

Programme for the 2020 meeting of SCAR-SCAGI

Location of the meeting: Online using Zoom

1) Wednesday 29 July 2020: 14.00 – 18.00 UK time.

2) Friday 31 July 2020: 07.00 – 11.00 UK time.

The meeting times were chosen to be accessible for those in the western hemisphere and Europe (1) and eastern hemisphere (2). Delegates were welcome to attend both meetings, but the material was duplicated at the meetings – they were not separate meetings. All the National Reports were presented in person.

Both meetings were chaired by Adrian Fox and Jean-Yves Pirlot.

Attendees

1+2 Ai Songtao (China) Wuhan University ast@whu.edu.cn

1+2 Carlo Baroni (Italy) University of Pisa Carlo.Baroni@unipi.it

1 Kimberley Casey (USA) US Geological Survey: Kcasey@usgs.gov

1 David de Sousa (France) Terres Australes et Antarctiques Françaises (TAAF): david.de-sousa@taaf.fr

1+2 Adrian Fox (UK) British Antarctic Survey a.fox@bas.ac.uk

1 Antonie Haas (Germany) Alfred Wegener Institute Antonie.Haas@awi.de

2 Ursula Harris (Australia) Australian Antarctic Division Ursula.harris@aad.gov.au

1+2 Larry Hothem (USA) US Geological Survey: Lhothem@usgs.gov

1+2 Louise Ireland (UK) British Antarctic Survey louela@bas.ac.uk

1+2 Lyubomir Ivanov (Bulgaria) Antarctic Place-names Commission apcbg@yahoo.com

1 Ricardo Jaña Obregón (Chile) Instituto Antártico Chileno rjana@inach.cl

1 Cole Kelleher (USA) Polar Geospatial Center kell1026@umn.edu

2 Joohan Lee (Korea) Korea Polar Research Institute joohan@kopri.re.kr

1 Jaakko Mäkinen (Finland) National Land Survey of Finland jaakko.makinen@nls.fi

1+2 Fei Li (China) Wuhan University fli@whu.edu.cn

1+2 Jerónimo López-Martínez, Universidad Autonoma de Madrid jeronimo.lopez@uam.es

1+2 Yngve Melvaer (Norway) Norwegian Polar Institute Yngve.Melvaer@npolar.no

1+2 Paul Morin (USA) Polar Geospatial Center lpaul@umn.edu

1+2 Jacqueline Müller (Italy) University of Siena jacqueline.muller@unisi.it

1 Shang Peng (China) International Relations, Wuhan University – part time

1+2 Jean-Yves Pirlot (Belgium) Belgian National Geographic Institute Jean-Yves.Pirlot@ign.be

1 Jennifer Runyon (USA) US Board on Geographic Names jrunyon@usgs.gov

2 Wendy Shaw (New Zealand) NZ Geographic Board wshaw@linz.govt.nz

Total attendees 23.

Welcome and introductions (Jean-Yves Pirlot, and Adrian Fox, co-COs SCAGI).

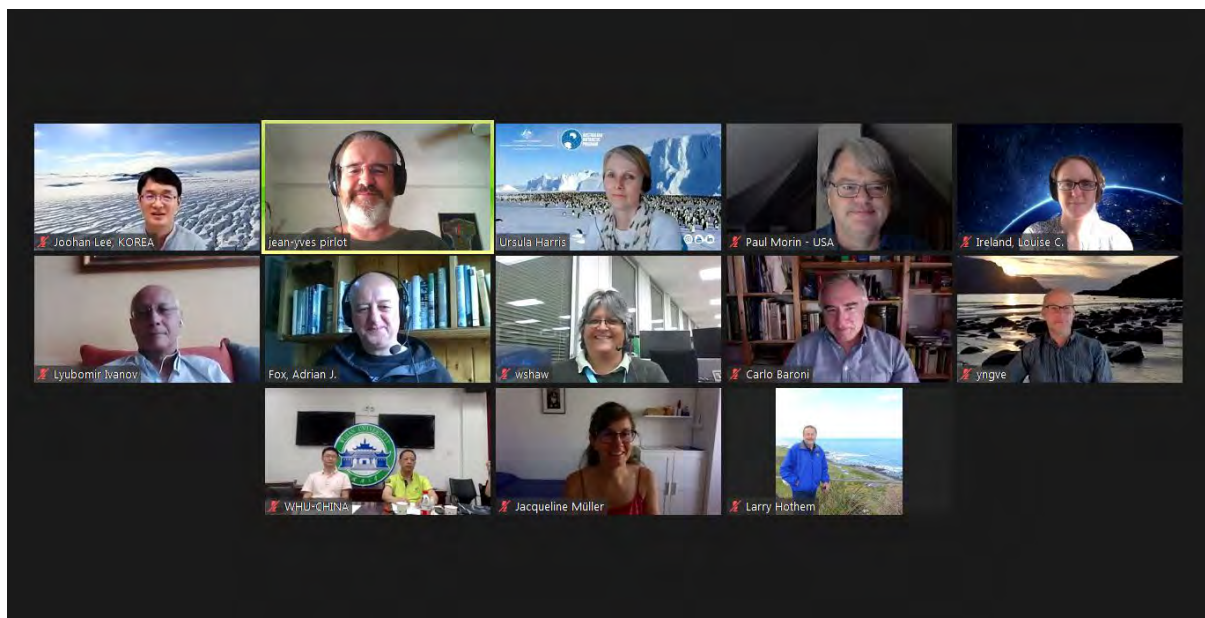
Welcome to the meeting, including round-the-table introductions and welcome to new members even if some of them were involved in SCAGI in the past: David de Sousa, Jennifer Runyon, Louise Ireland, Ricardo Jaña Obregón.

Changes to membership: Jean-Yves and Adrian are standing down as National Delegates (as well as Co-Chief Officers). Louise Ireland will take over from Adrian Fox as UK National Delegate.

Frédérique Spitaels (Geospatial) and Jeanne Henrion (Toponymy) will probably take over from Jean-Yves Pirlot. The formal decision was not taken yet.



Attendees at the 1st meeting: Left to Right: David de Sousa; Jean-Yves Pirlot; Lyubomir Ivanov; Jerónimo López; Adrian Fox; Louise Ireland; Cole Kelleher; Jenny Runyon; Jaakko Makinen; Jacqueline Müller; Ricardo Jaña; Paul Morin; Yngve Melvaer; Ai Songtao + Fei Li; Antonie Haas; Carlo Baroni; Kimberly Casey; Larry Hothem.



Attendees at the 2nd meeting: Left to Right: Joochan Lee; Jean-Yves Pirlot; Ursula Harris; Paul Morin; Louise Ireland; Lyubomir Ivanov; Adrian Fox; Wendy Shaw; Carlo Baroni; Yngve Melvaer; Ai Songtao + Fei Li; Jacqueline Müller; Larry Hothem.

1) Review of minutes of last meeting, Pisa, Italy 2019

Overview of the minutes of the last meeting and progress of the Action Items:

The minutes of the last meeting in Pisa were unanimously approved (by both groups).

Update and comments on the Actions: All the Actions were completed or ongoing, except Action 2 (liaison between UK and US-PGC over place-names polygons) which was carried over. See Action Grid at 11) for details.

2) National reports

National reports are an important part of the SCAGI meeting – they are an opportunity to inform delegates from other organisations about current and planned activities, which may highlight opportunities for collaboration and sharing of resources.

National Reports received, 12.

The National reports were available on a BAS FTP site before the meeting, and will be added to the SCAR document library and linked from the SCAGI web-pages after the meeting. Short summaries by the Co-chief Officers are included below – please follow up with reading the fully detailed National Reports.

<https://www.scar.org/library/products/scagi/scagi-nat-reports/>

Australia National Report – Ursula Harris

- A new 5-year strategic plan for mapping and charting is out for consultation.
- New ship *RSV Nuyina* supersedes *RSV Aurora Australis* in 2021. It is much larger, and shallow-water bathymetric surveys are underway at Australian stations in preparation for supply by the new ship. A Laser Airborne Depth Sounder has been used at Macquarie Island.
- A new Mapping Officer has joined AADC and new continent maps at 1:10M and 1:20M scale are at draft stages.
- Ursula Harris has contributed to the WG on place names and has been an editor for the *International Principles and Procedures for Antarctic Place Names* document.
- There are six new Australian place names.
- Mapping work includes an ortho-image map, based on WorldView-3 imagery, for the proposed Davis Aerodrome Project.

China National Report – Ai Songtao

- The 36th Chinese National Antarctic Research Expedition (CHINARE) 2019-20. Multi-Institute collaboration for the continuation of airborne radio-echo-sounding survey, the 4th campaign since 2015-16. Near-complete coverage achieved of the Amery Ice Shelf and Princess Elizabeth Land area.
- Dragon2Polar web-GIS (<http://x.hbaa.cn>) gives access to ship and aircraft tracks and other publicly available operational and scientific data.
- The Chinese Arctic and Antarctic Administration is coordinating Chinese research institutions on Antarctic place naming. Some new place names resulting from scientific research will be proposed.

Comments:

- A plea was made to submit the radio-echo-sounding data to BEDMAP3.
- Ai Songtao confirmed that the web-GIS is open and can be accessed via the web-address.

France National Report – David De Sousa

- David De Sousa is Principal Private Secretary for Terres Australes et Antarctiques Françaises (TAAF) and new Delegate to SCAGI. Thanks to Élisabeth Calvarin, previous Delegate, for her work, help and advice.
- There are four new French names in the CGA, August 2019.
- There will be a two-day conference with the French National Archives, 14-15 December 2020, on the 65th Anniversary of TAAF.

Germany National Report – Antonie Haas

- Further developments with AWI Marine data services online (web-GIS) (<https://maps.awi.de>) (<https://www.meereisportal.de>) including new terrestrial ESA GlobPermafrost permafrost data.
- Ongoing work to validate German Antarctic place names for the national gazetteer and CGA, and locating and scanning historical maps.

Italy National Report – Carlo Baroni (actually presented with the CGA product report).

Details about progress with the hard airstrip at Mario Zucchelli Station. The runway is now about 1,650 m long and planned to be 2,200 m when complete. There has been a test over-flight by a C-130 aircraft.

Comments:

When will the runway will be operational? There will be delays due to Covid-19 and there are also some problems to solve with snow and melt-water accumulation. Probably in two three years - this will help Korean logistics and others operating in the region. This is clearly an ambitious and significant engineering project.

Korea National Report – Joochan Lee

- There is a new 1:20,000 scale geological map of the area around Jang Bogo Station and a new 1:10,000 scale hydrographic chart (International Series 9013) 'Terra Nova Bay and approaches to Jang Bogo Station'.
- Other hydrographic work includes bathymetric survey for charting in Maxwell Bay near to King Sejong Station and deployment of a new tide gauge at the station.
- Airborne radio-echo-sounding data for the David Glacier and Campbell Ice Tongue area has been uploaded to BEDMAP3.

Comments: Adrian Fox thanked KOPRI for their data and support of the BEDMAP3 project.

New Zealand National Report – Wendy Shaw

- Ongoing work to calibrate and maintain the NZ Antarctic tide gauge network.
- Operation of four continuously operating GNSS sites in the Ross Sea Region. These sites provide real-time positioning data for tectonic studies and regional science projects, and underpin the Ross Sea Region Geodetic Datum.
- Deformation surveys for wind turbine structures.
- Survey and mapping work for projects, management and planning around Scott Base and the Ross Sea Region.
- Deformation surveys with NZ Antarctic Heritage Trust for four historic huts in the Scott Base area.
- The New Zealand gazetteer available with web-map at: <https://gazetteer.linz.govt.nz/>
- There is a new Antarctic Place Naming Standard for New Zealand, which acknowledges the SCAGI *International Principles and Procedures for Antarctic Place Names*.
- Revisions to 650 names and four new names ratified by NZ Geographic Board December 2019.
- About 50% of 4,330 place names have now been reviewed for accuracy. Rationalisation with the CGA is underway.

Comments: Thanks to NZ for the progress on the important task of reviewing their place names and rationalising with the CGA.

Norway National Report – Yngve Melvaer

- Topographic map at 1:250,000 scale with satellite image backdrop *Fimbulheimen* won the best printed map award at the ICC cartographic conference in Tokyo 2019. (Congratulations on this achievement were offered by the Chair and the group). The map can be freely downloaded from NPI at: <https://www.npolar.no/produkt/fimbulheimen-satellitt/>
- There will be a release of Quantarctica V3.1 in Autumn 2020.
- Nearing completion of almost 5000 km² of detailed topographic mapping around Troll Station from WorldView stereo-satellite images, with more work planned for 2021.

- Update of Air Operations Planning Map 8 with new elevation data from REMA (see Air Ops Planning Maps SCAR Product report at 3.4 below).

Comments:

Question on the level of Norwegian activity in 2019-20 season – possible Covid-19 impacts. Mapping activities were low this year, but the Norwegian Antarctic Programme was a busy normal season. Discussion about the new ice breaker - New 100 m long ice-breaker *RV Kronprins Haakon* entered scientific service in August 2018 and was in Antarctica in 2019-20. The ship will supersede *RV Lance* which was built in 1978.

Spain National Report - Jerónimo López-Martínez

- Two new geological and geomorphological maps and books, published by the Geological Survey of Spain (*Instituto Geológico y Minero de España, IGME*), involving scientific collaboration and logistical support of the *Instituto Antártico Argentino (IAA)*. 1) Geology and Geomorphology of Seymour (Marambio) Island, 1:20,000 scale maps and book; 2) Geology and Geomorphology of Hope Bay (Bahía Esperanza), 1:10,000 scale maps and book.

- A new hydrographic chart (International Series 7003), Fuelles de Neptuno (Neptunes Bellows), Deception Island. 1:1,500 scale.

- A new bathymetry compilation of the Central Scotia Sea is in preparation. It is an international initiative coordinated by IGME (Spain), BAS (UK) and AWI (Germany) incorporating additional data from other partners and is an initiative of the International Bathymetric Chart of the Southern Ocean (IBCSO) SCAR Expert Group.

Comments: Excellent to see this international collaboration through SCAR IBCSO, building on previous similar outputs for the Drake Passage and South Sandwich Islands areas.

UK National Report – Adrian Fox

- Rolling updates of 1:250,000 scale and 1:200,000 scale topographic maps. Completely new map of the South Shetland Islands released November 2019. A new map of the South Orkney Islands, not mapped since the 1960s is in preparation. UK maps are up-to-date in the SCAR MapCat.

- Continuing development of web-GIS services, including internal Operations GIS (OpsGIS); ThwaitesGIS for the International Thwaites Glacier Collaboration (ITGC) and Polar View (www.polarview.aq) sea-ice information services.

- 2020 is the 75th anniversary of the UK Antarctic Place-names Committee. 16 new names have been submitted to the CGA since the 2019 meeting, several of the names are in the unclaimed sector and result from deep-field scientific work, eg. for ITGC, or remote-sensing studies of emperor penguin colonies.

- An aerial photography campaign with a Z/I Imaging DMC camera in a BAS Twin Otter covered penguin colonies and areas important for the Antarctic Treaty in Marguerite Bay and the northern Antarctic Peninsula region.

- BAS has acquired a 1.2 m wingspan fixed-wing UAV (drone) with 90 minutes endurance, which will be used for airborne survey applications. There is also a larger fixed-wing platform (Prion-3), with a much greater operational range and payload, that occupies a different space on a spectrum of airborne survey capability.

- BAS has continued working with UK Antarctic Heritage Trust (UKAHT) for 3D-building modelling of historic bases on the Antarctic Peninsula. A fieldwork campaign in early 2020 acquired laser-scanning and terrestrial photogrammetry data for Port Lockroy, Damoy and Wordie House sites.

- Future plans for aerial photography, fixed-wing drone flights and 3-D building modelling work are postponed or uncertain due to Covid-19 impacts.

Comments: Adrian would like to note thanks for operational support from the Chilean Air Force at Marsh and the Ukraine Antarctic Programme at Vernadsky.

- The fixed-wing UAV (drone) will be used for a range of projects including wildlife surveys and construction project support and station support. It follows a flight plan, and will have a team of two

operators, but is not directly piloted. BAS has well-defined procedures for UAV work and is involved with discussions at COMNAP and the Antarctic Treaty for UAV operations.

- The Prion-3 AUV has a 1000 km + operational range and ~10 Kg payload, including a 50MP camera in a stabilised mount. The system is delayed and not yet fully operational. It can take off on a short runway or angled ramp.

- Map sales: BAS sells substantial numbers of regional-scale maps per year, including through Port Lockroy in liaison with UKAHT. The numbers are variable from year to year but are usually several 1000s. BAS does not do direct sales of maps, but wholesale through other distributors. There is also a guidebook 'A visitors guide to the Antarctic Peninsula' published with the UK Natural History Museum, aimed at tour ship visitors. The maps and guidebook are seen as much as providing high-quality information products for visitors as a sales activity.

USA National Report – Paul Morin, Cole Kelleher

- Reference Elevation Model of Antarctica (REMA): Work is ongoing. All the continent is now processed at 2 m resolution. There is now a fully automated workflow. The combination of data redundancy and a new Median-Stacking technique has significantly improved data quality. Launch date of REMA II not yet confirmed.

- Ongoing map scanning and preservation: PGC are working with USGS and Borchert Map Library (University of Minnesota) and many other international organisations to track down and digitise polar maps. The maps are freely available for download where copyright allows, with over 650 Antarctic maps available. The USGS Reconnaissance Map series is digitised and mosaicked.

- Place names: Ongoing work to review and update details for names in the US gazetteer in liaison with ACAN. About 64% of 18,641 point features and 55% of 9,127 polygon features completed. PGC have developed a web-application that allows ACAN members to review named features online against background information such as REMA.

- Air Operations Planning Maps Series V4, sheets 11-16 completed for 2019-20.

Comments:

- REMA II is a really exciting initiative and will build on the step-change achieved by REMA and will open up further new opportunities.

- Countries should scan their historic maps and PGC are happy to make these maps public if there is no copyright issue.

- There should be a harmonization of work on place-names polygons - better not to have duplicate polygons and that everybody can use them. USA and UK already have an action item to cooperate on this. Some polygons for major features have previously been provided to Google and it would be good to revisit this.

Belgium National Report – Jean-Yves Pirlot

Due to a lack of capacity, Belgium has concentrated its efforts on leading the Working Group on Place names. We do hope that in a near future the cartographic and GI activities can be resumed. The national report is entirely given in point 6 of the agenda.

3) SCAGI products:

Progress reports, future plans and discussion about SCAGI products: [See the detailed SCAR Product Reports linked from the SCAGI website](#)

The Map Catalogue is included in the Australia National Report, CGA in the Italy National Report.

3.1 Map Catalogue (Ursula Harris, AADC): <https://data.aad.gov.au/aadc/mapcat/>

British Antarctic Survey has updated maps in the MapCat and included links to the BAS Map Catalogue and details on how to access the maps.

Australia has completed scanning all Australian maps in their collection and made them available to download, 2,291 Australian maps are available digitally.

New instructions are provided for creating and validating an upload file for the MapCat.

Comments:

- The MapCat can only be as good and as useful as the content allows and it's important that mapping organisations submit their maps.

- Adrian remarked that the monthly alert email is working well and that he appreciated this function.

ACTION: Representatives of Mapping Agencies are to ensure that their organisations' maps are up-to-date in the Map Catalogue.

3.2 Antarctic Digital Database (Louise Ireland, BAS): <https://www.add.scar.org/>

A new team at BAS are now responsible for the ADD. Louise Ireland made the ADD presentation on behalf of herself, Laura Gerrish and Felix Fennell.

- Since the last SCAGI meeting there have been releases V7.1 (August 2019) and V7.2 (May 2020).

New data has included coastlines of Dronning Maud Land, Thwaites Glacier area, South Shetland Islands, Ross Ice Shelf and parts of Victoria Land, as well as work on identifying and fixing topology errors in the ADD data.

There has been substantial work on the underlying systems including a new data catalog and data download facility, backed by ISO compliant metadata. The ADD layers have been categorised into ADD core data or external datasets included from other sources for context.

Plans for V7.3 (end September 2020) include: Updates to the coastline, with new data for South Orkney Islands from BAS mapping work; Rolling updates of the coastline of key areas such as Thwaites Glacier; Revision of the ADD manual; Creation of DOIs for the layers; Open-sourcing of the catalog software; and implementation of data versioning.

Comments:

- Adrian highlighted the new team at BAS working on the ADD and explicitly thanked Peter Fretwell for his previous work on maintaining and developing the ADD since 2012. Peter is now working on other projects, notably leading BEDMAP3.

- Ursula Harris would like to discuss linkage of the ADD and the SCAR Feature Catalogue.

- The ADD is a fantastic resource that might be underestimated. It would be good to publicise some guidelines on how to submit data to the ADD and the planned release schedule. The landing page for the ADD is currently the web-map, it would be useful to have a link to a page with general information about the ADD (this could be an updated version of the Product page on the SCAR website: <https://www.scar.org/data-products/antarctic-digital-database/>)

ACTION: ADD team to discuss linkage to the SCAR feature catalogue with Ursula Harris.

ACTION: Add ancillary information about how to submit data and proposed update schedule and link prominently from the landing page (web-map).

3.3 Composite Gazetteer of Antarctica (Carlo Baroni) <https://data.aad.gov.au/aadc/gaz/scar/>

Postponed to the very end of the meetings and linked to discussion about the Place-names Guidelines. The CGA update and Italian National Report were presented together.

At the date of 24 July 2020, the number of records (place names) in the CGA is 37,974 (last year 37,893), referring to 20,174 recognized different features (last year: 20,078). However, a check of all ID numbers has revealed that 277 numbers do not have any entry, thus the effective number of features is 19,897 (last year: 19,844).

New names since the 2019 meeting include: France, 4; UK, 16; Bulgaria 48; New Zealand, 72.

Jacqueline Müller (jacqueline.muller@unisi.it) is the point of contact for submission of names to the CGA.

Liaison between the Italian team who are responsible for the content and the AADC which hosts the database and website is working well.

3.4 Air Operations Planning Maps Series (Adrian Fox, BAS)

The latest versions of the 16 1:1M scale maps and the overview map showing the COMNAP Air Operations Facilities, distance rays and magnetic declination isogons were all ready for the start of the 2019-20 Air operations season at the beginning of October.

The main developments this year were:

- A comprehensive update to the elevation data on the maps, mainly from REMA but with additional licenced data from Airbus WorldDEM 90 for the Antarctic Peninsula. The procedure for this update had been agreed at a workshop after the 2019 SCAGI meeting in Pisa.
- Availability of the maps in MBTile format for inclusion in the Foreflight 'digital flight bag' app gaining usage by Antarctic Air Operators.

Future Plans:

- There will be minimal Air Ops activity in Antarctica during 2020-21 due to the impact of the Covid-19 virus. It is agreed to hold the maps static for 2020-21 and then update for 2021-22, hopefully with further updates to the elevation data, eg from REMA-II.
- Offer the elevation data in feet for the ADD and Quantarctica for onward use in GIS for Ops Planning. It was noted that it will have to be made very clear that these data are in feet to avoid confusion by presenting alongside other science-focussed data in metres.
- Add a note about the Air Operations Planning Maps series into the COMNAP Antarctic Flight Information Manual (AFIM).
- Work with ADD for completion of continent-wide coverage by inclusion of maps covering the Australian sector.

ACTION: Organise a meeting in Spring 2021 to plan an update with new elevation data.

ACTION: Liaise with ADD and Quantarctica teams over inclusion of Air Ops elevation data in feet.

ACTION: Liaise with COMNAP over inclusion of information about AOPMs in AFIM.

Downloads:

Sheets 1-7 (BAS): <https://add.data.bas.ac.uk/repository/entry/show?entryid=6b559b00-bc1c-4a64-a6c6-316be1c25233>

Sheet 8 (NPI): <https://data.npolar.no/dataset/3cc98a62-a062-415f-a269-7464ee283f40>

Sheets 9-10 (IGN Belgium):

<http://add.antarctica.ac.uk/repository/entry/show?entryid=synth%3A6b559b00-bc1c-4a64-a6c6-316be1c25233%3ALzlwMTdfMTg%3D>

Sheets 11-16 (US-PGC): <http://maps.apps.pgc.umn.edu/antarctica/20/17>

Overview map (BAS):

<https://add.data.bas.ac.uk/repository/entry/show?entryid=synth%3A6b559b00-bc1c-4a64-a6c6-316be1c25233%3ALzlwMThfMTk%3D>

4) Website (Jean-Yves Pirlot, NGI Belgium): <https://www.scar.org/data-products/scagi/overview/>

There have been some problems in the past with the website that was totally renewed by SCAR during the last years. The CMS is quite efficient but not easy to handle if you're not busy with it every day.

However, the Co-COs managed to get this nearly totally updated and with all the reports on line.

Jean-Yves gave an overview of the refurbished website. The plan has been to keep it simple with the focus on being able to find contacts, the Product pages and National Reports easily.

Thanks to Rosemary Nash in the SCAR Office, for her help and commitment in updating the website.

5) Horizon scan

Discussion on any emerging developments or opportunities not covered in the National Reports or SCAR Products discussions. (Standing Item for SCAR Committees).

Adrian remarked that he had been working on Antarctic mapping for more than 30 years, and that the absence of accurate and complete elevation data had always been a difficulty.

REMA has already provided a step-change in the quality of data available. REMA-II with the new Median-Stacking technique and fully automated workflow, together with satellite-radar based products such as WorldDEM promise to improve the situation further. Antarctica will even become one of the areas of the world with the best elevation data!

The National Reports highlight that more and more organisations are sharing their operational and science data over web-GIS applications (eg China, Germany, UK, USA).

Use of imagery collected with UAV platforms is well-established amongst the Antarctic geospatial community and set to develop further as the capabilities of the platforms evolve.

6) Working Group on Antarctic Place Names (Jean-Yves Pirlot)

Jean-Yves presented a summary of progress by the Working Group since the SCAGI Pisa meeting, 2019. A key aspect has been liaison with UN Group of Experts on Geographic Names (UNGEGN). He thanked UNGEGN toponymic specialists including Jennifer Runyon (US) and Élisabeth Calvarin (France) for their inputs, and Catherine Cheetham (UK) for her peer review of the draft document. A near-final version of the *International Principles and Procedures for Place Names in Antarctica* dated 27 July was presented for discussion at the meeting. There were no substantive comments at the meeting, which is a testament to the careful work done by the WG during the year to circulate earlier drafts and respond to comments to arrive at a version of the document that can achieve consensus.

Jean-Yves set a deadline of **15 September** for any final comments on the draft of 27 July 2020.

Jerónimo López remarked that the Spanish Antarctic programme would review the document and provide any feedback. Ricardo Jaña reported after the SCAGI meeting that there would be a meeting of the Chilean Antarctic Geographic Names Committee on 8 August, and that they would provide any responses.

ACTION: Submit any final comments on draft of *International Principles and Procedures for Place Names in Antarctica* dated 27 July. Note that 15 September 2020 is the final deadline.

7) Election of SCAGI officers at 2020 meeting.

Adrian Fox and Jean-Yves Pirlot stood down as Co-Chief Officers of the group at the 2020 meeting, after two four-year terms. Over the last year, starting at the Pisa meeting in 2019, delegates have been invited to consider taking on the leadership roles. Jean-Yves and Adrian feel that it can work well to share the responsibilities as Co-Chief Officers.

Both sessions unanimously agreed with the appointment of **Paul Morin** (USA) and **Prof. Fei Li** (China) as the new Co-Chief Officers of the group. Paul Morin and Prof. Fei Li thanked their predecessors for their good work.

Ursula Harris (Australia) was unanimously agreed as the new Chair of the WG on Antarctic Place-names.

The group thanked Adrian and Jean-Yves for their role at the helm of SCAGI during the last 8 years, and thanked Jean-Yves for his work as a chair of the Working Group on Place Names in Antarctica. Adrian announced that he is also standing down as a delegate, but he remains interested.

Jean-Yves is standing down in the near future as well, he will be gradually replaced, probably by Frédérique Spitaels for GI matters and Jeanne Henrion for Toponymy (TBC). However, Jean-Yves will remain in support of Ursula, until the new International Principles and Procedures for Place Names in Antarctica are approved. He also would like to become member of the “still interested retired delegates”.

8) AOB (Any Other Business)

Larry Hothem, mentions ISO TC211. Paul Cooper and Larry Hothem served there as a liaison to SCAR. He proposed that SCAGI should think about representation in the ISO TC211. He will provide the related links.

9) Date and location of next meeting

There would normally be an inter-sessional meeting in 2021. It was agreed that the location of this would be decided by the new leadership team, but would be on-hold for the moment due to the current uncertainties over international travel.

The 2022 meeting is expected to be in association with the SCAR Open Science Conference, which is currently planned to be in Hyderabad, India.

10) Close

Both meetings completed the agenda and closed after about 3hr 40 mins, and the Chairs thanked the delegates for their attendance and attention over long Zoom meetings. Adrian and Jean-Yves thanked their SCAGI colleagues for their support over the last years, and are sure that the new SCAGI Officers are well placed to lead the group in a time of great opportunity in Antarctic geospatial information. Jean-Yves remarked that he has participated and held official roles in a range of national and international Committees, but working with SCAGI colleagues and the WG on Antarctic place names have been some of his best experiences.

11) Actions

11.1 Progress against Actions from 2019 meeting

No.	Action	Owner	Due by	Status
1	Delegates to contact Ursula Harris a) for a listing of their Organisation’s MapCat entries to check for completeness, and b) to ask Ursula to be added to the CGA new maps alert list, if desired.	ALL	Ongoing	Ongoing. The MapCat can only be as good and as useful as the content allows and it’s important that organisations submit their maps.
2	Polygon generation for place names – UK and US to liaise over shared polygons.	AJF/CK	2020	Not done – to carry over
3	Owners of the SCAR Products are invited to review/rewrite their pages.	AJF and Product Owners.	End 2019	The Co-Chief officers have revised the SCAGI web-pages. Comments are welcome from members, especially owners of the SCAGI Products.
4	AJF to liaise with SCAR Office to update the SCAGI web-pages.	AJF	End 2019	Done

5	Liaise with Chandy Nath for process to submit the final place-names document to SCAR delegates.	AJF and JyP	End 2019	In progress – deadline for final comments on the draft is 15 September.
6	Find out process for appointing new officers – talk to Chandy Nath.	AJF and JyP	End 2019	Done.
7	Delegates to consider taking on SCAGI leadership roles.	ALL	2020	Done. New officers Paul Morin and Prof. Fei Li appointed at the meeting.

11.2 New Actions from 2020 meeting

No.	Action	Owner	Due by	Status
1	Delegates to contact Ursula Harris a) for a listing of their Organisation's MapCat entries to check for completeness, and b) to ask Ursula to be added to the CGA new maps alert list, if desired.	ALL	Ongoing	Ongoing. The MapCat can only be as good and as useful as the content allows and it's important that organisations submit their maps.
2	Polygon generation for place names – UK and US to liaise over shared polygons.	AJF/CK	Autumn 2020	Not done – to carry over
3	ADD team to discuss linkage to the SCAR feature catalogue with Ursula Harris.	LI (Louise Ireland)	Autumn 2020	
4	Add ancillary information about how to submit data and proposed update schedule and link prominently from the landing page (web-map).	LI	For release V7.3	
5	Organise a meeting in Spring 2021 to plan an update with new elevation data.	AJF and others involved		
6	Liaise with ADD and Quantarctica teams over inclusion of Air Ops elevation data in feet.	AJF/LI/YM	2021	Depends on outcome of 5.
7	Liaise with COMNAP over inclusion of information about AOPMs in AFIM.	AJF	2020	Linked to next AFIM update.
8	Final comments on doc 'International Principles and Procedures for Place Names in Antarctica' dated 27 July	JyP/UH	15 September	15 September is final deadline.