Updated: 16 November 2018

Disaster-related Statistical Geospatial Indicators for SDG Implementation

30-31 January 2019, 09:30am - 16:30 pm
Venue: Almaty, Kazakhstan

Background:

The geospatial and statistical professional communities are major contributors of information to support policy- and decision-making processes across many public and private sectors. With the increasing complexity of national, regional and global challenges and issues, the need to better understand the interrelationships across the economic, social and environmental pillars of sustainable development is becoming ever more critical. In this connection, there is a clear recognition that one of the key challenges is a better integration of geospatial (which includes much environmental information) and statistical information (which includes much socioeconomic information) as a basis for sound and evidence-based policy- and decision-making[1].

UN entities and key stakeholders such as the United Nations Statistical Commission (Statistical Commission) and the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) have explored the global statistical and geospatial framework to support the assessment of the progress in implementing disaster-related Sustainable Development Goals (SDGs). The geo-statistical results can significantly improve the quality of official statistics for the measuring and monitoring of SDGs[2], including disaster risks and impacts.

In collaboration with the experts in the UN entities and region, in 2017, ESCAP has initiated analytical research to develop a set of the disaster-related statistical geospatial indicators as a tool to assess the progress of the implementation of SDGs to support the second and third tiers of SDGs indicators. The indicators will measure how to reduce disaster risks, rather than how to calculate disaster impact. These indicators will support policy makers and technical officials of member States to prepare more effective policies and actions in support of reducing disaster risks, preventing or mitigating human suffering and economic and environmental damages. The indicators contribute to improving the statistical accuracy of the already established SDG indicators and its framework. For example,

The statistical geospatial indicators and their products will contribute to assessing and monitoring the progress of other SDGs by:

- Providing disaggregated geospatial data (e.g. indicator 15.1.1: forest area as a percentage of total land area);

[1] Secretary General of the UN Economic and Social Council 2012.
[2] Summary report of the Global Forum on the Integration of Statistical and Geospatial Information 2014.

- Supporting statistical data (e.g. indicator 11.2.1: proportion of population that has convenient access to public transport, by age, sex and persons with disabilities);
- Enriching statistical data and indicators (e.g. indicator 6.3.2: percentage of water bodies with good ambient water quality)

The indicator models require estimates of certain variables that need to be derived from available geospatial and socio-economic data. Derived features include population density projections for 2030, land cover and topology mappings over roads and rails, for instance, hydrographic data and mapping such as watershed boundaries, rivers, lakes and dams, hazard maps for recurrent disasters in specific regions, human-made risks, coastal line mappings, urban buildings and infrastructure, persistent nighttime lights, annual average rainfall, temperature and cloud cover, time-series vegetative green-scales, and disaggregated GDP per capita.

Expert Group Meeting for Disaster-related Statistical Geospatial Indicators

The objective of the EGM is to discuss frameworks, methodologies and sets of indicators to assess the progress in reducing disaster risks in the overall context of disaster-related SDGs indicator framework. The indicators aim to measure how much disaster risks reduced prior to disasters happen. Indicators provide policy makers of member States with directions on what actions are required to reduce disaster risks prior to disaster breakout.

The first EGM in Bangkok on 10 October 2017 reviewed and discussed key concepts and potential approaches on frameworks, indicators and challenges. The second EGM in Almaty, late January 2018 discussed developed frameworks and indicators proposed by a group of research team and provided insightful comments and advice. Experts in the second EGM presented draft research outputs on how to define and frame statistical geospatial indicators. The proposed frameworks and indicators have unique features, different from existing disaster indicators and risk assessment methodologies which are often static and univariate. The statistical geospatial indicators assess changes in disaster risk levels for a given period, not static situations and results at specific times after disasters such as death tolls or asset losses.

ESCAP pilot tested the proposed frameworks, indicators, and data sets in Japan and the Republic of Korea, as well as Kazakhstan and verified its feasibility and practicality. ESCAP plans to further apply the draft statistical geospatial framework and indicators in selected ASEAN[3] and SPECA[4] countries in the second phase.

This event will focus on:

- Overall goal and expected outputs of the statistical geospatial indicators;
- Framework, methodologies and approaches for statistical geospatial Indicators and data;
- Suggested frameworks of statistical geospatial indicators for disaster-related SDGs;
- Validation of suggested indicators in Japan and Korea as reference case; and
- Pilot result of applications of framework and indicators in Kazakhstan.

[3] ASEAN: Association of Southeast Asian Nations
[4] SPECA: United Nations Special Programme for the Economies of Central Asia

Organizers and Participating Experts (12-15 participants)

Organizers: UNESCAP and Government of Kazakhstan

Invited participants

- ✓ Government officials of Central Asian countries on statistics and disasters
- ✓ Experts in the Asia Pacific region.

Date and Venue

Venue: Almaty, Kazakhstan

Date: 30-31 January 2019

Interpretation

English-Russian interpretation will be provided.

Note: This expert meeting will be conducted in a small group of experts and government officials for intensive discussions