Recommendation for Committee Decision

Prepared by: the "Applications of Global Navigation Satellite Systems (GNSS) for Disaster Risk Reduction" Task Force of Working Group D (WG-D).
Date of Submission: Friday the 11th of October 2024.
Issue Title: Publication of a Policy Brief on the Uses of GNSS for Disaster Risk Reduction

Background/Brief Description of the Issue:

The "Applications of GNSS for Disaster Risk Reduction" Task Force (hereafter DRR TF), operates under the umbrella of Working Groups D and B. Its mission is to explore how GNSS technology can enhance disaster risk reduction (DRR) strategies and bolster natural hazard early warning systems (NHEWS). At the heart of this endeavour is the concept that GNSS-based techniques provide a cost-effective means to comprehensively monitor the surface-atmosphere system, offering a novel approach to tracking natural hazards. Currently, the Task Force's focuses primarily on four GNSS-based techniques: Precise Point Positioning (GNSS-PPP), Reflectometry (GNSS-R), Radio Occultation (GNSS-RO), and ground-based Total Electron Content (GNSS-TEC). These techniques have broad applications, spanning for instance earthquakes, tsunamis, floods, and solar storms. Established at the 16th Annual Meeting of the International Committee on GNSS (ICG-16) in October 2022 following WG-D Recommendation #26, the DRR TF has now achieved two years of gathering and organizing expertise in the field.

Discussion/Analyses:

Through its exchanges with experts, stakeholders, and policymakers worldwide, as well as through its co-chairs' own academic research efforts, the DRR TF has identified outreach as a critical factor in promoting the use of GNSS for Disaster Risk Reduction. Despite the clear advantages GNSS-based techniques offer to enhance early warning systems, there is hesitancy among current systems to fully integrate these augmentations due to concerns about robustness and reliability.

While the role of GNSS in geodesy is well recognized, its broader applications in natural hazard monitoring remain largely unfamiliar to stakeholders and policymakers. This gap in awareness is further highlighted by findings from the United Nations Global Geodetic Centre of Excellence[1], which revealed that the Global Geodetic Supply Chain receives far less funding than its geodetic benefits alone justify. Considering the additional benefits GNSS could offer in Disaster Risk Reduction, there is a strong case for more extensive outreach and advocacy in this area.

[1] United Nations Global Geodetic Centre of Excellence "Hidden Risk" Report - Version 1.1 - 20 June 2024 (https://ggim.un.org/UNGGCE/documents/20240620-Hidden_Risk_Report.pdf)

Recognizing this need, the DRR TF, with inputs from external experts, has drafted a concise policy brief. This document aims to clearly articulate the benefits of GNSS in DRR, with the goal of enhancing the perception and uptake of GNSS technology among stakeholders and policymakers. By doing so, the DRR TF hopes to foster greater integration of GNSS into disaster risk reduction strategies worldwide.

Recommendation of Committee Action:

The International Committee on GNSS to publish the Policy Brief on the Uses of GNSS for Disaster Risk Reduction prepared by WG-D's "Applications of GNSS for Disaster Risk Reduction" Task Force and external experts (provided as attachment).

Members Consensus Reached ____Yes_____;

Chairperson Signature: _____ **Date:** ___10 October 2024_____