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Committee on the Peaceful Uses of Outer Space

Report on the United Nations/Germany International Expert Meeting on the Global Partnership on Space Technology Applications for Disaster Risk Reduction (Bonn, Germany, 1 and 2 December 2016)

I. Background

1. In its resolution 61/110, the General Assembly decided to establish the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) as a dedicated programme of the Office for Outer Space Affairs to provide universal access for all countries and all relevant international and regional organizations to all types of space-based information and services relevant to disaster management in support of the full disaster management cycle.
2. The UN-SPIDER workplan for the biennium 2016-2017 ([A/AC.105/1093](#)) included the provision, by UN-SPIDER, of scientific and technical guidance to implement the commitments made during the third World Conference on Disaster Risk Reduction, which was held in Sendai, Japan, from 14 to 18 March 2015. One of those commitments was the launch of a global partnership on the use of space technology applications for disaster risk reduction. The workplan also included the organization of international workshops, expert meetings and/or seminars, to bring together national focal points, experts from UN-SPIDER regional support offices and other experts in order to promote the coordination of initiatives launched by the programme.
3. The United Nations/Germany International Expert Meeting on the Global Partnership on Space Technology Applications for Disaster Risk Reduction was held in Bonn, Germany, on 1 and 2 December 2016. The expert meeting was organized by the UN-SPIDER programme on behalf of the Office for Outer Space Affairs of the Secretariat, in cooperation with the German Aerospace Centre (DLR), and benefited from the support provided by the German Federal Ministry for Economic Affairs and Energy. The expert meeting provided an opportunity for the partners to discuss the role that the Global Partnership could play in promoting the use of space-based technology applications in disaster risk reduction efforts worldwide and to agree on the terms of reference to shape the Partnership and on a plan of action for the coming years. The present report provides a summary of the expert meeting, including recommendations and conclusions.



II. Organizational framework

4. The expert meeting was conducted as part of the outreach activities stipulated in the UN-SPIDER workplan for the biennium 2016-2017.
5. The meeting was one of the activities funded by the Government of Germany through its voluntary contribution to the UN-SPIDER programme.

A. Background and objectives

6. The third World Conference on Disaster Risk Reduction marked the beginning of a new era for disaster risk reduction policy and its application in disaster risk management. On that occasion, the Sendai Framework for Disaster Risk Reduction 2015-2030 was launched by 187 Member States. Several national Governments and regional and international organizations, with a mandate in Earth observation and disaster risk reduction, worked together prior to and during the Conference to set up a multi-stakeholder, voluntary partnership to promote the use of Earth observation and space-based technologies worldwide as a way of contributing to the implementation of the Sendai Framework.

7. That partnership (the Global Partnership on Space Technology Applications for Disaster Risk Reduction (GP-STAR)) was committed to fostering the use of Earth observation and space-based technologies at all levels, through existing mechanisms, as a way of contributing to a better and more integrated use of such technologies in disaster risk reduction efforts around the world.

8. By March 2015, following the launch of the Partnership, the following organizations and entities expressed an interest in being active partners in GP-STAR: the United Nations Office for Outer Space Affairs and its UN-SPIDER programme, the United Nations Office for Disaster Risk Reduction (UNISDR), the World Meteorological Organization (WMO), the Food and Agriculture Organization of the United Nations, the Economic and Social Commission for Asia and the Pacific (ESCAP), the Operational Satellite Applications Programme of the United Nations Institute for Training and Research, the Global Facility for Disaster Reduction and Recovery, the secretariat of the Group on Earth Observations (GEO), the Committee on Earth Observation Satellites (CEOS), the European Union, the International Working Group on Satellite-based Emergency Mapping (IWG-SEM), DLR, the Centre of Excellence on Space Technology for Disaster Mitigation of the World Academy of Sciences and the Chinese Academy of Sciences, the International Centre for Integrated Mountain Development, the International Water Management Institute (IWMI), the National Emergency Commission of the Dominican Republic (CNE), the Disaster Management Centre of Sri Lanka (DMC), the National Disaster Reduction Centre of China and the International Research Institute of Disaster Science of Tohoku University.

9. The first meeting of the Global Partnership was held during the United Nations/Germany International Conference on Earth Observation entitled “Global solutions for the challenges of sustainable development in societies at risk” (see [A/AC.105/1097](#)). That conference was held in Bonn, Germany, from 25 to 28 May 2015, and allowed partners to advance the discussion on the terms of reference of the Partnership and on its governance, and to identify several activities to be carried out in subsequent years.

10. The United Nations/Germany expert meeting brought together partners and experts from other national, regional and international institutions interested in joining the Partnership. The goals of the expert meeting included:

- (a) Setting out ways to facilitate synergies among experts involved in GP-STAR and other experts interested in contributing to the promotion of the use of space technology applications in disaster risk reduction;

(b) Reaching an agreement on the terms of reference for the Partnership and its governance;

(c) Reaching an agreement on the plan of action for the coming years and modalities to implement it.

11. The expert meeting allowed partners and experts to take stock of recent developments in the implementation of the Sendai Framework, taking into consideration, in particular, activities related to Earth observation, geospatial information and space technology applications and international networks, such as the International Network on Multi-Hazard Early Warning Systems. In addition, the meeting provided an opportunity for new partners from several national, regional and international organizations that took part in the expert meeting to be accepted as members in the Partnership.

B. Attendance and financial support

12. The expert meeting was attended by 31 experts and professionals from the following Member States: Austria, Czechia, Dominican Republic, Germany, Guatemala, Indonesia, Mexico, Sri Lanka, Switzerland and Ukraine. Altogether, participants represented 23 national, regional and international organizations, as well as several agencies and organizations of the United Nations system, the space community, the disaster risk management and emergency response communities, knowledge transfer and academic institutions and international private companies.

13. Funds allocated by the Federal Ministry for Economic Affairs and Energy of Germany through the UN-SPIDER programme were used to defray the costs of air travel, daily subsistence allowance and accommodation for six participants from developing countries.

C. Programme of activities

14. The programme of activities for the expert meeting was developed by UN-SPIDER and DLR. The programme included welcome remarks by representatives from UN-SPIDER and DLR and five sessions, which comprised presentations, plenary discussions and closing remarks. Keynote presentations were delivered by representatives from DLR and UN-SPIDER.

15. The five sessions addressed the following topics: (a) goals of the meeting; (b) exchange of views on the Partnership (partners and potential partners); (c) action plan for the coming years and ways to implement it; (d) upcoming session of the Global Platform for Disaster Risk Reduction, to be held in Cancun, Mexico, in May 2017; and (e) terms of reference and governance.

16. The first session, entitled “Setting the scene”, included technical presentations by representatives of UN-SPIDER, CEOS, DLR and DMC. The presentations allowed participants to take note of the efforts conducted by the space community in the areas of disaster risk reduction and emergency response, the Data Access for Risk Management (GEO-DARMA) initiative launched by CEOS and GEO, the UNISPACE+50 process being conducted by the Committee on the Peaceful Uses of Outer Space and the Office for Outer Space Affairs as a way towards the “Space2030 Agenda” for strengthening the role of space activities in supporting the overarching, long-term development concerns and efforts conducted by disaster management agencies such as DMC regarding the use of geospatial technologies to assess and map risks.

17. The second session allowed partners to share their views regarding the mission of GP-STAR, potential projects and activities that could be conducted by the Partnership and the potential roles that the institutions could assume in the context of the Partnership.

18. The partners indicated that the mission of GP-STAR should remain as it had been proposed in the original white paper presented by the partners during the Sendai conference in 2015 ([A/AC.105/C.1/2015/CRP.35](#)). The Partnership should foster the use of Earth observation and space-based technologies in disaster risk reduction, facilitate the sharing of information and ideas and provide advisory support and assistance as a way of contributing to the implementation of the Sendai Framework.

19. Most of the partners indicated that they could contribute to GP-STAR by organizing events such as expert meetings and workshops and by providing relevant knowledge, tools, expertise and data. Other partners indicated that they could carry out capacity development and provide technical or financial assistance to agencies and organizations at the national and regional levels. They offered to contribute to the dissemination of information generated by the Partnership through their websites or portals.

20. In the context of outcomes and products, most partners indicated that the Partnership should develop guidelines, in the form of publications on the use of satellite applications in disaster risk reduction efforts. Such efforts would reinforce the GP-STAR network.

21. Regarding roles, the majority of partners taking part in the expert meeting indicated that they could provide information, experience, scientific input, technical expertise and guidelines and support for countries that would require capacity-building and institutional strengthening. UN-SPIDER and the secretariat of GEO offered to serve as secretariat of GP-STAR.

22. The third session was used to discuss and agree on the plan of action for the coming years. The partners emphasized that the Partnership should be user-oriented, it should provide conceptual guidance based on the Sendai Framework and user needs and it should facilitate the networking and sharing of technological know-how regarding space technology applications and Earth observation in disaster risk reduction efforts.

23. The partners agreed to conduct six initiatives targeting different topics:

(a) An initiative dedicated to the preparation and holding of a side event during the upcoming session of the Global Platform for Disaster Risk Reduction, to be organized by UNISDR and the Government of Mexico and held in Cancun, Mexico, from 23 to 25 May 2017. Specific activities to be conducted within that initiative would include the development of a brochure highlighting examples of the use of satellite technology applications and Earth observation methods in disaster risk reduction. GEO, UN-SPIDER, DMC, the International Society for Photogrammetry and Remote Sensing (ISPRS), IWG-SEM, the Coordination Centre for the Prevention of Natural Disasters in Central America (CEPREDENAC) and the Mexican Space Agency (AEM) expressed interest in being involved in that initiative;

(b) The second initiative would focus on the use of satellite technology applications and Earth observation to monitor volcanic activity. Partners involved in that initiative included DLR, CEPREDENAC, CEOS (to be confirmed) and ISPRS (to be confirmed);

(c) The third initiative would target the use of satellite technology applications and Earth observation for drought risk assessment and drought monitoring. Partners involved included DMC, IWMI, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, WMO, ESCAP (to be confirmed), the Centre for Remote Sensing of Land Surfaces (ZFL) of the University of Bonn, ISPRS (to be confirmed) and the Institute for Environment and Human Security of the United Nations University;

(d) The fourth initiative would address sand and dust storms. The partners involved in that initiative were the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, ISPRS (to be confirmed), WMO, the National Disaster Reduction Centre of China (to be confirmed), the Centre of Excellence on Space Technology for Disaster Mitigation (to be confirmed), the Iranian Space Agency and UN-SPIDER;

(e) The fifth initiative would focus on tsunamis. Partners involved in that initiative included Tohoku University, the Ministry of Marine Affairs and Fisheries of Indonesia, Sentinel Asia (to be confirmed) and ISPRS (to be confirmed);

(f) The sixth initiative would address the topic of floods. The partners involved in that initiative were IWMI, IWG-SEM, Sentinel Asia (to be confirmed), DMC, CNE, GEO (to be confirmed), the Joint Research Centre of the European Commission (to be confirmed), the Copernicus programme of the European Commission (to be confirmed), DLR (to be confirmed) and WMO.

24. The fourth session of the expert meeting was dedicated to the first initiative linked to the session of the Global Platform for Disaster Risk Reduction to be held in May 2017. It was agreed that partners would approach the organizers of the session to request the convening of a side event in order to disseminate the objectives of GP-STAR, its action plan and outcomes, and to provide visibility to the activities of its partners. It was decided that as many partners as possible should request a side event as a way to secure a slot.

25. Partners agreed to compile a brochure containing fact sheets with examples of the use of space technology applications and Earth observation. UN-SPIDER, GEO, DMC, ISPRS (to be confirmed) and IWG-SEM would gather the required information in order to prepare the brochure and a dedicated GP-STAR web page.

26. The fifth session focused on reviewing the terms of reference of GP-STAR, which had been proposed by UN-SPIDER and partners at the previous meeting, held in May 2015. The terms of reference included a description of the overall aim and objectives of the Partnership, guidelines on membership (including procedures for accepting new institutional members), information on the organizational structure and governance and a segment on meetings of the Partnership. In the terms of reference, the voluntary nature of the Partnership was reiterated, and it was stated that partners were expected to contribute with in-kind resources to the Partnership, and could affiliate some of their programmes and activities to the Partnership.

27. Partners agreed to modify the name of the partnership from “Global Partnership on Space Technology Applications for Disaster Risk Reduction” to “Global Partnership using Space-based Technology Applications for Disaster Risk Reduction”, but it was decided that the acronym GP-STAR should be kept.

28. The session concluded with the election of the representative of AEM as the Chair of the Partnership and the representative of DMC as the Co-Chair.

29. In order to ensure a proper balance among organizations from the space community and those involved in disaster risk reduction efforts; the partners agreed that the Chair and Co-Chair positions should be occupied by either a partner from a space agency or a civil protection agency (or vice versa) at all times. In addition, partners concluded that there should be a geographical balance regarding the selection of Chair and Co-Chair.

III. Outcomes and recommendations

30. The United Nations/Germany International Expert Meeting on GP-STAR allowed UN-SPIDER, DLR and the partners to review and agree on the terms of reference for the partnership and its governance and to agree on a plan of action for the coming years, framed through the six initiatives.

A. Outcomes

31. The terms of reference and governance of the partnership were completed and approved by the partners.
32. A plan of action for the coming years was developed that included initiatives on the topics of the session of the Global Platform for Disaster Risk Reduction to be held in 2017, namely volcanic activity, drought, floods, tsunamis and dust and sand storms.
33. The expert meeting enabled participants to become aware of:
 - (a) Activities conducted by partners that were contributing to the implementation of the Sendai Framework for Disaster Risk Reduction;
 - (b) Recent advances and efforts made by civil protection agencies such as DMC;
 - (c) The ongoing UNISPACE+50 process and its workplan and thematic priorities, as endorsed by the Committee on the Peaceful Uses of Outer Space at its sessions in 2016, and contained in documents [A/AC.105/L.297](#) and [A/71/20](#), paragraph 296.
34. An agreement was reached concerning a request to UNISDR and the Government of Mexico for a side event to be conducted during the session of the Global Platform for Disaster Risk Reduction to be held in May 2017. The side event would be aimed at providing the visibility of the Partnership and the efforts it was conducting, as a way of contributing to the implementation of the Sendai Framework.
35. In a complementary fashion, the expert meeting allowed the UN-SPIDER programme to contribute to bridging the gap between the space and the disaster risk management communities by building a Partnership involving them both.
36. The expert meeting facilitated the incorporation of AEM, the Federal Office of Civil Protection and Disaster Assistance of Germany (BBK), CEPREDENAC, the Disaster Management Training and Education Centre for Africa in South Africa, the Joint Research Centre of the European Commission, the Ministry of Marine Affairs and Fisheries of Indonesia, the Space Research Institute of Ukraine, ISPRS, the Secure World Foundation, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, the Institute for Environment and Human Security of the United Nations University and ZFL as new institutional members.
37. UN-SPIDER will serve as the permanent secretariat of GP-STAR.

B. Main recommendations

38. The following recommendations were proposed in the plenary sessions held during the expert meeting:
 - (a) The positions of the Chair and Co-Chair of the Partnership should be held for a period of two years;
 - (b) The Chair and/or the Co-Chair should represent the Partnership at international events;
 - (c) In order to secure a side event at the session of the Global Platform for Disaster Risk Reduction to be held in 2017, the partners should submit applications individually.

C. Policy-relevant recommendation for the UNISPACE+50 process

39. During the final session of the international expert meeting, participants agreed on the following policy-relevant recommendation, to be brought to the

attention of the Committee on the Peaceful Uses of Outer Space: as a way to contribute to the implementation of the Sendai Framework for Disaster Risk Reduction, the Committee on the Peaceful Uses of Outer Space should support efforts conducted by GP-STAR as an example of international cooperation geared at achieving improved coordination among institutions dedicated to promoting the use of space technology applications, to increase the resilience of societies worldwide.

D. Way forward

40. In its role as secretariat to the partnership, UN-SPIDER will circulate to all partners the terms of reference, which were reviewed and agreed to by the partners, support the Chair and Co-Chair in the holding of regular meetings and videoconferences and keep records of all recommendations and decisions agreed to by the partners.

41. The members of GP-STAR will start working on the six initiatives that were identified in the plan of action for the coming years, including the participation of the Partnership in the upcoming session of the Global Platform for Disaster Risk Reduction, to be held in Cancun, Mexico, in May 2017.

42. The Office for Outer Space Affairs, through its UN-SPIDER programme, will bring to the attention of the Committee on the Peaceful Uses of Outer Space the policy-relevant recommendation that stemmed from the United Nations/Germany International Expert Meeting on the Global Partnership on Space Technology Applications for Disaster Risk Reduction.

IV. Conclusions

43. Since its establishment in 2006, UN-SPIDER has worked with its regional support offices and other partners to raise awareness regarding the benefits of the use of space-technology applications in disaster risk reduction and emergency response efforts. Taking note of the launch of the Sendai Framework as the global initiative to promote disaster risk reduction efforts worldwide during the period 2015-2030, UN-SPIDER worked with several partners in order to approach the disaster-risk management community in a coordinated fashion to promote the use of space technology applications and Earth observation within that framework.

44. GP-STAR has been set up by the partners as a voluntary, coordinated effort to contribute to the implementation of the Sendai Framework.

45. The expert meeting allowed the partners of GP-STAR:

(a) To consolidate GP-STAR through agreements regarding its terms of reference, its governance structure and plan of action for the coming years;

(b) To agree on a policy-relevant recommendation to be brought to the attention of the Committee on the Peaceful Uses of Outer Space, in particular in the context of the UNISPACE+50 process;

(c) To elect both a Chair and a Co-Chair and to establish UN-SPIDER as the secretariat of the Partnership.

46. In the coming years, the Partnership will serve as an example of international cooperation among space agencies, institutions dedicated to Earth observation and national, regional and international organizations dedicated to promoting the use of satellite technology applications in disaster risk reduction efforts. Through its initiatives and activities, GP-STAR will contribute to the implementation of the Sendai Framework and to strengthening the resilience of societies worldwide.