity for intense interaction between scientists and governments that probably could not be sustained on a more frequent timeline, the need for a certain period of time for scientific topics to mature and new research to be published, and the requirements of the coordinated modelling efforts. Among those supporting this length of assessment cycle, several suggested narrowing the focus, often stating that the scope of the reports has grown unnecessarily large.

Several respondents suggested that the intervals between comprehensive assessments could expand up to 10–12 years and combining this longer comprehensive assessment cycle with more focused interim reports or a rolling succession of short Special Reports. Special Reports were seen as being inherently cross-WG assessments. The difficulty of managing a succession of reports was identified. Some respondents suggested that an assessment cycle consisting of Special Reports could be concluded with a technical summary or synthesis report from the Special Reports produced during that cycle to further support this choice.

Respondents preferring smaller, more focused WG reports every two years recommended that these should also be cross-WG thematic assessments. Some supported the principle of smaller, more focused WG reports but felt that a two year interval was too short. Others proposed specific topics where the science supported the pace, and that this could be done in combination with a longer—10 to 12 year—comprehensive assessment cycle.
There was little support for fast track annual updates on their own. Those who selected this option saw this only as an addition to the current structure rather than a replacement, noting that it should be combined with either Special Reports or the traditional comprehensive reports. It was also mentioned that there might not be enough new findings to make an impact and that there are many other organizations doing annual reports on climate change. The two respondents who chose the Wiki-type, continuous update provided no additional comments. However, several respondents raised concerns that high-frequency reports or Wiki-type continuous updates would present challenges of ensuring rigor, balance and quality.

WGI should expand the regional component of the physical science assessment. [166 responses]

This question captured the attention of most respondents, but their views are distributed across the full range from strongly agree to strongly disagree.

When comparing the responses by role, responses were distributed across the full range, but CLAs were much less likely to be neutral.

Do you have any suggestions for how WGI could expand or improve its regional coverage or treatment? [122 responses]

There were a variety of comments and suggestions from respondents, with the most common theme emerging that the assessment reports should remain focused on a global scale, with the additional possibility of exploring a cross-WG Special Report or WGs I and II working together to produce a series of regional assessments, which might replace or be out of phase with the full reports. Multiple respondents voiced hesitation regarding WGI expanding its regional coverage, either because this is not a natural framework for physical science where processes manifest themselves in many regions and across arbitrary boundaries or because there were concerns about the quality of regional information that is available to be assessed and the associated large uncertainties. Finally, several noted the difficulties of distinguishing an IPCC regional assessment from national assessments where these are being done, but many also commented on the lack of capacity for many nations to do this on their own.
The current IPCC assessment structure with three Working Groups (WGI: The Physical Science Basis, WGII: Impacts, Adaptation and Vulnerability; WGIII: Mitigation) is still the best option to fulfill the task given to IPCC. [157 responses]

The responses to this question cover the full range but with many more strongly agreeing or agreeing (98) than disagreeing or strongly disagreeing (30).

Comments were received from 61 of the participants. For those disagreeing, the most frequent suggestion—if continuing with a long assessment cycle—was to combine the impacts part of WGII with WGI and merge adaptation and mitigation. Others favored the IPCC only producing Special Reports that are across current WG boundaries, so effectively no separate WGs or new constellations for each report. A small number of respondents suggested a single WG that works together all the time but produces an assessment report in two or three volumes.

Those respondents agreeing with the current structure of three WGs and providing comments still expressed the need for more end-to-end assessment involving more than one WG and/or strengthening cross-WG cooperation. It was noted by several respondents that this was much improved in AR5 but could still be better.

**Section 3: Scale of the Task**

This section focused on the report production process, including the scale of the assessment (i.e., literature and data) and the amount and type of support received.

The amount of literature to be assessed was a challenge. [168 responses]

The overwhelming majority of respondents (142) either agreed or strongly agreed with this statement.

25 respondents provided comments on the amount of literature. The majority of comments noted that it was not unexpected, but voiced concern for the ever-growing amount of literature and the ability to provide a comprehensive assessment of all available literature in the future. Several comments were also made about literature that was submitted late in the process and the difficulties inherent with the timing of cut-offs and/or deadlines.
From a WGI perspective, more coverage of peer-reviewed literature in languages other than English is needed. [160 responses]

The responses to this question were distributed across the full range with rather more disagreeing or strongly disagreeing (70) than agreeing or strongly agreeing (44); a large number were neutral (46).

10 respondents provided comments on the coverage of peer-reviewed literature in languages other than English. Most comments reaffirmed their earlier response for this category, either noting the need to consider more sources in languages other than English or to state that they believed this to be well-covered in their chapter through LAs or CAs. Some respondents commented that for regional assessments, many such publications may only be e.g., in national reports, rather than published in the peer-reviewed literature. It was mentioned that the ability to assess the quality of such sources is constrained by a limited understanding of the review processes for such publications.

The amount of data to be processed/transfered/assessed was a challenge. [162 responses]

Over two-thirds of respondents to this question (109) either agreed or strongly agreed with this statement.

23 respondents provided comments on the amount of data to be assessed. The majority of the comments reaffirmed their previous response, agreeing or strongly agreeing with the statement. Others voiced concern over the increasing amount of data becoming available. Some respondents commented that the CMIP cycle should be completed much more in advance of the IPCC assessment cycle.

IPCC should make available the data underlying all figures published in the assessment. [162 responses]

Almost three-quarters of the respondents to this question (120) either agreed or strongly agreed with this statement.

An additional 47 respondents provided comments on the provision of data underlying all figures. The comments revealed a split in views between those who supported it in the interests of transparency and those who disagreed based on practical considerations including resources. Several respondents felt that this suggestion would turn the IPCC into a database or a climate services project. The principles that the production of the figures should be well documented and that any that were not from the literature but were produced for the report should have a traceable account were generally supported.
Did you receive assistance for your role on WGI AR5? [160 responses] And if so, please specify type and source. [78 responses]

In response to this question, 68 participants said yes and 92 said no.

When comparing the responses by role, CLAs were more likely to have received support.

The most common assistance noted was specific to the travel funding provided to attend the meetings. Travel support came from a variety of sources with the home institution, the national IPCC Focal Point/government and the IPCC Trust Fund all being mentioned. Many authors received funding in varying amounts to free up time to work on the assessment or a tacit agreement from superiors to do so, or were freed of certain duties (e.g., teaching). Several authors acknowledged the assistance of colleagues at their home institution also working on a voluntary basis, and a number mentioned Contributing Authors. The assistance received included technical assistance with figures, library research, reference checking, proof reading and IT support. The help provided by both the FAQ editor and the TSU was acknowledged here as well. 7 CLAs and 3 LAs report partial or full support from the nominating government or home institution in providing an assistant or post-doc who supported one or both CLAs, the LA, or served as an assistant to the chapter. Many voiced appreciation for the support received.

Dedicated assistance for CLAs should be a standard approach in future assessments. [155 responses] And if you agree, from whom should the assistance and funding be provided (i.e., nominating governments, home institutions)? [132 responses]

The overwhelming majority of respondents either agreed or strongly agreed with this statement (136) and primarily identified nominating governments as the source of this support rather than the home institution, but it was also recognized that this may vary from one country to another. It was generally felt that this should come from a dedicated resource rather than, e.g., through research grants. Home institutions were noted for their important support through a reduced work load.
Section 4: Process of the Assessment

This section was broken into a number of subsections, focusing on the size and composition of the chapter team, the number and programming of Lead Author meetings, IPCC procedural requirements, the role of the RE and the support received from the TSU.

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<th>Question</th>
<th>Responses</th>
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<td>In your opinion was the size of your chapter team … [165 responses]</td>
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<td>Over three-quarters of the respondents to this question (131) felt that the size of the chapter team was about right.</td>
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<td>When the responses were compared across the three roles, there was no significant difference in the response.</td>
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<th>Comment</th>
<th>104 comments</th>
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<td>Do you have any comments about the composition or working of your chapter team?</td>
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<td>The most common comment from authors was that the largest fraction of the work was done by a smaller fraction of the team. Many comments were made about either missing expertise or redundant expertise, and it was repeatedly suggested that CLAs should have a say in the selection of authors. In the case of some authors, it was felt that they did not have the experience to make a full contribution even if willing. Many suggested a need for better gender balance. Some felt that there were not enough authors from developing countries for regional balance. Others voiced frustration over chapter members being selected for reasons other than scientific expertise.</td>
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<th>Suggestion</th>
<th>94 responses</th>
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<td>Do you have any suggestions for modifying the role of the Review Editors in the chapter?</td>
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<td>Some very strong opinions were expressed on this role, and many authors and REs alike expressed the view that the role needed to be revised or eliminated. Many thought that the senior experienced people appointed as WGI AR5 REs were underused, and several respondents suggested that the REs could perhaps be brought in earlier. Many REs voiced frustration over the limited role and felt that the REs should have a role in shaping the content of the chapter, with several suggesting that they should be able to review the chapter. A number of comments proposed that the REs should act more like a journal editor and have the final say on a chapter. However, many authors felt that the REs were not useful, with several authors commenting that the REs were more of a hindrance than a help, and that some of the REs pushed their own views too much.</td>
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In your opinion was the number of Lead Author meetings … [157 responses]

Over three-quarters of the respondents to this question (137) felt that the number of Lead Author meetings (four) was about right. When the responses were broken down by role the results remained consistent.

Do you have any comments about the timing, locations, or programming of the Lead Author meetings? [100 comments]

Of the participants who chose to provide comments, the primary concern raised was the location of meetings. Most respondents suggested that meetings should be held only in destinations where there are airports with intercontinental flights. Several authors suggested that having more chapter/cross-chapter time during the meetings would have been helpful, while others thought holding an additional chapter meeting would have been useful.

Please rate the overall support that you received from the WGI TSU throughout the AR5 cycle. [162 responses]

The overwhelming majority of respondents (134) rated the support they received from the TSU during the AR5 cycle as outstanding or very good. Comparing the responses by role resulted in slightly more favorable response from CLAs, with no CLA rating the TSU support less than very good.

How could it be improved in future assessments? [50 responses]

The majority of the comments received were positive. Several authors suggested that they and/or the assessment would have benefited from dedicated graphics assistance. Others suggested the development of improved tools, noting difficulties with references/EndNote, or the challenges of drafting text with multiple authors.
IPCC procedural requirements add to the burden of the task with limited benefit. [146 responses]  

The responses to this question were distributed across the full range with rather more disagreeing with the statement to some extent (51) than agreeing (37), but a large number (58) were neutral. When the responses were reviewed based on role, CLAs and REs tended to agree or strongly agree, whereas LAs were more likely to disagree or remain neutral.

If you agree, please specify which procedure(s) and any suggestions for how they could be improved. [37 responses]  

This question drew relatively few comments. The majority of comments received related to the review process. Authors noted difficulty with the sheer number of comments received and the requirement to provide responses to each one. It was suggested by some that either the requirement to respond to every comment needed to be reconsidered and/or a higher standard needed to be defined for an individual to serve as an expert reviewer. The quantified uncertainty language was criticized by a few authors as being inappropriate or difficult to understand. Some respondents noted understanding that the IPCC procedures were necessary for transparency and quality assurance.

Section 5: Production of the Technical Summary and the Summary for Policymakers  

This section focused entirely on the internal production and schedule of the Technical Summary and Summary for Policymakers.

Please rate your experience with the production process of the Technical Summary. [93 responses]  

The responses to this question were distributed across the full range with more rating their experience as excellent or very good (54) rather than fair or poor (13).

A total of 31 respondents provided comments. Multiple comments were received questioning the need for a Technical Summary. Authors noted the additional burden to produce a product that was not seen as particularly essential or useful. Many respondents felt that the timing could be improved and that more communication back to the chapters by the chapter representatives on the TS writing team was needed.
Please rate your experience with the production process of the Summary for Policymakers. [99 responses]

The responses to this question were consistent with that of the Technical Summary. Although distributed across the full range, significantly more participants provided a rating of excellent or very good (63) rather than fair or poor (14).

A total of 40 respondents provided comments. These comments tended to be more positive than those made on the Technical Summary, with many noting the importance of the Summary for Policymakers and the overall high quality of the final product. Some respondents again suggested that the timing could have been better, albeit with multiple and conflicting suggestions as to how to do this. Others again noted that the communication back to the chapters by the chapter representatives on the SPM writing team could be improved. Multiple respondents commented on their experience with the approval plenary, some voicing frustration at the approval process and/or concern regarding the level of involvement of governments with the final text or content.

Section 6: Cross-Working Group Interactions

This section focused on cross-WG collaboration in the AR5 and possible ways to improve them in the future.

How do you rate cross-WG collaboration in AR5? [146 responses]

The responses to this question were distributed across the full range but almost half (76) rated them as being absent or difficult. (right)

When responses were broken-out by role, it resulted in a more negative reporting from the CLAs (none of the CLAs responding rated the collaboration as very good, and half rated it as difficult). (below)
Cross-WG collaboration needs to be made easier/improved. [145 responses]

About three-quarters of the respondents to this question (113) either agreed or strongly agreed with this statement. (left)

The distribution of responses was consistent when considered by role. (below)

If you agree, please provide suggestions for improvement. [97 responses]

Respondents provided a variety of suggestions for improvement. Some authors proposed changes to the assessment structure, suggesting that IPCC only do cross-WG assessments such as Special Reports. Several authors noted the positive experience of the Expert Meetings and Workshops on cross-WG topics. Others suggested having a joint LA meeting for those cross-WG topics, while others suggested having authors who work on more than one WG report specific to the cross-WG topics identified.

Section 7: General Comments on the Assessment

In this section, a list of possible topics was provided for general comments on various steps of the assessment process. A total of 100 respondents provided comments on a wide range of topics. The text below gives a synthesis of the main comments submitted, using the headings used in the questionnaire.

Scoping and nomination process

Several respondents considered these steps to be the least transparent of the IPCC assessment process. It was noted by some that this may arise because of a disconnect between the national IPCC Focal Point and the scientific community in a country and/or because the authors drafting the report are not necessarily involved in the scoping of it. Some suggested that more flexibility should be provided to the authors to adapt the scope/outline during the drafting process to allow for changes due to unforeseen difficulties or the evolving science.

When considering the nomination and selection process, multiple respondents noted the need for more gender balance. Some suggested that more focus be placed on bringing younger scientists (i.e., in their 30s and 40s) into the process. Others commented on the need for more developing country participation, while still others voiced concern over authors being selected for factors other than scientific expertise.
Writing of WGI AR5 (including cross-cutting issues and FAQs)
Respondents commenting on the cross-cutting issues were consistent in their suggestion that these needed to be coordinated better, identified sooner in the process and authors involved earlier to ensure adequate coverage – this referred to both cross-WG and cross-Chapter issues. Some suggested adding a new role—defined as either a dedicated contributor or reviewer—who would be tasked with the specific cross-topic identified and then work both cross-Chapter and cross-WG to ensure coverage and consistency. These experts could be nominated and selected like the authors and would receive appropriate recognition for their role.

Respondents commenting on the FAQs provided almost exclusively positive feedback, noting their importance and/or praising the support received from the Science Editor and the TSU. Some believed that even more focus could be placed on this aspect. Suggestions included ensuring the questions being answered are the ones actually being asked frequently, even if the questions are repeated with the answers being updated.

Other comments received on the writing process noted problems with meeting deadlines and the majority of the drafting being done by a few. Others suggested that better tools should be developed to support the drafting process where problems still exist (i.e., reference management, limitations of using Word, sharing/writing a draft with many authors) and that more support is needed—including professional expertise—for producing graphics. Finally, few comments were received on the IPCC publication deadlines as these were perceived as either problematic for peer-reviewed scientific journals with pressure to publish before the deadline and/or a challenge when meeting the drafting deadlines.

Review process
This topic received the majority of comments. Many respondents voiced concerns over the increasing number of comments received, the resulting workload and the inadequate quality of many of the review comments received. The number of comments received and the requirement to provide a response to all comments was considered a major frustration and an unnecessary drain on their time given the relatively few high-quality comments often received. Some expressed concerns that despite the very large number of comments received overall on the chapter the number of substantive comments was much lower than expected.

Pleas for changes to the procedures were made, suggesting that either authors be allowed to not respond to non-substantive or unsubstantiated comments and/or by increasing the standard required to submit a review. Several suggested that the reviewers should be selected with the same standard of scientific expertise as the authors are. A few suggested that comments could be sorted by either the TSU or REs, with editorial and non-substantive or unsubstantiated comments being removed and answered by the TSU and REs respectively. A few comments were received on confidentiality of drafts, which was felt by some to be unrealistic or counterproductive, while others maintained the need for the private working space during the drafting process.

WGI approval process (including CLA pre-meeting and the preparation for the approval session)
Not many comments were received on this component. Of those providing comments, many stated that this was overall a challenging but positive experience. Many stated that the pre-meeting and approval session were well organized. A few voiced concern over the role of governments and their ability to change text or delete content.

Post-approval production process (i.e., copyedit, error correction, layout)
Few comments were received on this component. Some voiced frustration at the time commitment still required of them during post-approval. Others mentioned specific issues related to copyedit and/or error correction, but still others recognized the necessity of the stage and/or provided neutral or positive feedback on this stage.
Communications and outreach on AR5 (both WGI and IPCC in general)
Of those commenting on this topic, many appreciated the increasing focus on outreach and communication, but thought it could be further strengthened. A few suggested that post-SPM release activities could be more formalized or better coordinated across the regions. Several authors considered the Headline Statements a positive resource. The SPM and FAQs were also mentioned in this context. The media training for authors ahead of the approval plenary was received positively and some suggested this activity be expanded. The press conference received some criticism. Some suggested that it could have been set-up or managed better. There was a call for more outreach in developing countries, including more cross-WG events/activities.