**Note on the organisation of disaster related activities within CEOS**

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1. **Introduction and background**

As an organisation whose focus is on promoting the use of space data for societal benefit, CEOS has long been involved in bringing together the data that satellites can generate with consolidated user needs. This is true in many thematic areas, among which the area of “Disasters”. During the recent CEOS self-study a major theme has been ensuring resources are used in an optimal manner and thus maximising outcomes for CEOS Agencies. It is not surprising then that one of the recommendations (see Annexe 1) made by the CEOS Self-study Implementation Initiative (CSSII) topical team on “Roles and Responsibilities” at SIT-28 highlighted the potential “duplication of efforts” by CEOS Agencies in several parallel disaster-related activities. Following the discussions on this recommendation (SIT-28 agenda item 20) and those in connection with the reporting of disaster activities (SIT-28 agenda items 27/28), SIT created a study group on CEOS disaster activities with the objective of proposing an appropriate organisation for disaster activities within CEOS.

The discussions of this group were to be built upon an analysis of the current activities carried out within CEOS and the recommendations put forward by the CSSII Topical Team on Roles and Responsibilities. The group’s objective was to propose an organisational structure that best equips CEOS to face the challenges in the thematic area of disasters for the years to come.

1. **Current disaster activities within CEOS**

Three main activities on disasters have been identified within CEOS. A brief description of these activities and their main characteristics follows:

* CEOS Disaster SBA Coordinator and Team.

In 2007, CEOS decided to establish structures to facilitate interaction with many of the nine societal benefit areas (SBAs) identified by the Group on Earth Observations (GEO) in the Implementation Plan of the Global Earth Observation System of Systems (GEOSS). A coordinator for each of the GEO SBAs was identified at this time and given the mandate to 1) generate a coherent vision for CEOS’s activities in each theme; 2) coordinate these activities providing reporting internally to SIT and Plenary when required; and 3) be an external focal point for contact from GEO on the SBA . In order to play this role fully, some SBA Coordinators created a group of agency participants active in the SBA which became the “CEOS SBA Team”. The Disasters SBA Team has been led by the CEOS Disaster SBA Coordinator from the Canadian Space Agency (CSA). The Disaster Team met regularly (two to four times yearly) to guide CEOS disaster activities in response to GEO Tasks. Since April 2013, NASA is has assumed the role as the CEOS Disaster SBA Coordinator. Since its inception, the Disaster SBA Team has involved a number of CEOS Agencies who have proposed actions and Tasks and coordinated activities in response to GEO’s evolving focus on disasters.

* CEOS Disaster Risk Management

The creation of a CEOS *ad hoc* Working Group on Disaster Risk Management was endorsed during the 2011 Plenary with the broad objective of increasing and strengthening the contribution of EO satellites to the various phases of disaster risk management through a series of coordinated enlarged actions. These actions are intended to raise the awareness of politicians, decision-makers, and major stakeholders on the benefits of using satellite EO in all phases of DRM. While targeting key priority areas for GEO, the intention is to take a broader view focusing also on UN entities involved in Disaster Risk Management and the build-up to the World Conference on Disaster Risk Reduction organised by UNISDR in 2015.

* CEOS WGISS GA.4D

The GEOSS Architecture for Disasters (GA.4D) project activity housed within the CEOS Working Group on Information Systems and Services (WGISS) was initiated in 2011 in coordination with the CEOS Disasters SBA Team. Its purpose is to provide an enterprise architecture for managing distributed systems and services for disasters and risk management. Rather than being a coordination activity, this project analyzes case studies to determine how to better acquire and utilize satellite data within disaster and risk management systems. It differs somewhat from the two mentioned above and involves a smaller, more focused project team addressing technical issues and best practices for information systems and services.

1. **CSSII Topical Team on Roles and Responsibilities – Recommendations on disaster activities**

Having noted the parallel and often overlapping nature of the CEOS activities described above, the Roles and Responsibilities topical team’s report proposed three options intended to improve the organisation of Disaster activities within CEOS.

1. Embed all of the existing CEOS Disaster activities within just one of the existing three mechanisms addressing Disasters and suppress the other two activities/mechanisms.
2. Suppress the CEOS Disaster SBA Coordinator, the ad hoc Working Group on DRM and the Disaster activities within WGISS, and transfer all activities to a new WG on Disasters
3. Leave "as is

Following discussion within the study group, it became apparent that, as a short-term project activity, the CEOS WGISS GA.4D would not be an appropriate mechanism in which to embed all existing CEOS Disaster activities. This leaves four viable options for analysis by the Disasters study group:

1. Suppress the *ad hoc Working Group on DRM* and embed all of the existing CEOS Disaster activities within the *CEOS Disaster SBA Team*
2. Suppress the *CEOS Disaster SBA Team* and embed all of the existing CEOS Disaster activities within the *ad hoc Working Group on DRM*
3. Suppress both the *CEOS Disaster SBA Team* and the *ad hoc Working Group on DRM* and transfer all activities to a new WG on Disasters
4. Leave "as is”

The following section details the discussions and analysis of the Disaster Study Group on these four options.

1. **Analysis**

Initial thoughts among the study group on the possible options indicate that the fourth option identified above (Leave “as is”) is unanimously considered not to be an acceptable recommendation to be put forward by the group. An issue with the current structures has been clearly identified during the CSSII and this has been accepted by SIT-28. Recommending no change is therefore not an option.

Among the three remaining options, there is a common theme: the need to regroup all activities in one “CEOS disasters group” in order to provide a more coherent and structured view of disaster activities both internally and externally to CEOS. The main difference between these three remaining options is in the type of structure proposed.

* + CEOS Disasters SBA Team. The SBA Teams, where they exist, are a flexible *ad hoc* structure called upon by the SBA Coordinator to support his role. This structure has no “official” status within CEOS but could be assimilated to an -*ad hoc* working group focused on a set of GEO Tasks. The role of SBA Coordinators and Teams in general within CEOS has been the subject of some debate at SIT-28. This is due in part to the way in which GEO Tasks, and subsequent CEOS-GEO Actions are defined and managed as a whole. As these Tasks have been consolidated and the number of CEOS-GEO Actions has decreased over the past 6 years, the requirement for a complex coordination structure to manage CEOS contributions has decreased. Because of this, it is likely that CEOS will revisit the way in which it addresses the coordination of CEOS activities in response to GEO Tasks in the near future within the context of the CSSII.
  + *Ad hoc* working group on DRM. This structure is an *ad hoc* working group as defined in the CEOS TORs. It is focused more broadly than the SBA Team on the promotion of space data in response to disaster risk management requirements and seeks to interface with a broad range of potential CEOS “clients” including, but not limited to, GEO.
  + Working group on Disasters. The third option proposes the creation of a new standing working group on Disasters within CEOS. Currently four standing WGs exist within CEOS[[1]](#footnote-1) covering strategic themes for CEOS whether this be more technically oriented or, more recently with the creation of the WG Climate, focused on a specific theme. The study group is conscious of the necessity for CEOS to remain a manageable size, able to focus on its mission, and that the proposal to create a new standing working group would be examined in this context.

In answering the question “Which of the above structures would be most appropriate in structuring the Disasters theme?” the group identified a number of similarities between the Climate theme and that of Disasters. These are detailed below:

* Both themes are of long-term strategic importance to CEOS in achieving its mission of better employing EO data for societal benefit over the next 10 to 20 years. The themes are also somewhat intertwined with climate change thought to be one factor in extreme weather and the increasing intensity of hydro-meteorological hazards.
* Both themes are characterised by a complex context of national, regional and global actors who contribute at different parts of the chain from observations to information products.
* Both themes have a broad range of potential external client organisations (much broader than GEO) that CEOS must interact with to be successful in improving use of EO data. This “client base” is much wider than that typically represented by GEO and the Tasks identified in the Disasters SBA. The diverse client base is particularly evident in the build-up to the World Conference on Disaster Risk Reduction organised by UNISDR in 2015.
* Many established space actors or groupings already contribute to focused aspects of both themes. This makes CEOS’s role of ensuring that these themes are covered all the more challenging, as interfaces must be established with these groups. The study group believes that this can be done so most effectively through a common CEOS “voice” which would be afforded by a standing Working Group.

Having taken into account these marked similarities to the Climate theme and there role in influencing the decision to create a standing WG, the group has unanimously decided to recommend to CEOS the creation of a standing working group on Disasters as the most appropriate reorganisation of the disaster activities within CEOS.

1. **Conclusions and recommendations**

Successfully demonstrating the value of EO data in addressing the challenges of disasters and risk management is of strategic importance to CEOS achieving its mission over the next 10 to 20 years. As the context of national, regional and global actors in this theme is complex both among the space sector and the potential users of EO data, CEOS must be capable of responding to its usual clients, such as GEO, but also more broadly, including many other international groups ranging from UN entities to NGOs. A standing working group representing CEOS with one voice on the “disasters” theme would allow both the appropriate scope and continuity in addressing the requirements of this broad community over time.

In many ways, the challenges faced by CEOS in addressing this theme resemble those in addressing the Climate theme. Despite the additional charge of managing it, the study group on CEOS disaster activities recommends that CEOS create a standing working group to coordinate CEOS activities on disasters and risk management.

Attached to this note in Appendix 2 is a proposed set of Terms of Reference for such a WG.

1. **Next steps**

This note summarises the discussions of the Disasters Study Group established during SIT-28 and proposes to Plenary a recommended course of action regarding the management of CEOS disaster related activities.

The Disasters study group proposes the following decisions to plenary:

1. Creation of a new standing Working Group on Disasters
2. Adoption of the proposed Terms of Reference for this Working Group
3. Nominations of Chair and Vice-Chair

Annexe 1 – CSSII Topical Team on Roles and Responsibilities - Recommendations on disaster activities

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| **Option** | **Option Description** | **Advantages/Drawbacks** |
| A | Embed all of the existing CEOS Disaster activities within just one of the existing three mechanisms addressing Disasters and suppress the other two activities/mechanisms | simplicity and clarity |
| B | Suppress the CEOS Disaster SBA Coordinator, the ad hoc Working Group on DRM and the Disaster activities within WGISS, and transfer all activities to a new WG on Disasters | simplicity and clarity |
| C | Leave "as is" | overly complex organisational structure that is not justified by the benefits, and does not respond to the criticisms in the CSS Synthesis Report |

Annexe 2 – Proposed Terms of Reference for the CEOS Disasters Working Group

TERMS OF REFERENCE

CEOS WORKING GROUP ON DISASTERS (WGDisasters)

*Issue v0.1, dated 2 September 2013*

**Mission Statement**

The Committee on Earth Observation Satellites (CEOS) Working Group on Disasters (WGDisasters) ensures the sustained coordination of disaster-related activities undertaken by the CEOS Agencies and acts as an interface between CEOS and the community of stakeholders and users involved in risk management and disaster reduction.

**Membership**

Membership is open to all CEOS Agencies (Members and Associates). In addition, the Working Group may include experts from non CEOS Agencies who have relevant expertise to contribute to the objectives of the WGDisasters.

**Objectives**

The CEOS Working Group on Disasters will:

* Identify priority areas and initiatives within the theme of risk management and disaster reduction that should be supported by the CEOS Agencies.
* Represent CEOS in the GEO Work Plan Disaster Tasks and Components (to include leadership of Tasks and Components, as determined by CEOS leadership) and develop CEOS Actions to support the execution of the GEO Disaster Tasks and Components in accordance with CEOS Work Plan
* Ensure the coherency and the proper coordination of CEOS Agencies resources that support disaster-related activities undertaken by CEOS.
* Interface the major stakeholders and other representatives of the user community involved in disaster risk management to better understand and assess their needs and priorities, taking into account the resources available in the CEOS agencies.
* Develop a realistic and coherent observing strategy aimed at responding as well as possible to user needs through improved coordination and use of available resources.
* Identify and assess gaps in Earth Observation data necessary to address all parts of the disaster management cycle with the aim of better supporting the needs of the user community involved in disaster risk management.
* Advise and coordinate CEOS Agencies in better use of existing assets and the deployment of new assets that will reduce these gaps
* Maintain a close dialogue with GEO and UN experts to ensure appropriate recognition for the use of space-based Earth Observations within the 2015-2025 Post-Hyogo Framework for Action (HFA). Relevant activities will include and leverage existing disaster-related efforts supported by CEOS Agencies.
* Identify and establish a dialog with the major potential funding agencies active in this domain
* Undertake any other relevant activities as instructed by CEOS Chair.

In addition, it will:

* Develop a multi-year plan of action aimed at increasing progressively both the coverage of disasters types and the geographical areas (globally, regionally and locally).
* Make recommendations to the CEOS Agency Principals for the transition from demonstrator projects to more operational services whenever relevant.

In carrying out the tasks above, it will:

* Interface with the other CEOS Working Groups to address aspects related to disasters that those Working Groups are better equipped to tackle. This may include specific activities such as capacity building, calibration / validation, access mechanisms to data and services.
* Work with the CEOS Virtual Constellations to enhance the provision of data that can be used for risk management and disaster reduction.
* Promote openness and access to relevant data and products
* Coordinate with existing in situ networks to integrate complementary measurements and observations

The Group shall operate under the same procedures of conduct as established CEOS Working Groups.

**Structure and Procedures**

The WGDisasters will normally meet twice per year, rotating the meeting venue among its membership or locations conducive to WGDisasters goals. Remote participation at these meetings will be possible. At each meeting, the time, place and host for the next meeting will be established.

A WGDisasters Chair and Vice-chair will be designated by the CEOS Plenary and will rotate among WG members every two years. Both will be staff from CEOS Agencies. In addition, WGDisasters Chair will provide administrative support during the whole chairmanship period. The designated Vice-chair will assume the chair after two years, and a replacement Vice-chair will be designated by Plenary.

For each meeting, the Chair of WGDisasters will prepare the agenda prior to the meeting and distribute notes and actions following the meeting. WGDisasters Chair will be responsible for following actions established during their chairmanship.

Each CEOS Agency is invited to designate a point-of-contact for WGDisasters correspondence and representation; otherwise correspondence will be addressed to the Agency’s main point-of-contact within CEOS.

The WGDisasters will coordinate its work with other CEOS Working Groups, the Virtual Constellations, and with the CEOS SIT who will be invited to send a representative to WGDisasters meetings to facilitate coordination.

The WGDisasters may propose modifications to these Terms of Reference, and such modifications will be submitted to CEOS Plenary for approval.

1. CEOS’s standing working groups are: WG Calibration and Validation; WG Information Systems and Services; WG Capacity Building and Data Democracy; WG Climate. [↑](#footnote-ref-1)