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MATTERS RELATED TO OTHER IPCC ACTIVITIES

Informal Group on Publications and Translations

(Submitted by the Secretary of the IPCC)

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Informal Group on Publications and Translations

1. Background

The document aims to serve as the basis of an IPCC Panel decision during its Sixtieth Session (16 – 19 January 2024, Istanbul) under item 8.1 Informal Group on Publications and Translations, of the Provisional Agenda.

The document is providing a history and a summary of recommendations delivered by an Informal Group on Publications (IGPubs) with extended mandate on translations, which was established by the IPCC Bureau during the sixth assessment cycle.

Full recommendations and information regarding the work of the IGPubs is contained in two Annexes attached to this document, as follows: **Annex 1** providing an update on publications and **Annex 2**, providing an update on publications. Both documents were presented by the IGPubs to the IPCC Bureau during the sixth assessment cycle.

2. History and role of IGPubs

The IPCC Bureau at its Fifty-seventh Session (BUR-57) (24 October 2019, Singapore) established the IGPubs to develop advice for the IPCC Bureau, the Secretariat and the IPCC's parent organizations on processes for managing publications of IPCC reports, including the preparation and conduct of procurement processes and the management of citation data¹.

At the 60th electronic Session of the IPCC Bureau (BUR-60) (16 March 2021) the IGPubs presented its recommendations on the process for managing publications to the Bureau² fulfilling its original mandate. The IPCC Bureau extended its mandate to cover the translation of IPCC products.

At the 64th hybrid Session of the IPCC Bureau (BUR-64) (16 February 2023) the IGPubs presented its recommendations related to translations to the Bureau³.

3. Membership

The initial membership of the IGPubs comprised of two Bureau members from each Working Group (WG), and one member representing the Task Force on National Greenhouse Gas Inventories (TFI), two representatives from the Secretariat and other co-opted experts as appropriate⁴.

Working Groups' (WGs) and TFI members were supported by their Technical Support Units (TSUs) and the Task Group on TG-Data as needed. The Informal Group could seek advice from qualified experts, such as university librarians, publishing organizations and international scientific bodies.

Following the extension of the mandate to cover translations, the IGPubs reviewed its membership with a view to ensuring that native speakers of all UN languages were represented, together with representatives from the three WGs, the TFI, and the Synthesis Report (SYR)⁵.

1 The Terms of Reference (ToR) of IGPubs are contained in Annex D of Annex 1

2 Full details are contained in Annex 1

3 Full details are contained in Annex 2

4 Full list of members in Annex E of Annex 1.

5 Full list of members in Annex B of Annex 2.

4. Recommendations to the IPCC Bureau on Publications

The list below comprises of the first recommendations on publications made under five topics defined by IGPubs. It also indicated how many recommendations were made in total for each topic. The full list of recommendations is contained in Annex 1 from page 3 to page 6.

4.1. Documentation of publication practices (two recommendations in total)

1. Written guidance on publication practices to be followed by the Secretariat and the TSUs should be developed and agreed by the Bureau.

4.2. Acceptance, publication and error correction of WG Reports, Special Reports and the Synthesis Reports (sixth recommendations)

3. The decision of the Executive Committee at ExCom 17 (2013) to post a digital version of a report online, within two working days of acceptance, should be confirmed. It should be clearly stated that the posted report is subject to grammatical and minor editorial corrections, incorporation of “tricklebacks” from the approval session, and application of the Error Protocol.

4.3. Acceptance, publication and error correction of products of the TFI (one)

9. ... The TFI will continue to amend the online text of its Document of Record to include corrections identified and approved through the error protocol.

4.4. Procuring publication and printing services (four)

10. The IPCC Bureau should establish a ‘Publication Committee’ for each assessment cycle whose role is to advise the IPCC Secretariat on Technical Specifications and Terms of Reference for the procurement of printing and publishing services for IPCC products.

4.5. Scientific status of IPCC products (six)

14. The IPCC needs to ensure that all IPCC reports and their main components ... receive digital object identifiers (DOIs)...

5. Recommendations to the IPCC Bureau on Translations

The list below comprises of the first recommendations on translations made under three topics defined by IGPubs. It also indicated how many recommendations were made in total for each topic. The full list of recommendations is contained in Annex 2 from page 2 to page 4.

5.1. General Principles (in total six recommendations)

1. In line with the Annex to the 1989 Memorandum of Agreement establishing the IPCC, the IPCC Secretariat retains responsibility for arranging the translation of IPCC products. The Secretariat should be supported by relevant expertise to deliver high-quality and timely translations of IPCC products. This should include IPCC Bureau members, IPCC member governments, IPCC authors, and contracted outside expertise.

5.2. Process and Responsibilities (seven recommendations)

7. The Publications Committee that was recommended in Phase 1 of the IGPubs should have its remit extended.

5.3. Glossary and New Terms (two recommendations)

14. All terms in the Glossary should be agreed and translated prior to the approval session for the relevant assessment report.

Annex 2 outlines in addition the proposed process for translating IPCC products into the UN languages and the roles of participants in the translation process.

6. Expected Outcome

Following the agreement by the IPCC Bureau at its 66th Session (15-16 November 2023), to the implementation of recommendations made by the Informal Group on Publications and Translations (IGPubs), the Panel is invited to consider and agree on these as outlined by the IGPubs as set out in Annex 1 and Annex 2, taking into account Financial Task Team (FiTT) recommendations on the financial implications associated with their implementation.

Informal Group on Publications

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1. INTRODUCTION

IPCC reports fulfil two functions: for IPCC member governments they represent the accepted document of record arising from an intergovernmental process; for the research community, they are highly-cited scientific documents that synthesize a vast body of evolving knowledge and bring prestige to those involved in writing them. IPCC publishing practices have largely been successful in satisfying these two needs. However, these practices are largely undocumented. The 1989 Memorandum of Understanding between UNEP and WMO notes that the IPCC's activities will include "publication of reports of the Panel and its bodies" and the Memorandum of Agreement refers only to the preparation, finalization and dissemination of reports of Working Groups to Governments, UN agencies and scientific institutions. The IPCC *Principles and Procedures* and the terms of reference for IPCC bodies are silent on publication and its management. Towards the end of the Fourth and reinvigorated the Fifth Assessment cycle, the Panel and the Executive Committee started to give consideration to publication issues, but these were unresolved. Practice has changed since that time in several ways:

- a) Until the Fifth Assessment Report (AR5), it had been tacitly assumed that the document of record was the printed version of IPCC reports. The report was not made publicly available until the printed copy was available, some weeks or months after the approval session. Following the Special Report on Renewable Energy (SRREN), the Executive Committee (ExCom) decided to post a digital copy online shortly after approval.
- b) The separate release of digital and printed copies raised the issue as to which was the document of record. Plenary invited the ExCom to consider this matter, but ExCom had not responded by the end of AR5.
- c) The separate release of digital and printed copies raised the further issue as to whether digital copies should be modified to take account of the operation of the Error Protocol. ExCom decided that they should not.
- d) The AR6 Special Reports have yet to be printed 18 months after the approval of the Special Report on Climate Change and Land (SRCCL) and Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC); the gap is now 2½ years for the Special Report on Global Warming of 1.5°C (SR15). The digital copy has become the de facto document of record.

These developments have revealed tensions and difficulties in the publications process. Experiences during the Sixth Assessment Report (AR6) have highlighted the value attached by authors and Bureau members to the scientific reputation of the publisher of IPCC reports. The IPCC Bureau therefore established the Informal Group on Publications (IGPub) at the 57th Session of the IPCC Bureau (BUR-57). The Informal Group on Publications set out to "develop advice for the IPCC Bureau, the Secretariat and the IPCC's parent organizations on processes for managing publications of IPCC reports, including the preparation and conduct of procurement processes and the management of citation data" (full Terms of Reference and Membership are at Annexes D and E). This report documents IGPub's findings and recommendations based on its work to 12 February 2021.

2. HOW THE INFORMAL GROUP ON PUBLICATIONS ORGANISED ITS WORK

The first meeting of IGPub was held on 24 March 2020 where the group reviewed its draft Terms of Reference. The Terms of Reference identified three primary areas of focus. IGPub members were assigned to three subgroups covering each area of work. The final Terms of Reference were approved at the second meeting of IGPub on 30 July 2020 (see Annex D).

The three Subgroups were:

- **Subgroup A: The form in which IPCC products are published**, including full reports and summary volumes. This area of work has addressed online and printed publication, the production of hard copies for different audiences (e.g. governments, libraries, and authors), and the sequencing of publishing activities associated with specific IPCC products.

- **Subgroup B: Maintaining and building the scientific status of IPCC products** through, for example, the use of Digital Object Identifiers (DOIs) and other vehicles that enable direct access, and metadata facilities including user friendly citation support. Ensuring that all IPCC assessment and special reports (past, present and future) are included in citation databases, such as Web of Science.
- **Subgroup C: Specifications relevant to scientific publishing and scientific publishing standards**, for example to be applied by WMO or others when developing requests for tenders and selecting printers/publishers for IPCC reports.

Membership includes Bureau members and representatives of the IPCC Secretariat including the Secretary, Deputy Secretary, Head of Communications and the Legal Officer. Task Group on Data Support for Climate Change Assessments (TG-Data) members were invited to attend from the second meeting onward as advisory members. Heads of Technical Support Unit (TSU) (Working Groups and Task Force on National Greenhouse Gas Inventories) attended as advisory members and the Head of TSU for the Synthesis Report, once appointed, was also invited in this role (see Annex E for updated IGPub membership).

Subgroup A progressed its work as a priority, and its preliminary findings formed the focus of the Third Meeting of IGPub on 08 October 2020. Building on the outcomes of the Third Meeting of IGPub, Subgroup B and C took forward their work and shared their findings at the Fourth Meeting of IGPub on 07 January 2021. At its Fourth Meeting, IGPub considered draft recommendations and provided guidance to the Subgroups.

The detailed work of the Subgroups is documented in Annexes to this report along with the Terms of Reference, Group membership and a record of previous relevant agreements, discussions and relevant excerpts from the reports of Panel and ExCom meetings:

Annex A: Report of Subgroup A

Annex B: Report of Subgroup B

Annex C: Report of Subgroup C

Annex D: Terms of Reference for IPCC Bureau Informal Group on Publications

Annex E: Updated Membership of the IPCC Bureau Informal Group on Publications

Annex F: IPCC and ExCom mandate, decisions and discussions in relation to the matter of publication of IPCC products

3. RECOMMENDATIONS TO THE IPCC BUREAU

The recommendations of the Informal Group on Publications follow. Further context and discussion are provided in the individual Subgroup reports included as Annexes A-C. The recommendations are grouped by themes with a line of sight to the relevant Subgroup report.

3.1 Documentation of publication practices

1. Written guidance on publication practices to be followed by the Secretariat and the Technical Support Units should be developed and agreed by the Bureau.
2. The Panel may consider integrating all or part of that guidance into any future revision of the *Principles and Procedures*.

3.2 Acceptance, publication and error correction of Working Group Reports, Special Reports and the Synthesis Reports

These recommendations derive from the work of Subgroup A.

3. The decision of the Executive Committee at ExCom 17 (2013) to post a digital version of a report online, within two working days of acceptance, should be confirmed. It should be clearly stated that the posted report is subject to grammatical and minor editorial corrections, incorporation of “tricklebacks” from the approval session, and application of the Error Protocol.
4. Following acceptance of the report and up until the formatted text (including figures) is submitted to printers / commercial publisher and is posted online (see recommendation 5 below), those errors that have been alleged following acceptance of the report and which have completed all required steps in the Error Protocol will be incorporated into the text that is submitted to the printers/publishers and is posted online. A record of these errors will be posted prominently on the IPCC website alongside the Document of Record report.
5. Formatted text, incorporating grammatical and minor editorial corrections, “tricklebacks” from the approval session, and the correction of any errors identified through application of the Error Protocol (see recommendation 4 above), and with no other modification, should be submitted to the printers/publishers within six months of the acceptance of a report by the Panel.
6. The formatted text submitted to the printers/publishers should become the Document of Record and should be posted online.¹
7. While every effort must be made to ensure that the online and printed versions of the Document of Record are identical, to avoid doubt we recommend that the Panel should determine, or should delegate another body of IPCC to determine, which of the online or printed versions should be considered definitive.
8. Following submission to the printers/publishers and that version being posted online, the text and figures of the online Document of Record will no longer be amended, as agreed at ExCom 18 (2013). The errata file will be updated with any errors approved following the establishment of the definitive Document of Record. The errata file will be posted prominently on the IPCC website alongside the report. The text and figures will not be amended following submission to the printers/publishers and posting online, but a working version of the report shall be marked up (e.g. by “sticky notes”) to highlight where errors have been corrected, with a link to the online errata file. The mark-ups will cover errors identified subsequent to submission to the printers/publishers.

3.3 Acceptance, publication and error correction of products of the Task Force on National Greenhouse Gas Inventories

These recommendations derive from the work of Subgroup A.

9. Notwithstanding Recommendation 8 above, the Task Force on National Greenhouse Gas Inventories (TFI) will continue to amend the online text of its Document of Record to include corrections identified and approved through the error protocol. All corrigenda dated and progressively numbered are published with the online edition. For each chapter, corrigenda implemented are clearly referred. This practice reflects the different end-user community for TFI products, which requires the most up-to-date text possible.

3.4 Procuring publication and printing services

These recommendations derive primarily from the work of Subgroup C, with contributions from Subgroup B.

¹ IPCC XXXV (2012) charged the Executive Committee to further investigate the issue of the document of record and report on its findings to the Bureau. This charge was never fulfilled.

10. The IPCC Bureau should establish a 'Publication Committee' for each assessment cycle whose role is to advise the IPCC Secretariat on Technical Specifications and Terms of Reference for the procurement of printing and publishing services for IPCC products.
11. Technical Specifications should include at a minimum that bidders demonstrate: i) that their publication catalogue spans the full range of scientific disciplines, including economics, social science and the humanities as well as the physical and natural sciences, cited in IPCC products; ii) that they have experience in publishing long and graphically complex documents like an IPCC Report and any associated online material; and iii) that they can and will acquire and maintain all necessary digital instruments that ensure the appropriate management of the metadata associated with IPCC products and their main components (e.g. Chapters, Technical Summary and Summary for Policymakers, see Recommendations 14 and 16).
12. Once established, the IPCC Publication Committee should work with the Secretariat to facilitate the procurement process for IPCC publications during the assessment cycle, including on the coordination, planning, and membership on the relevant technical evaluation boards set up by the WMO.
13. The IPCC Publication Committee should have at least two of its members serve on the TEB for any IPCC publication/procurement process operated by the WMO. The members will serve on the TEB in their personal capacity and will need to be able to meet the neutrality and conflict of interest test for membership.

3.5 Scientific status of IPCC products

These recommendations derive from the work of Subgroup B.

14. The IPCC needs to ensure that all IPCC reports and their main components (see Annex B, level A components: a to h) receive digital object identifiers (DOIs). Those DOIs are always to be made available together with the recommended citations that can also be downloaded² from the website to which the DOI resolves (see Annex B, requirements (i) to (iv)).
15. Working with the publisher, as appropriate (see Section 3.4), the IPCC needs to ensure that DOIs are minted and curated early on to ensure they can be made publicly available at the very same time that an IPCC report is made publicly available within two working days of the approval of the Summary of Policymakers (Recommendation 3).
16. IPCC reports also need to be incorporated into major citation databases such as Web of Science, Scopus, or Google Scholar as early as possible. This is probably best accomplished in collaboration with the appointed publisher (Section 3.5). To ensure permanent and full accessibility, once a report is published by the publisher, that publisher is also required to provide a direct link back to the IPCC report websites, again best by minting an additional DOI. This is to maintain the access to all related and additional material not offered by the publisher such as earlier drafts with their review comments, errata, repositories for data, and other additional material related to the report preparation (see Annex B, levels below level A).
17. The Secretariat, in collaboration with TSUs, should ensure, as a matter of urgency, that DOIs are retrospectively minted and curated for all previous IPCC reports and their components (see Annex B, level A components a to h) together with the recommended downloadable citations. The Secretariat should also ensure that all previous reports and their components are incorporated into major citation databases such as Web of Science, Scopus, or Google Scholar. These tasks should be completed by the end of 2021. This may be retrospectively implemented by IPCC becoming a member of academic metadata and DOI service providers such as Zenodo³ or Crossref⁴ or similar institutions serving a comparable purpose.

² Such a download should be available in at least following formats: Text, RIS, and BibTeX

³ <https://zenodo.org>

⁴ <https://www.crossref.org>

Update on Publications and Translations

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1. INTRODUCTION

After the Informal Group on Publications (IGPubs) fulfilled its original mandate, the IPCC Bureau, at its 60th Session (BUR-60), extended the IGPubs mandate to cover the translation of IPCC products. Under the new mandate, IGPubs is chaired by Working Group III Co-Chair Jim Skea and Working Group II Vice-Chair Taha Zatar. This report documents IGPubs's findings and recommendations based on its work since BUR-60 up to the completion of its work under this new mandate in December 2022.

IGPubs members emphasise the importance of making IPCC products accessible to policymakers, stakeholders and citizens across the world. The timely and accurate translation of IPCC products into the official UN languages is a prerequisite for this. Translations that maintain the scientific integrity of the original assessments are particularly important if they are used in legal contexts.

The Annex to the 1989 Memorandum of Agreement creating the IPCC notes that the IPCC Secretariat will “arrange for the translation, publication and distribution of the reports of the sessions”. The proposed process outlined in this document is intended to assist the IPCC Secretariat, along with other stakeholders, in delivering translations in an accurate and timely manner with appropriate quality assurance.

2. HOW THE INFORMAL GROUP ON PUBLICATIONS ORGANISED ITS WORK ON TRANSLATIONS

Before commencing its second phase of activity focusing on translation, IGPubs reviewed its membership with a view to ensuring that native speakers of all UN languages were represented, together with representatives from the three Working Groups, the Task Force on National Greenhouse Gas Inventories (TFI) and the Synthesis Report (SYR). The revised membership of IGPubs is shown in Annex B.

After a hiatus due to the approval of the Working Group Reports, the Co-Chairs of IGPubs developed a plan of work which was considered by members at the first meeting on 21 July 2022. At that meeting, members were invited to provide feedback on the current process for translation of IPCC products, taking into account the specificities of translation into particular languages. These key considerations were used by the Co-Chairs to develop two possible options, with the support of the TSUs, for a translation process. These were reviewed by IGPubs at its second meeting on 23 August 2022. Feedback from members informed the development of a preferred option, which members considered at the third meeting (26 September 2022). During the third meeting, IGPubs reviewed the proposed process and a number of specific refinements were proposed and agreed.

3. RECOMMENDATIONS TO THE IPCC BUREAU

The recommendations of the Informal Group on Publications follow. Full details of the proposed process are included as Annex A.

General principles

1. In line with the Annex to the 1989 Memorandum of Agreement establishing the IPCC, the IPCC Secretariat retains responsibility for arranging the translation of IPCC products. The Secretariat should be supported by relevant expertise to deliver high-quality and timely translations of IPCC products. This should include IPCC Bureau members, IPCC member governments, IPCC authors, and contracted outside expertise.
2. The process for translation must remain flexible to allow for differences between IPCC products and specificities associated with the different official UN languages.

3. The translation of IPCC products should begin immediately after submission of the fully copyedited and typeset report to the publisher and should be completed within three months of that date.
4. Translation of IPCC products must be compatible with the IPCC Error Protocol. Relevant errata statements will be translated.
5. All individuals who have contributed to the translation process should be recognised through acknowledgement in the translated product.
6. The process relates only to the official translation of IPCC products. Unofficial translations, including those for non-UN official languages, which may be undertaken by Focal Points or non-governmental organisations, are outside the mandate of this Group and fall within the scope of the IPCC copyright policy.

The Process and Responsibilities

7. The Publications Committee that was recommended in Phase 1 of the Informal Group on Publications should have its remit extended to include:
 - a. The establishment of Editorial Sub-Committees (one for each official UN language other than English, See 10. below);
 - b. Assisting the Secretariat in drawing up Technical Specifications and Terms of Reference for the procurement of WMO translation services; and
 - c. Assisting the Secretariat in drawing up the Person Specifications and Responsibilities of the new Science Editor role (see 9. below).
8. The Secretariat should continue to be responsible for contracting translation services, including the WMO translators, and appointing Science Editors for each UN language other than English.
9. The first draft of translations will continue to be made by the WMO translation service, referring to the Glossary (see 14. below) and earlier translations of IPCC products.
10. Editorial Sub-Committees, convened by a suitably qualified Bureau member who is a member of the Publications Committee, should supervise the translation of all products into a specific language during the assessment cycle. They should also supervise the translation of Glossary terms. Members of the Editorial Sub-Committees should include WMO translators, Science Editors, government representatives and authors. Editorial Sub-Committees should have responsibility for finding consensus among members.
11. Science Editors, who must be native language speakers and have relevant scientific expertise, should monitor draft translations to ensure scientific integrity, consistency with the approved English language report, and consistency across different products. They should work closely with authors, WMO translators, governments, and the relevant Editorial Sub-Committee throughout the translation process. Publications Committee members should participate in the selection of Science Editors.
12. Separate Science Editor contracts should be established for each IPCC product and each official UN language. However, the same individual may fulfil more than one contract.
13. Governments should participate in the review of draft translations and proposed translations of Glossary terms. Governments are best positioned how to organise themselves and the approach may vary by language. A single government representative should ideally participate in the

Editorial Sub-Committee and coordinate input from all other governments whose countries use the language in question.

Glossary and New Terms

14. All terms in the Glossary should be agreed and translated prior to the approval session for the relevant assessment report.
15. The Collaborative Online Glossary System (COGS) under development by the Secretariat should be established as a key resource for translators, interpreters, governments and scientists. This should contain all terms in the Glossary translated into all official UN languages with two-way translation functionality.

ANNEX A: PROPOSED PROCESS FOR TRANSLATING IPCC PRODUCTS INTO THE UN LANGUAGES

A.1 Starting Points

Based on discussions at the first two meetings of the IPCC Informal Group on Publications (IG Pubs), the following were agreed starting points for the proposed translation process:

- 1) The process should be consistent with the Memorandum of Understanding between WMO and UNEP establishing IPCC and the associated Memorandum of Agreement.
- 2) Translations of products must accurately reflect the texts approved and accepted by IPCC member governments.
- 3) The components of IPCC Reports for which formal IPCC translations are made are those contained within the Summary Volume, comprising the Summary for Policymakers, Technical Summary, Glossary, Frequently Asked Questions, and front matter (cover, foreword, preface). The translated components of Methodology Reports are the Overview Chapter, Glossary, and front matter (cover, foreword, preface). Errata relating to the translated material are also translated.
- 4) The primary challenges are: a) to maintain continuity of practices and procedures within and between IPCC cycles; and b) to build in promptly the translation of novel scientific terms and concepts.
- 5) Those with an interest in assuring the accuracy and quality of translated products must have a role in the process. These include Bureau members, governments and authors with relevant expertise. The Bureau has specific responsibility for overseeing scientific quality.
- 6) Those with substantial work responsibilities must be subject to contractual arrangements rather than relying on voluntary contributions.
- 7) The process must be as simple as possible to avoid placing unnecessary administrative burdens on all concerned.
- 8) The process needs to be flexible to accommodate differences between IPCC products and the specificities of the different official UN languages (e.g., when the language concerned is the primary language of multiple countries).
- 9) The process should be compatible with established IPCC processes, in particular the IPCC Error Protocol.
- 10) Translated products should make consistent use of the IPCC Glossary, including the English language version and all its translations.
- 11) The process should ensure the timely provision of translated products.
- 12) Those contributing to the translation of IPCC products should be recognised through acknowledgement in the translated product.

A.2 Overview of proposed process

The proposed process should be viewed as a flexible framework for collaborative working. Informal communication and co-working will facilitate the translation task and could enable some fast-tracking. The key elements are:

All terms in the cross-Working Group **Glossary** should be agreed and translated prior to the relevant assessment report approval sessions. The **Collaborative Online Glossary System (COGS)** under development by the Secretariat should be established as a key resource for translators, interpreters, governments and scientists. This will contain all terms in the Glossary translated into all official UN languages with two-way translation functionality. COGS is the subject of a separate section below.

Working Group authors are best positioned to identify and propose translations of new terms. This is expected to take place organically, with TSUs providing guidance. TSUs could consider maintaining a shared database with translations of new terms that have been discussed with authors with a view to building the Glossary and promoting consistency in how terms are translated in different IPCC products.

The first draft of the translation will continue to be made by the **WMO translation service, referring to the Glossary and earlier translations of IPCC products.**

The position of **Science Editor** (for each UN language), under contract to IPCC and recruited through an open recruitment process, will be established to lead on editing first drafts in consultation with IPCC Bureau members and scientists. Different contracts should be established for each IPCC product, but the same individual could be contracted to cover more than one product.

The Secretariat will contract the WMO translation service and the Science Editors.

The Bureau has accepted a previous recommendation of IG Pubs to establish a **Publications Committee** with the task of advising the IPCC Secretariat on Technical Specifications and Terms of Reference for the procurement of printing and publishing services. The mandate of this should be extended to cover Technical Specifications and Terms of Reference for the procurement of translation services and Person Specification and Responsibilities for the Science Editor role.

An **Editorial Sub-Committee** to the Publications Committee should be established for each of the UN languages other than English, which would cover all products produced during the assessment cycle in that language. **The Convenor** should be a suitably qualified Bureau member who is a member of the Publications Committee. WMO translators, Science Editors and government representatives should participate, and invitations could be extended to other Bureau members and IPCC authors supporting the translation process. Each Editorial Sub-Committee should have a flexible membership depending on the task at hand. Each Editorial Sub-committee would be responsible for supervising the development and maintenance of the relevant glossary, and resolving issues relating to the translation of terms. The Publications Committee would establish more detailed terms of reference for its Editorial Sub-Committees.

Governments of those countries that use the language in question are best positioned to decide how to organise themselves, either working independently or in coordination. A single government representative should ideally participate in the Editorial Sub-committee and coordinate input from all governments whose countries use the language in question. The approach should remain flexible and may vary by language.

A.3 Translation process

Figure 1 summarises the proposed translation process for IPCC products. There would be a separate process for each UN language other than English.

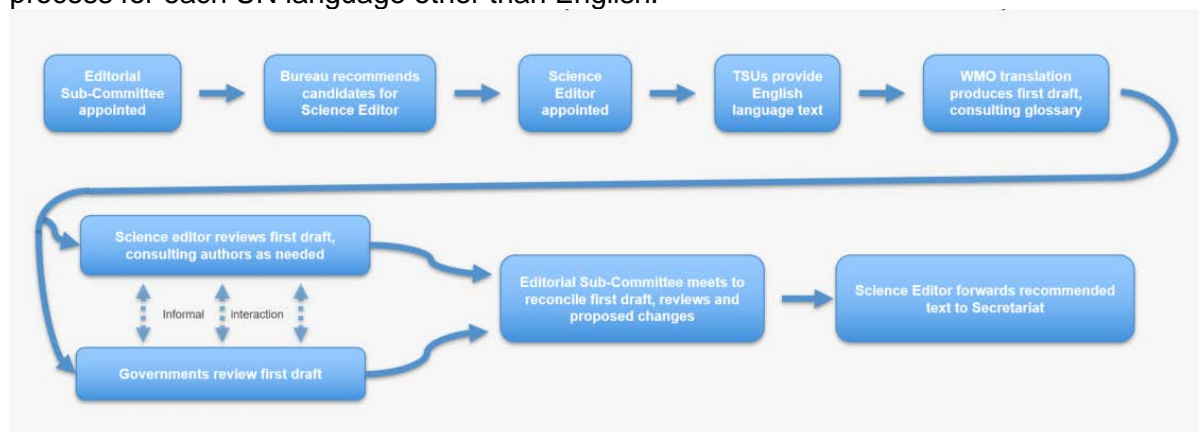


Figure 1: Summary of Translation process

The Secretariat will contract a Science Editor with guidance on the Person Specification and Responsibilities for the Science Editor role from the Publications Committee, based on advice and recommendations from the Bureau.

The relevant Technical Support Unit (TSU) will provide the Secretariat with the English language material used for final publication for transmission to the WMO translators.

The WMO translators will produce a first draft of the translated material, consulting the Glossary and relevant previous translations of IPCC products. The first draft is forwarded to the Science Editor, relevant government Focal Points and the Convenor of the Editorial Sub-Committee. The Science Editor reviews the translation, and identifies possible refinements, consulting authors identified by the TSU. Interested governments also review the translation in a self-organised process. Governments may wish to involve the Science Editor in their discussions.

The Editorial Sub-Committee is then convened to consider the reports of the Science Editor/government reviews and any proposed refinements. The WMO translators should participate in the Editorial Sub-Committee. The Editorial Sub-Committee should aim to reach consensus on an agreed translation. Once a translation is agreed at a meeting of the Editorial Sub-Committee, all those invited to the meeting would be deemed to have endorsed the text. If there is a high degree of consensus ahead of the meeting, it may be possible to conclude the business by correspondence. The IPCC Secretariat provides administrative support to the Editorial Sub-Committees.

Following the meeting, the Science Editor will tidy up the material and forward to the Secretariat and the relevant TSU. Preparation for final publication includes typesetting text and subsequent copyediting by a native language speaking professional. The Secretariat contracts the copyeditors and typesetters, and ensures quality by consulting the Science Editor and other native language experts, with TSUs providing support as necessary.

The efficiency of the translation process and the final quality of the translated products will be greatly enhanced by informal collaboration between different groups at various stages of the translation process.

The final translated products will include acknowledgement by name of all contributors, including the role they performed in the translation process.

A.4 Translation timeline

The process should be conducted in a timely manner. Table 1 shows a recommended timeline for completing the translations process. The Bureau has previously accepted an IGPubs recommendation that formatted text should be submitted to the printers/publishers within six months of the acceptance of a report by the Panel. As the material to be translated at this stage is more limited in scope than an entire IPCC report and, with the glossary already translated, it is recommended that translated material should be ready for printing/publishing no later than three months after the English language material is delivered to the publishers. This breaks down as follows:

Table 1: Recommended timeline for translation process

Time	Activity
Month 0	English language material delivered to the WMO translators
Month 1	WMO translators deliver first draft of translation
Month 2	Science Editors and Governments submit reports and proposed refinements to the Editorial Sub-Committee
Month 3	Science Editor tidies up text for transmission to Secretariat/TSU and Secretariat oversees typesetting/copy-editing processes ready for publication

The English language material for translation may be available before the entire report is delivered to the publishers, so this may not add a full three months to the overall process.

English language errata statements pertaining to translated components of Reports and Methodology Reports are also translated into the other UN languages. To ensure consistency between the English language and translated versions of the report, errata identified *after* the English language version has been submitted for publication will not be implemented in the translated texts and figures, and the error will be recorded as part of the Report's errata statement.

Any errors identified during the translation process will also be managed through the Error Protocol. Should errors occur through the translation, copyediting or typesetting processes for a specific language, these will be recorded only in the translated errata statement pertaining to that language.

A.5 The Collaborative Online Glossary System (COGS)

The COGS is managed by the IPCC Secretariat and will require appropriate resourcing for its development, management and maintenance. Functionality for two-way translation of terms will be crucial to its successful operation. This functionality was still under development when this IGPubs report was agreed.

Working Group authors are best positioned to identify and propose translations of new terms. This is expected to take place organically, with TSUs providing guidance and reminders to update terms in the Glossary.

The Editorial Sub-Committees will review and approve proposed translations of terms across products and across Working Groups. Noting the cross-WG nature of the Glossary, meetings of the Editorial Sub-Committees regarding the Glossary would involve all WGs rather than focusing on a single WG product.

During the period when reports are under development, the timing and frequency of meetings of the Editorial Sub-Committee to agree translations of new terms should be determined by the Editorial Sub-Committee based on progress on the Glossary and guidance from the TSUs. The translations of the Glossary should be finalised in advance of the Working Group approval sessions (subject to

corrigenda and tricklebacks) so that the agreed translations of the Glossary are available for use by the interpreters during the approval session.

A.6 Roles of participants in the translation process

This section sets out the responsibilities of each set of actors in the translation process.

Secretariat

- 1) Overall responsibility for arranging translations as part of the publication process.
- 2) Maintains the Collaborative Online Glossary System (COGS) with two-way translation capability between English with each official UN language other than English.
- 3) Commissions WMO translation services.
- 4) Contracts Science Editors, typesetters and copyeditors (all of whom must be native language speakers of the target language).
- 5) Manages copyediting and typesetting of translated products.
- 6) Provides administrative support for meetings of the Publications Committee and Editorial Sub-Committees.

Bureau

- 1) Identifies membership of the Publications Committee.
- 2) Identifies Editorial Sub-Committee Convenors from within the Publications Committee membership.
- 3) Advises Secretariat on the appointment of Science Editors, including person specifications and responsibilities.

Publications Committee

- 1) Advises the IPCC Secretariat on Technical Specifications and Terms of Reference for the procurement of WMO translation services and the Science Editor role.
- 2) Establishes Editorial Sub-Committees.

Editorial Sub-Committee (one per UN language other than English, covering all products in the cycle)

- 1) Reviews and agrees proposed translations of new glossary terms.
- 2) Reaches consensus on translated material based on first draft translation by WMO translators and subsequent Science Editor/government reviews.
- 3) The Editorial Sub-Committee comprises:
 - a) A Convenor nominated by the Bureau
 - b) WMO translator(s)
 - c) Science Editor
 - d) A government representative
 - e) IPCC Secretariat representative
 - f) Others who may be invited at the discretion of the Chair/Convenor, including authors and TSU members.
- 4) Membership would be flexible depending upon the product in question and the Sub-Committee's needs.

WMO Translators

- 1) Provide a first translation of English language material, consulting the Glossary and translations of earlier IPCC products.
- 2) Engage informally with the Science Editor during the review.
- 3) Participate in the Editorial Sub-Committee.

Science Editors

- 1) Consider authors' proposed translations of new Glossary terms or, where authors have made no proposals, suggest possible translations of terms.
- 2) Review first drafts of translations, consulting authors and WMO translators and others as necessary.
- 3) Finalise translations based on recommendations of the Editorial Sub-Committee.
- 4) Conduct final check of copyedited/typeset material for publication.

Governments

- 1) Run a self-organised process:
 - a) to comment on and propose any changes to new glossary terms
 - b) to comment on and propose refinements to first draft translations.

Note: May choose to involve Science Editors.

Authors

- 1) Will be informed of the translation review process by the relevant TSU, and may volunteer to support the process.
- 2) Review the translations of any terms inherited from previous cycles that may need updating, and propose translations of new terms.
- 3) May be invited to participate in Editorial Sub-Committees as members or guests.
- 4) May be consulted by the Science Editor during the review process.

Technical Support Units

- 1) Add new Glossary terms to the English language component of COGS as reports progress and provide updates to the Editorial Sub-Committee.
- 2) Provide final English text to Secretariat for the WMO translators.
- 3) Provide Science Editors and Editorial Sub-Committee Convenors with lists of authors to support the translation process.
- 4) Coordinate author support for the translation review process.
- 5) Support the final check of copyedited/typeset material by the Science Editor, as necessary.

ANNEX B: MEMBERSHIP OF THE IPCC BUREAU INFORMAL GROUP ON PUBLICATIONS AS MANDATED TO ADDRESS THE TRANSLATION OF IPCC PRODUCTS

Co-Chairs:

Jim Skea (WG III Co-Chair)
Taha Zatari (WG II Vice-Chair)

Members:

Eduardo Calvo Buendía (TFI Co-Chair)
Ermira Fida (IPCC Deputy Secretary)
Andreas Fischlin (WG II Vice-Chair)
Greg Flato (WG I Vice-Chair)
Valérie Masson-Delmotte (WGI Co-Chair)
Abdalah Mokssit (IPCC Secretary)
Sergey Semenov (WG II Vice-Chair)
Diana Ürge-Vorsatz (WG III Vice-Chair)
Carolina Vera (WG I Vice-Chair)
Noureddine Yassaa (WG I Vice-Chair)
Panmao Zhai (WG I Co-Chair)

Advisory members:

Laura Biagioni (IPCC Secretariat Web Information and Publications)
Sandro Federici (Head of TSU TFI)
Roger Fradera (Head of TSU (Operations) WG III)
Jennifer Lew Schneider (IPCC Legal Officer)
Andrej Mahecic (IPCC Head of Communications and Media Relations)
Charlotte Pascoe, Martina Stockhause (TG-Data representatives)
Anna Pirani (Head of TSU WG I)
José Romero (Head of TSU SYR)
Raphael Slade (Head of TSU (Science) WG III)
Melinda Tignor (Head of TSU WG II)

Support:

Géninha Lisboa (WG III Administrator)

18. It is recommended that all IPCC authors, review editors, and report editors are listed also with ORCID identities as part of the metadata that are to be prepared when minting DOIs.
19. It is recommended to collaborate with, and build on, TG-Data's and IPCC DDC's practice and experience as appropriate.

3.6 Matters outside of scope

This recommendation relates to the work of Subgroup A.

20. The Bureau may consider inviting other IPCC bodies to consider the matters identified by the Informal Group on Publications in relation to errata, specifically i) how errata should be recorded; and ii) whether errata should be categorised for their implications for the storage of underlying data.

3.7 Topics not addressed

A number of topics were not discussed due to lack of time. These include:

- Translations;
- Preparation of html versions of reports;
- Derivative material in different formats; and
- Review of open data formats for products with a view to their interoperability.

4. PROPOSED NEXT STEPS

The IPCC Bureau is invited to:

- take note of the report of the Informal Group on Publications;
- adopt or modify the recommendations made in Section 3 of this report;
- request the Secretariat to forward the recommendations as modified by the Bureau to the Panel along with the report of the Informal Group on Publications; and
- note that the mandate of the Informal Group has been fulfilled and thank the members of the Informal Group on Publications for their work.

ANNEX A: REPORT OF SUBGROUP A: THE FORM IN WHICH IPCC PRODUCTS ARE PUBLISHED

Members: Valérie Masson-Delmotte (WG I Co-Chair); Jim Skea (WG III Co-Chair).

Advisory members: Sandro Federici (TFI TSU); Roger Fradera (WG III TSU); Anna Pirani (WG I TSU); Raphael Slade (WG III TSU); Melinda Tignor (WG II TSU)

1. Direction given to Subgroup A

The work of Subgroup A was informed by IGPub's direction to consider the question of what constituted the definitive version of IPCC products, with particular attention paid to the process between approval and publication of the report. The 1989 Memorandum of Understanding between UNEP and WMO notes that the IPCC's activities will include "publication of reports of the Panel and its bodies" and the Memorandum of Agreement refers only to the preparation, finalization and dissemination of reports of Working Groups to Governments, UN agencies and scientific institutions. The IPCC Principles and Procedures and the terms of reference for IPCC bodies are silent on publication and its management. Towards the end of the Fifth Assessment cycle, the Panel and the Executive Committee started to give consideration to publication issues, but these were unresolved. To this end, Subgroup A set out to consider:

1. Recent practices relating to publication as employed by the TSUs of the WGs and TFI during the Sixth Assessment Cycle, including the management of changes (errors and grammatical and minor editorial corrections commonly termed copyedits) during and after the period between government approval and when the laid-out version is posted online and submitted to a commercial publisher
2. Defining when changes constitute grammatical and minor editorial corrections or when changes require the error protocol
3. The question of 'what is the "Document of Record"?' in the context of the preparation of printed and web-based published versions

Noting the many aspects of publication on which the Principles and Procedures are silent, Subgroup A sought to review the record of previous sessions of the IPCC and IPCC Bureau, and meetings of ExCom, to understand when and how the IPCC had considered the matter of publication in previous assessment cycles. Subgroup A found that many of the topics had been broadly considered in previous cycles but often with no firm conclusions or resolutions (reference to relevant decisions and discussions are footnoted in this report and included as Annex F to the main report). These included issues such as what was the Document of Record, and whether the digital version should be altered after the error protocol had been exercised.

2. Recent practices relating to publication as employed by the TSUs of the WGs and TFI including the management of changes (errors and grammatical and minor editorial corrections)

The Heads of TSUs for the WGs and TFI provided clarification on recent practices and Subgroup A sought to distil these into a single coherent process as follows:

1. Final Draft circulated for Final Government Distribution (FGD)
2. FGD + corrigenda identified prior to the WG or TFI/IPCC Session = text + corrigenda submitted to governments for approval/acceptance
3. WG or TFI/IPCC Session approves the SPM and accepts the underlying report

4. Approved SPM + accepted report Final Draft⁵ + accepted corrigenda + tricklebacks = **Document of Record** accepted by governments subject to (i) grammatical and minor editorial corrections and (ii) Error Protocol
5. Document of Record posted online^{6, 7}
6. Laid-out version of the Document of Record is produced, including tricklebacks + grammatical and minor editorial corrections + errors identified to this point
7. This version is posted online as “in press” with Errata listing and sent to an appropriate publisher, resulting from which printed copies of the report are / may be produced; however, practices in relation to this online text differ between the WGs and TFI:

<p>7.a <u>WG approach</u>: Online text is frozen and, even if errata are approved, no further changes are made to the text</p>	<p>7.b <u>TFI approach</u>: Amendments to the online text continue to be made as and when errata are identified</p>
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8. All subsequent errors are subject to the Error Protocol and Errata files (and, in the case of the TFI, online text) updated following normal procedure

The above process was considered to adhere to IPCC Principles and Procedures and conform to recent decisions by IPCC decision-making bodies.

Under current practices, all three WGs and the TFI make grammatical and minor editorial corrections⁸ to their Document of Record prior to posting online and submitting it to a commercial publisher (i.e. before step 7). Noting that the error protocol applies from step 5 onwards (see footnote 7), in the same manner text and figures are amended in line with errata before step 7. This practice was supported by the Principles and Procedures and accepted by governments, as there were clear benefits in that it resulted in a higher quality and more intelligible product. Practices at and after step 7, however, differ between the WGs and the TFI; this reflects the different nature and purpose of their respective products with different end-user communities. For the WGs and their end users (policymakers and scientists), it is important that their end products provide a snapshot of the assessed literature up to that point in time; for the TFI, paramount importance is given to providing end users (inventory compilers) with the most up-to-date versions with text amended in line with approved errata. As a result, the TFI continues to update its online text to reflect approved errata, whereas the WGs do not.

The WGs noted additional challenges in continuing to update the WG reports from step 7 onwards: these included: (i) version control, particularly noting the translations of the Summary Volumes into the six United Nations languages if these versions were also expected to be updated; and (ii) resource implications, including maintaining graphic designers in contract to update any figures requiring amendment in line with errata.

⁵ The accepted report Final Draft comprises the Technical Summary, chapters, and annexes, alongside any other supplementary materials submitted for acceptance by governments.

⁶ Point of note: following accepted legal understanding that “publication” constitutes any instance of making a text (or other form of information) available to the public, it was agreed that posting the document of record online (as per step 5 here) constitutes first publication of a report. On this basis, for example, the error protocol, which is accepted to come into effect following publication of the report (agreed by all WGs and TFI), should apply from step 5.

⁷ Established practice regarding the timing of releasing the reports after acceptance/approval was agreed at ExCom 17 (27 February 2013) and clarified at ExCom 20 (03 June 2013), whereby the SPM will be released immediately after its approval session and the accepted underlying report, accompanied by a document detailing tricklebacks resulting from the approval of the SPM, will be released no later than the second working day following release of the SPM. See the Annex C for full text of relevant IPCC and ExCom discussions.

⁸ Section 3 provides further clarification on what changes constitute grammatical and minor editorial corrections and what changes require the error protocol.

Neither previous legal advice received by TSUs or TFI, nor earlier discussions by IPCC bodies, had settled the question as to how these more substantive changes should be managed by TSUs.

IGPub considered the above process and agreed that there were benefits from establishing a clear process from assessment cycle to assessment cycle for publications that would be adopted by WGs and TFI. However, any benefits would be undermined if a single approach was mandated that did not take into account the differences in the products and their end users for the WGs and TFI. What was sought was a clearly established but not uniform approach across the WGs and TFI. There were clear benefits for the WGs from making no further changes to their text after posting the laid-out version online and submitting to a publisher (providing consistency across the online version, the version sent to a commercial publisher, and the translated Summary Volumes). For the TFI, their products and end users benefitted immensely from their online version continuing to be updated in line with approved errata.

Should differences between the WG and TFI approaches not be acceptable, an alternative option could be the use of editions for both WG and TFI products (i.e. with both online and published versions updated in new editions). However, IG Pub noted that this could bring considerable operational challenges for the WG TSUs, as further, additional publication processes would need to be introduced and managed (including possibly by TSUs in later cycles that would not know the reports so well) and there could be additional resource implications (as commercial publishers may lack the same financial incentive to produce new editions that might attract less interest from buyers in proportion to their efforts producing a new edition, and as a result costs would be passed onto IPCC). This approach was considered not preferable for the Working Groups but could be adopted.

One final matter Subgroup A considered in relation to the form and publication process for IPCC products was the application of pop-up/sticky notes within the online HTML text as a means of identifying where errata have been approved. This practice had been introduced by WG I within the laid-out, online, HTML (not PDF) version of the SR1.5 report. These notes indicate text and figures where errors have been identified and provide links to the errata file. However, the text is not amended. This idea was considered at earlier meetings of ExCom, including naming this online version updated with pop-up notes as the “working version”; however there was no conclusion with regards to whether this practice should be adopted, and the WG I practice has developed relatively independent of these discussions⁹. Subgroup A saw the merits of this approach, and the idea was further discussed by IGPub at its Third and Fourth meetings, concluding that this approach provided clear benefits to the end user (by highlighting to them where errata have been approved and where further information about the errata can be accessed) and the operational challenges were considered relatively minimal, although the practice would need to be introduced across Secretariat and TSUs.

3. Defining when changes constitute grammatical and minor editorial corrections or when changes require the error protocol

The IPCC Principles and Procedures make a distinction between grammatical or minor editorial corrections (sometimes referred to as copyedits) and those more substantive changes that require the error protocol. What constitutes “grammatical or minor editorial corrections” is not defined in the IPCC *Principles and Procedures*. In practice, these encompass the thousands of minor edits required to convert the word document into a high quality, print-ready PDF. Examples of copy edits to past reports are provided below. Changes requiring error protocol are defined in the error protocol and are the responsibility of the Co-Chairs and WG and TFI Bureau.

⁹ See note of discussion relating to errata files at ExCom 18 (April 2013), where this approach was endorsed; however, at ExCom 25 (December 2013) concerns were raised about the number of electronic versions and the ExCom agreed to convene a small group to further consider the matter. The question was then raised again at IPCC XLI, and the Panel requested that the ExCom consider the matter further, which it did so at ExCom 33, however the ExCom was unable to agree consensus approval.

Acceptable use of copyedits based on past practice:

- Those changes that do not affect content or meaning. This may include:
 - Changes to the formatting, style, and layout of the report text.
 - Corrections to grammar or punctuation that does not affect meaning (e.g. spelling mistakes, appropriate use of capital letters, names of authors).
 - Changes for consistency across the report but where the meaning is not changed (e.g. correcting phrasing of a figure title to more closely match how the same term is used in the report text).
 - Correction to references, including addition of incomplete details of existing references (e.g. DOI number, issue/volume, page numbers) and missing references.
 - Redrawing and re-formatting all report figures and tables (although not in a way that content and meaning, or their possible interpretation, are affected – special care must be taken with figures where even minor changes to format and style can have more significant effects on interpretation; consider the changing of the colour of a data series in a figure from a neutral grey or black to red, traditionally a more alarming colour).
 - Harmonisation of colour scheme.

N.B. It is not possible to give an exhaustive list of every edit undertaken in the layout and production process.

Change requiring error protocol:

- This is defined in the error protocol as the responsibility of the Co-Chairs and WG Bureau. Changes that reflect errors of fact or accuracy and that could have been avoided in the context of the information available at the time the report was written. These may include:
 - Typographical errors.
 - Issues of sourcing, interpretation, analysis, or assessment, arising from the previously mentioned errors of fact or accuracy.
 - Addition or removal of references.

Unacceptable changes (cited in the error protocol):

- Changes that reflect new knowledge or scientific information that became available only after the literature cut-off date for the report in question.
- Changes to propose the consideration of additional sources not cited in the existing assessment, unless directly relevant to an error of fact or accuracy.
- Changes to reflect a difference in opinion compared with an author team or a new interpretation of knowledge or scientific information.

IGPub considered the extent to which it was possible to define the two classes of changes. It was agreed that there were limits, that a degree of discretion would need to be employed, and that the above could be considered by the Bureau as guidance for future assessment cycles rather than a set of criteria to codify a sharp definition between these two classes of changes.

4. The question of ‘what is the “Document of Record”?’ in the context of the preparation of printed and web-based published versions

The importance of establishing which version of an IPCC report constitutes the Document of Record of IPCC reports was recognised by the Informal Group on Publications.¹⁰ The question of ‘what is the “document of record”?’ remains for governments to decide. Recent IPCC discussions implied but did not clearly state a preference for the printed version to be the document of record.¹¹

The production process outlined above remains open to either the digital version posted online or the version sent to be printed being the ultimate “Document of Record”. The WG (but not TFI) preference that no further changes to the text and figures will be made in response to approved errata would have the intention of ensuring that there is no difference between the digital and printed versions. The TFI established practice is that the Document of Record is the version published online with all approved corrigenda applied.

5. Matters relating to the errata protocol identified but considered out of scope

i) Establishing a common approach to recording errata

Under current practices, WG I and WG II do not make changes to their text in response to approved errata. The TFI, seeking to provide the user of its products (inventory compilers) with the most up-to-date versions, amended their texts in line with approved errata and publish in the same webpage the corrigenda documents where each errata is reported by comparing the original erroneous text and the corrected text. WG III amended their text in line with approved errata but with a change to previous practice in how the errata was recorded, which was agreed with the IPCC Secretariat Legal Officer in post in June 2019:

1. If an error is identified WG III run the full error protocol
2. WGIII edits the text or figures in all available versions to correct the error - this means users will have available the most up-to-date version of the report

WG III post an erratum online which is formulated slightly differently: instead of stating ‘there was an error - this is how it should be corrected’, WG III instead state ‘this is what the report originally said, this is the nature of the error and that it has been corrected in the most recent published version’. Subgroup A considered the merits of the above approach and agreed that it struck a good balance between the two approaches, providing the most up to date version at the time of laying-out the report, while mitigating the risks of confusion caused by amending those texts and figures accepted/approved by governments, and that this approach would be preferable as a consistent approach across all WGs. However, it was agreed by IGPub at its 07 January 2021 meeting that this fell outside the scope of IGPub and the question as how best to record errata should be directed to another IPCC body.

ii) The categorisation of errata for their implications for data storage

At the Third Meeting of IGPub it was noted that TG-Data was seeking to improve archival of data for the underlying report and so it could be helpful to have categories for errata that could signal implications for the data stored (e.g. errors of calculation) and other categories with no implications for the data (e.g. grammatical or formatting changes) in order to improve management of data. The suggestion had strong merit; however, it was agreed by IGPub at its 07 January 2021 meeting that this fell outside the scope of IGPub and the question as whether errata should be categorised for their implications for data storage should be directed to another IPCC body, perhaps TG-Data.

¹⁰ For example, IPCC reports have been cited in court cases, such as State of the Netherlands v. Urgenda Foundation, 2019.

¹¹ See the discussion held at IPCC XXXV, where the panel considered adopting the electronic version of a report as the document of record (see Annex F). Discussions ended without a clear conclusion.

6. Recommendations

Subgroup A makes the following proposals as recommendations for IGPub to submit to the IPCC Bureau for its consideration:

Documentation of publication practices

1. Written guidance on publication practices to be followed by the Secretariat and the Technical Support Units should be developed and agreed by the Bureau.
2. The Panel may consider integrating all or part of that guidance into any future revision of the *Principles and Procedures*.

Acceptance, publication and error correction of Working Group Reports, Special Reports and the Synthesis Reports

3. The decision of the Executive Committee at ExCom 17 (2013) to post a digital version of a report online, within two working days of acceptance, should be confirmed. It should be clearly stated that the posted report is subject to grammatical and minor editorial corrections, incorporation of “tricklebacks” from the approval session, and application of the Error Protocol.
4. Following acceptance of the report and up until the formatted text (including figures) is submitted to printers / commercial publisher and is posted online (see recommendation 5 below), those errors that have been alleged following acceptance of the report and which have completed all required steps in the Error Protocol will be incorporated into the text that is submitted to the printers/publishers and is posted online. A record of these errors will be posted prominently on the IPCC website alongside the Document of Record report.
5. Formatted text, incorporating grammatical and minor editorial corrections, “tricklebacks” from the approval session, and the correction of any errors identified through application of the Error Protocol (see recommendation 4 above), and with no other modification, should be submitted to the printers/publishers within six months of the acceptance of a report by the Panel.
6. The formatted text submitted to the printers/publishers should become the Document of Record and should be posted online.¹²
7. While every effort must be made to ensure that the online and printed versions Document of Record are identical, to avoid doubt we recommend that the Panel should determine, or should delegate another body of IPCC to determine, which of the online or printed versions should be considered definitive.
8. Following submission to the printers/publishers and that version being posted online, the text and figures of the online Document of Record will no longer be amended, as agreed at ExCom 18 (2013). The errata file will be updated with any errors approved following the establishment of the definitive Document of Record. The errata file will be posted prominently on the IPCC website alongside the report. The text and figures will not be amended following submission to the printers/publishers and posting online, but a working version of the report shall be marked up (e.g. by “sticky notes”) to highlight where errors have been corrected, with a link to the online errata file. The mark-ups will cover errors identified subsequent to submission to the printers/publishers.

¹² IPCC XXXV (2012) charged the Executive Committee to further investigate the issue of the document of record and report on its findings to the Bureau. This charge was never fulfilled.

Acceptance, publication and error correction of products of the Task Force on National Greenhouse Gas Inventories (TFI)

9. Notwithstanding Recommendation 8 above, the Task Force on National Greenhouse Gas Inventories (TFI) will continue to amend the online text of its Document of Record to include corrections identified and approved through the error protocol. All corrigenda dated and progressively numbered are published with the online edition. For each chapter, corrigenda implemented are clearly referred. This practice reflects the different end-user community for TFI products, which requires the most up-to-date text possible.

Matters outside the scope of the Informal Group on Publications

10. The Bureau may consider inviting other IPCC bodies to consider the matters identified by the Informal Group on Publications in relation to errata, specifically i) how errata should be recorded; and ii) whether errata should be categorised for their implications for the storage of underlying data.

ANNEX B: REPORT OF SUBGROUP B: MAINTAINING AND BUILDING THE SCIENTIFIC STATUS OF IPCC PRODUCTS

Members: Andreas Fischlin (WG II Vice-Chair); Diana Ürge-Vorsatz (WG III Vice-Chair)

Advisory members: Anna Pirani (WG I TSU); Raphael Slade (WG III TSU); Melinda Tignor (WG II TSU)

1. Motivation and goals

The accessibility of published work is of pivotal relevance for both its readership and for its authors. The reputation and crediting of scientists, and herewith IPCC authors, often depends on automatic harvesting citations (meta data) based on the digital accessibility of the scientist's published work (h-index, ORCID identity, Google scholar etc). Publication practices of IPCC products currently fall short of best practice for scientific publication. This impacts the ease with which IPCC reports are accessed by what is a growing breadth of readership and users around the world. It also directly impacts the motivation of scientists to engage in the preparation of IPCC reports as volunteer authors.

Subgroup B has the goal to develop recommendations that will enable IPCC to bring its published products to a comparable standard as current practices of scientific publications, to ensure optimal accessibility for all readers. This requires the attribution of digital object identifiers (DOIs), downloading of recommended citations, and stable digital accessibility, irrespective of whether IPCC products are available in printed form, or if websites hosting IPCC reports change over time. This can be met by working with an established academic publisher whose catalogue covers the breadth of disciplines assessed in IPCC reports.

2. Requirements for digital and printed publication formats

The production of IPCC reports, including their publication, has to conform to IPCC rules and procedures that can differ in some respect from the usual publication of other scientific material. Among those requirements are open and generally free access of digital objects and full documentation of and transparency throughout the entire process of preparation. Nevertheless, IPCC products should reach a recognition that is comparable to that of any other high-quality scientific work.

For these reasons, a tiered approach is recommended that consists of three levels by which IPCC reports and related products are published and digitally managed.

Top level A - IPCC reports and their main components:

- a. Entire report
- b. Front matter including forewords and table of content
- c. SPM
- d. TS
- e. Chapters and Cross-Chapter Papers
- f. Glossary
- g. Other Annexes (individually)
- h. FAQs¹³

Combinations of above listed components also belong to the top level, e.g. a brochure containing the SPM, TS, and FAQs and similar brochures.

¹³ Due to the complexity and technical nature of TFI reports not all elements as listed may be available always and/or form part of this level.

At this top level each report component is made freely and publicly available at no charge in accordance with IPCC's rules and procedures regarding copyrights. Any such publication must always meet the following requirements:

- (i) a DOI by which the web site on which this report component is offered can be accessed permanently, i.e. the DOI resolves to the URL of the correct landing web page (first the IPCC web site; once published in final form¹⁴, the publisher's web site);¹⁵
- (ii) the DOI must be contained within the component's PDF itself, i.e. the DOI is contained both in the recommended citation given in the PDF as well as in the downloadable¹⁶ citation;
- (iii) a downloadable PDF of the component itself must be available, first typically water marked by a "subject to copy edit and/or trickle back" warning;¹⁷ and
- (iv) the IPCC recommended citation must be available for downloading, e.g. at least in Text, RIS, and BibTeX format.¹⁸

It is highly desirable that the downloadable citation and DOI be made available together with the PDF for each component of the report from the very first time when the report is made public. This is typically done on the IPCC web site soon after the approval of the SPM is completed. A good practice appears to be that these DOIs are e.g. provided and reserved by the publisher in time before the report is made publicly available for the first time. These originally minted DOIs are assigned with the view to keep these DOIs permanently resolvable throughout all updates the report component will receive until final publication.¹⁹ This implies that until the publisher has completed the publication process, these DOIs will resolve to URLs of web pages maintained by the IPCC secretariat. As of final publication the very same DOIs of all top-level A report components resolve to URLs of the publisher's web pages.²⁰

Combinations of above listed components also belong to the top level, e.g. a printed brochure containing just the SPM, or combining SPM, TS, and FAQs, either per WG or across all WGs. Such products when published need also to adhere to the same principles as described above (i.e. requirements (i)–(iv) are met for each and its components at the top-level A as appropriate).

Second level B – It contains all elements related to the preparation of IPCC reports that are available as separate digital objects. These may be excerpts from top level A components, such as figures made individually available for download, tables, report-specific fact sheets, and press material. In addition, this includes documents such as the report drafts as made available during the review rounds, review comments including author responses, the review editor reports²¹, and errata as subsequently added.

¹⁴ The final form is in terms of content identical to the Document of Record (cf. Subgroup A).

¹⁵ To warrant long-term access this DOI is the one representing all versions and should resolve always to the latest version (for details of such a mechanism see <https://help.zenodo.org/#versioning>, accessed 1.Feb.2021)

¹⁶ Downloadable citations are typically offered as links or buttons, e.g. named as "Download Citation", "Export Citation", or "Cite Tool" etc.

¹⁷ PDFs of plenary approved SPMs are subject to copy editing and errata handling, while other report components are also subject to "trickle backs" for consistency with the approved SPM, until the final Document of Record is prepared (cf. Subgroup A).

¹⁸ The downloaded files of the aforementioned formats are all text files, but should use the well-established standard extensions for these formats, i.e. '.txt', '.ris', and '.bib'.

¹⁹ A DOI versioning system can be optionally used here, so that each version of a report receives its separate DOI while the originally assigned DOI remains unchanged and resolves always to the latest version (a useful explanation of such a mechanism can be found at <https://help.zenodo.org/#versioning>, accessed 1.Feb.2021).

²⁰ Since it may be very difficult to find a publisher who would be able, let alone interested, in publishing draft versions of IPCC reports (see below 2nd level B), it is assumed here that any DOIs possibly minted for draft report versions resolve always only to IPCC web sites.

²¹ It is currently not the practice to publish review editor reports.

Third level C – It contains all digital objects that are produced by authors according to FAIR principles²². This may include figure recipes, code, and the plotted and post-processed data that underpin such objects. TG-Data and the DDC are best placed to provide guidance to the IPCC on the handling of all these level C products.

At all stages of preparation and publication, all digital components need to be publicly offered and their accessibility maintained through the DOIs regardless of website revisions.

As PDFs' contents need updating towards the preparation of the document of record (cf. Subgroup A), the DOI of any top-level A component should remain identical permanently, in particular also during the phase of copy editing and tricklebacks handling. Once published in its final version on the publisher's website – using still the same DOIs – it becomes then the publisher's responsibility to ensure on its websites that a link back to the IPCC's website is made available for all top-level A components as offered there. The IPCC websites are typically the ones to which the component's permanent DOI has previously resolved.²³ It is recommended to use for such link back also DOIs. Such DOIs may then be newly minted, if not reserved already from the very beginning. They serve not only to link back from the publisher's website to the IPCC website, but serve from then on also as a parent DOI, allowing from the IPCC's website to access all other elements at the lower levels, i.e. levels B and C. The handling of report related elements at level B, including any errata published after the final publication, is best handled by the IPCC, notably the Secretariat. This distinction is necessary since publication of level B elements such as report drafts, review comments, errata handling etc. are managed and overseen by IPCC (i.e. the Secretariat and/or TSUs, TG-Data, DDC) while the final publication of a report and its components is the main responsibility of the publisher and offered mainly on the publisher's web site.²⁴

There exist of course many web sites offering edited reports that could be considered model websites for IPCC reports. One such illustrative example are the edited books as published by Springer, e.g. <https://link.springer.com/book/10.1007/978-3-642-71630-0>. They offer the individual contributions to the edited book via a table of contents. Such a web site meets all requirements (i) to (iv). In this structure are missing only the links back to the IPCC website from the publisher's website or if the IPCC websites are organised in such a manner the links to the publisher's website.

It is also recommended that all IPCC reports provide in their front matter a permanent URL that points to the report's home page at the IPCC website. Any IPCC website revision would need to consider the maintenance of such URLs, either by retaining the website or then redirection.

The IPCC DDC currently uses Zenodo to mint DOIs for its reports and documents.²⁵ Zenodo is a free of charge general-purpose open-access repository developed under the European OpenAIRE program and operated by CERN. Zenodo may well be an attractive DOI service provider also for IPCC reports in general, notably for the lower levels B and C.

Similarly, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) curates a Zenodo page.²⁶ It uses these facilities also to share publications that are related to its assessments, with the goal of providing:

- open access to cited publications and their related publications (topics, authors) using DOIs; and
- search functionality in CrossRef, DataCite, PubMed, RefBank, GNUB and Mendeley.

²² FAIR principles are available at <https://www.go-fair.org/fair-principles/>

²³ That DOI may be constructed as a version DOI of the main DOI. This may e.g. be accomplished by appending to the DOIs suffix a dot followed by a version number (for details cf. <https://help.zenodo.org/#versioning>, accessed 1.Feb.2021).

²⁴ For convenience of IPCC web site visitors, IPCC should also be allowed to continue offering on its web sites the PDFs and the downloadable recommended citations for all top-level A report components.

²⁵ Zenodo offers a DDC support page at <https://zenodo.org/communities/ddc-support/?page=1&size=20>

²⁶ The Zenodo IPBES page is available at <https://zenodo.org/communities/ipbes/?page=1&size=20>

Similar curation approaches, e.g. via Zenodo, would work well for at least all non-top-level IPCC elements. DOI service providers, i.e. Zenodo²⁷, Crossref²⁸, or ONEDATA²⁹, all provide sufficient services, that could even be applied consistently to all three levels. However, a well-established collaboration of the publisher may call for using another DOI service provider. Subgroup B recommends that the practicality of such approaches, in particular unified ones, is at least investigated by the IPCC secretariat.

3. Past IPCC publications

All previous IPCC products are made available in various forms by the IPCC and Cambridge University Press (CUP) websites. Retrospective revisions are recommended for both websites, since the majority of those products have never been assigned DOIs and no downloadable citations are available for them.

Working backwards from the present all these offerings should urgently be revised to meet the requirements (i) to (iv)³⁰ as described in this Annex B inasmuch as the CUP websites offer past reports.³¹ If reports are only offered in their entirety, downloadable citations are nevertheless to be offered for all report components as described above for top level A.³² Again another approach is needed for the TAR where report components are intentionally not provided in their entirety at the IPCC web site, but only piecewise, distributed over many websites. In the latter case the IPCC DOIs will resolve to the URL of the first website representing the beginning of each report component as defined at top-level A. Finally, all IPCC websites offering IPCC reports should also be revised to provide links to all related material of level B and where appropriate to level C elements of a DDC website where possible. Similarly, CUP having served as a publisher of past IPCC products is to be asked to revise their offerings in a similar manner, by adding links to the corresponding IPCC web pages where corrigenda or other additional material at the levels B and C have been made available by IPCC for previous reports. It is recommended to complete all these tasks by end of 2021.

4. Academic metadata providers

For optimal linking with academic metadata providers such as Web of Science or Scopus, the IPCC products not only need DOIs, but these DOIs need to be indexed by the major scientific citation indices. The most effective way to do this, and to maximize the visibility of IPCC products, is for the IPCC to work with an established top-tier academic publisher.

Regardless of the publisher, it is recommended that the IPCC Secretariat, in collaboration with TSUs, compiles and provides the necessary metadata for all top-level A reports components a to h. To this end it may be advantageous that the IPCC Secretariat establishes a long-lasting collaboration beyond the length of assessment cycles not only with an established top-tier academic publisher, but also with DOI service providers. Such providers, e.g. Zenodo³³, Crossref³⁴, or ONEDATA³⁵, may differ in their specific requirements for metadata. It is therefore recommended to develop a best practice for the needed metadata, which is expected to also contribute towards maximizing the visibility of IPCC products. In this context it is particularly recommended that all IPCC authors (CLAs, LAs), review editors, and report editors are hereby listed also with their ORCID identities.

²⁷ <https://zenodo.org>

²⁸ <https://www.crossref.org>

²⁹ <https://onedata.org>

³⁰ For previous reports (ii) is not possible retrospectively for the PDFs. However, DOIs can be included in the downloadable citations.

³¹ As of this access (12.Jan.2021) the CUP web site is not particularly user friendly and fails for searches for older IPCC reports, e.g. search token "IPCC First Assessment Report" leads not to the wanted report.

³² In this case each report component, e.g. a chapter, will then have to be assigned a DOI that is available only in the downloadable recommended citation but not in the printed report nor its PDFs as those cannot be modified retrospectively.

³³ <https://zenodo.org>

³⁴ <https://www.crossref.org>

³⁵ <https://onedata.org>

5. Concluding remarks

Recommendations for curation and issues related to the full permanency of the access to the IPCC products at level C are beyond the remit of this subgroup and we recommend to refer such aspects to TG-Data and the IPCC DDC. Nevertheless, we wish to emphasize that DOIs serve also here again a pertinent role and have to be assigned with the view of permanent accessibility via the IPCC websites, including the DDC websites.

6. Recommendations

1. The IPCC needs to ensure that all IPCC reports and their main components (see Section 2, level A components: a to h) receive digital object identifiers (DOIs). Those DOIs are always to be made available together with the recommended citations that can also be downloaded³⁶ from the website to which the DOI resolves (see Section 2, requirements (i) to (iv)).
2. Working with the publisher, as appropriate (see Subgroup C), the IPCC needs to ensure that DOIs are minted and curated early on to ensure they can be made publicly available at the very same time that an IPCC report is made publicly available within two working days of the approval of the Summary of Policymakers (see Subgroup A).
3. IPCC reports also need to be incorporated into major citation databases such as Web of Science, Scopus, or Google Scholar as early as possible. This is probably best accomplished in collaboration with the appointed publisher (see Subgroup C). To ensure permanent and full accessibility, once a report is published by the publisher, that publisher is also required to provide a direct link back to the IPCC report websites, again best by minting an additional DOI. This is to maintain the access to all related and additional material not offered by the publisher such as earlier drafts with their review comments, errata, repositories for data, and other additional material related to the report preparation (see Section 2, levels below level A).
4. The Secretariat should ensure, as a matter of urgency, that DOIs are retrospectively minted and curated for all previous IPCC reports and their components (see Section 2, level A components a to h) together with the recommended downloadable citations. The Secretariat should also ensure that all previous reports and their components are incorporated into major citation databases such as Web of Science, Scopus, or Google Scholar. These tasks should be completed by the end of 2021. This may be retrospectively implemented by IPCC becoming a member of academic metadata and DOI service providers such as Zenodo³⁷ or Crossref³⁸ or similar institutions serving a comparable purpose.
5. It is recommended that all IPCC authors, review editors, and report editors are listed also with ORCID identities as part of the metadata that are to be prepared when minting DOIs.
6. It is recommended to collaborate with, and build on, TG-Data's and IPCC DDC's practice and experience as appropriate.

³⁶ Such a download should be available in at least following formats: Text, RIS, and BibTeX.

³⁷ <https://zenodo.org>

³⁸ <https://www.crossref.org>

ANNEX C: REPORT OF SUBGROUP C: SPECIFICATIONS RELEVANT TO SCIENTIFIC PUBLISHING AND SCIENTIFIC PUBLISHING STANDARDS

Members: Greg Flato (WG I Vice-Chair); Mark Howden (WG II Vice-Chair)

Advisory member: Melinda Tignor (WG II TSU)

The IPCC produces publications ranging from Supporting Materials, including meeting reports and guidance documents through Technical Papers, to Special Reports and Assessment Reports, and the Synthesis Report. While meeting reports and guidance documents essentially require only layout, copy-editing and printing/posting, the more formal products are documents that require a more comprehensive and costly publication process.

As the IPCC Secretariat operates under the auspices of the WMO, the publication process is undertaken through the WMO's 'Standing Instructions', of which Chapter 3 covers Publications and Documents. This set of standing instructions was designed to accommodate two categories of documents: 'governance and technical publications'; and 'general information publications'. The preparation, editing and review of these documents is the responsibility of the WMO Publications Board, and the outsourcing of translation, printing and publication is governed by the WMO Standing Instructions on Procurement (Chapter 8). It is evident that the standing instructions and the related administrative processes are intended for WMO documents, and were not explicitly designed for (nor explicitly mention) the publication of IPCC Reports that are scientific assessments running more than a thousand pages in length, containing hundreds of complex scientific graphics with a huge and hugely diverse readership. [NOTE: it is not clear if IPCC reports are published under the provisions of section 3.5.3 of the Standing Instructions, which refer to 'joint inter-agency and external publications', but it would seem to be the relevant category].

The tendering and procurement procedures for publications appear to be the same as for any other WMO purchasing, with a decision made by a "Tender Evaluation Board (TEB)". According to section 8.7.6.3 of the standing instructions, the TEB must have at least three members (one from the 'requesting Department' (i.e. in this case the IPCC), one from another WMO Department and one from the WMO 'procurement team'). However, the procedures state that, "In addition, for procurement above CHF 200,000, members from other Departments (as well as external subject experts) may be included in the composition of the TEB, if necessary and having regard to the nature and complexity of the procurement, provided that no conflict of interest exists.". The role of the TEB is to review and approve the Technical Specifications (TS) and or Terms of Reference (ToR) submitted by the requesting Department (i.e. in this case the IPCC), to decide on the mechanism to inform potential vendors and which vendors to specifically inform, to perform technical and financial evaluation of bids received, and to recommend award of a contract to the relevant internal approval authority.

Note that nothing in these procedures formally limits the number of members of the TEB, and nothing prohibits several external members from serving. Although the procedures are clear that TEB members must sign a 'declaration of neutrality and no conflict of interest form', there is nothing to suggest that the proceedings are secret apart from normal restrictions about disclosure of tender information, and indeed the proceedings of the TEB are to be recorded in written form (section 8.7.6.7). It is also worth noting that the procedures do not specify or limit the TS or ToR, and so would appear to allow flexibility in applying conditions related to a potential publisher's record of publishing comparably large reports of similar complexity and in similar scientific disciplines.

Recommendations:

1. The IPCC Bureau should establish a 'Publication Committee' for each assessment cycle whose role would be to develop Technical Specifications and Terms of Reference for IPCC publications. (Examples of such TS and ToR documents presumably exist and so it would simply be a matter of updated/revising as necessary). Such specifications should include, for example, that bidders demonstrate that their publication catalogue spans the full range of scientific disciplines, including economics, social science and the humanities as well as the physical and natural sciences, cited in IPCC products, and that they make clear their experience in publishing long and graphically complex documents like an IPCC Report and any associated on-line material.
2. Once established, the IPCC Publication Committee should liaise with the WMO Publication Board to ensure coordination, planning and scheduling related to the establishment of a TEB and in the bidding/evaluation process for IPCC publications.
3. The IPCC Publication Committee should have at least two of its members serve on the TEB for any IPCC publication/procurement process overseen by the WMO. The members will serve on the TEB in their personal capacity and will need to be able to meet the neutrality and conflict of interest test for membership.

ANNEX D: TERMS OF REFERENCE FOR IPCC BUREAU INFORMAL GROUP ON PUBLICATIONS

Agreed at its Second Meeting (30 July 2020)

The Informal Group on Publications (IG Publications) will develop advice for the IPCC Bureau, the Secretariat and the IPCC's parent organizations on processes for managing publications of IPCC reports, including the preparation and conduct of procurement processes and the management of citation data.

The three main areas of work of IG Publications are:

- The form in which IPCC products, including full reports and summary volumes, are published. This area of work will address online (including e-books) and printed publication, the production of hard copies for different audiences (e.g. governments, libraries, and authors), and the sequencing of publishing activities associated with specific IPCC products.
- Maintaining and building the scientific status of IPCC products through licencing arrangements, the use of Digital Object Identifier (DOIs) and other vehicles that enable direct access, and meta data facilities including user friendly citation support. Ensuring that all IPCC assessment and special reports (past, present and future) are included in citation databases such as Web of Science (WoS).
- General specifications, standards and procedures relevant to scientific publishing to be applied by WMO or others when developing procurement processes and requests for tenders, and selecting printers/publishers for IPCC reports.

The membership of IG Publications will comprise two Bureau members from each Working Group, and one member representing the TFI, two representatives from the Secretariat and other co-opted experts as appropriate. Working Group and TFI members will be supported by their TSUs and TG-Data as needed.

IG Publications may seek advice from qualified experts, such as university librarians, publishing organizations and international scientific bodies.

IG Publications will report back to the 58th Session of the Bureau and will report on progress to the 52nd Session of the IPCC.

ANNEX E: MEMBERSHIP OF THE IPCC BUREAU INFORMAL GROUP ON PUBLICATIONS

Chair:

Jim Skea (WG III Co-chair)

Members:

Eduardo Calvo Buendia (TFI Co-chair)

Andreas Fischlin (WG II Vice-chair}

Greg Flato (WG I Vice-Chair)

Mark Howden (WG II Vice-Chair)

Valérie Masson-Delmotte (WG I Co-Chair)

Diana Ürge-Vorsatz (WG III Vice-Chair)

Jonathan Lynn (Secretariat)

Abdalah Mokssit (Secretariat)

Ermira Fida (Secretariat)³⁹

Jennifer Lew Schneider (Secretariat)³⁹

Advisory members:

Charlotte Pascoe, Martina Stockhause (TG-Data representatives)³⁹

Anna Pirani (Head of TSU WG I)

Melinda Tignor (Head of TSU WG II)

Roger Fradera (Head of TSU (Operations) WG III)

Raphael Slade (Head of TSU (Science) WG III)

Sandro Federici (Head of TSU TFI)³⁹

Noémie Leprince-Ringuet (Head of TSU SYR)⁴⁰

Support:

Géninha Lisboa (WG III Administrator)³⁹

³⁹ Invited from the Second Meeting of the Informal Group on Publications, 30 July 2020.

⁴⁰ Invited from the Fourth Meeting of the Informal Group on Publications, 07 January 2021.

ANNEX F: AGREEMENTS, DECISIONS AND RECORDS OF RELEVANT MEETINGS

Memorandum of Understanding between the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) on the Intergovernmental Panel on Climate Change

Provisions

4. Accordingly, the United Nations Environment Programme and the World Meteorological Organization, by this Memorandum of Understanding (MOU), agree to support financially the activities of the Panel within the ceilings they shall mutually agree. This will include:

[...]

- (v) publication of reports of the Panel and its bodies

Memorandum of Agreement [between UNEP and WMO and attached to the Memorandum of Understanding], Annex to Memorandum of Agreement

Activities

The Secretariat of the IPCC will:

[...]

(viii) Generally, and to ensure proper co-ordination of IPCC activities, the IPCC Secretariat will attend, inter alia, to the following:

[...]

- d. Preparing, finalizing and disseminating to Governments, UN agencies and scientific institutions reports of Working Groups, Bureau and full IPCC sessions as appropriate

Reporting

All publications should be indicated as originating from the IPCC. Copyright should be vested in UNEP and WMO jointly. Logos of both organizations should appear on the cover.

IPCC XXXV, 06-09 June 2012

The Panel was invited to consider making the electronic version of the AR5 the document of record. Mr Christopher Field, Co-Chair of WG II, highlighted the present usage of electronic documents of records in different sectors and the advantages that could be realized by effectively allowing IPCC to communicate with broader audiences using a single document of record. The Co-Chair spoke about the usage of ISO standard PDF/A for robust archival purposes.

Delegates considered the innovation. The following concerns were expressed, along with calls for cautious consideration of this proposal: (1) the permanence of archived documents; (2) the need for a seamless transition that may require two versions of record (i.e. hard copy and electronic); (3) the complexity of handling errata in an electronic version; (4) the longevity of electronic documents, depending on the available technology; (5) the difficulty of access in countries with slow internet connectivity; (6) the need for a consistent approach across the Working Groups and Task Force; and

(7) the need for the content contained in or linked to the electronic document to be materials already approved by the Panel.

Thomas Stocker, Co-Chair of WG I, supported by some delegations, suggested providing two identical documents for AR5, one printed and one electronic version, in order to gain experience with the new approach. The Panel decided to charge the Executive Committee to further investigate the issue and report on its findings to the Bureau at its next session.

ExCom 11, 04 July 2012

- 3 (iii) Electronic version of IPCC reports as the document of record: C. Field To prepare a note for further action and decision by the ExCom. By 31 July 2012

ExCom 16, 04 January 2013

- 4.1 Electronic versions of IPCC reports as documents of record

C. Field, Co-Chair, WG II, referred to the PDF-A version with internal links of a SREX chapter that he had distributed to the ExCom in advance of the meeting. He suggested that work should continue on considering the PDF-A format with internal links for AR5.

ExCom 17, 27 February 2013

- 4.1 Confidentiality of drafts and timing of release of the chapters of AR5 and methodology reports

The Secretary clarified the two inter-linked issues to be reviewed under this item, namely: (i) the confidentiality of draft reports; and (ii) the time of the release of the AR5 chapters. She referred to the text of the Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports.

The Executive Committee decided that, as well as the approved Summaries for Policy Makers (SPM) that will be released immediately after the approval sessions, the unedited version of the chapters and Technical Summaries as prepared for the final government distribution (FGD) together with the FGD version of the SPM will be released on the first or second working day following the approval session. They will be accompanied by the document accepted by the Plenary that contains the list of changes to be made to the chapters for consistency with the approved SPM, and with an explanation/disclaimer of their status.

ExCom 18, 03 April 2013

- 3.2 Posting of errata

The ExCom endorsed the proposal by C. Field, Co-Chair, WG II, communicated by email to the members on 14/3/13, that the electronic document of record of IPCC reports, clearly marked as such on the website, cannot be changed. The website needs to indicate that corrections are in a separate file. There will be a downloadable "working version" in which the text has not been modified in any way, but in which flags are inserted in the text, containing or linking to corrections. With this approach, it is clear which text is original and what the changes are. The "working version" needs to be described as such on the web site, along with a direction to check the document of record version if there are any questions about authenticity. Note added following the meeting for clarification: it is proposed that this system be implemented starting with the AR5 cycle and the two Special Reports SRREN and SREX.

ExCom 20, 03 June 2013

- 2.1 Release of draft report after acceptance – clarification

In relation to the decision taken at ExCom-17 on this matter, the Secretary highlighted the following two procedural issues: (i) Appendix A to the Principles Governing IPCC Work does not contain any reference to “final government distribution (FGD)” but refers to “final draft report”; and (ii) after acceptance, the final draft report is no longer a draft, but acquires a new status. Consequently, the ExCom revised its decision taken at ExCom-17 as follows: The ExCom decided that the accepted underlying report will be released no later than the second working day (Monday-Friday) following the release of the SPM. It will be accompanied by the document accepted by the Plenary that contains the list of changes to be made to the chapters, Technical Summary (and Annexes) for consistency with the approved Summary for Policymakers (SPM). The cover page of the report will clearly show its status as “accepted” and will contain a disclaimer indicating that the text of the accepted report will undergo copy-editing and error correction. The ExCom will discuss at its next meeting in July the exact timing of the release of the approved Summary for Policy Makers (SPM) following the approval session.

ExCom 21, 16 August 2013

- 3.1 Process to correct factual errors identified in the Final Draft of the Working Group I (WGI) Fifth Assessment Report (AR5)

T. Stocker, Co-Chair, WGI summarized the document mentioned above that had been distributed to the ExCom for information. The process as planned by WGI includes the issuance of a document entitled “Final Draft Corrections” to be finalized and made public following the publication of the WGI AR5 report in its final form. This document will list all the factual errors that have been identified in the Final Drafts of the Technical Summary, Chapters and Annexes after they were made available to governments and are to be corrected in the final publication. The ExCom discussed the comprehensiveness of this document, which is not intended to include copy edits. C. Field, Co-Chair, Working Group II (WGII), recommended that a full list of copy-edits should also be compiled for internal use. The Secretary expressed her support for the process as developed by WGI. Working Group III (WGIII) indicated that they will use this process too, while WGII will continue considering it.

ExCom 24, 06 November 2013

- 2.1 Correction of errors in the Fifth Assessment Report (AR5) Working Group I (WGI) Summary for Policymakers (SPM)

T. Stocker, Co-Chair, WGI, recalled that, following the approval of the AR5 WGI SPM and its release on 27 September 2013 subject to copy-edit and final layout, the authors of the report had discovered some errors in the SPM. These errors were being handled in accordance with the IPCC Protocol for Addressing Possible Errors in the IPCC Assessment Reports, Synthesis Reports, Special Reports and Methodology Reports (the Error Protocol). In particular, the Panel had been notified about the errors and the proposed corrections with a letter from the IPCC Secretariat on 31 October and had agreed to delegate the approval of the errata to the Executive Committee.

ExCom 25, 04 December 2013

- 5.1 Posting of errata

The Deputy Secretary of the IPCC recalled the ExCom-18 decision to develop a downloadable "working version" of IPCC reports in which the text has not been modified in any way, but in which flags are inserted in the text containing or linking to corrections. Following that decision, the Secretariat, in consultation with C. Field, Co-Chair, Working Group II (WGII) had prepared and distributed to Technical Support Unit (TSU) Heads for comments an AR4 Chapter as sample, with errata showing in "sticky notes". The feedback had been generally positive, but some modifications of the system had been suggested. P. Midgley, Head, WGI TSU expressed concern about the number of different versions of approved IPCC reports that would be accessible on the website. It was agreed that this matter needs further discussion among a small group made up of the IPCC Secretariat and TSUs' representatives. The ExCom will then decide on whether the "sticky note" system is adequate, on the responsibility to prepare such versions of IPCC reports, and on the precise timing and scope of this exercise.

IPCC XLI, 24-27 February 2015

Decision IPCC/XLI-8. IMPLEMENTATION OF THE IPCC ERROR PROTOCOL

The Intergovernmental Panel on Climate requested the Executive Committee of the IPCC to further consider how to reflect errata corrected before and after publication and errata in translation in a consistent manner in publications and electronic versions of reports and to report to the Panel at its 42nd Session.

ExCom 33, 03 September 2015

- 4.2. Follow up to Decision IPCC/XLI-8

The Acting Secretary of the IPCC introduced a Document drafted to follow up on Decision IPCC/XLI-8 for consideration by the ExCom.

The proposal on how to address and record errata identified from the moment when an assessment report is approved in a Plenary Session of the IPCC until the moment when the copy-edited version is actually published did not meet the consensus approval of the ExCom. The ExCom agreed to continue discussions on this matter and to submit a progress report to the 42nd Session of the IPCC.