

Potential areas for contribution of Geospatial Community including National Geospatial Information Authorities to the effective implementation of Sendai Framework for Disaster Risk Reduction

Remarks

1. This chart enumerates potential areas for contribution of Geospatial Community(GC) including National Geospatial Information Authorities(NGIAs) with the corresponding descriptions in Sendai Framework for Disaster Risk Reduction(SFDRR).

The areas are also related to the Priorities for Action of Strategic Framework on Geospatial Information and Services for Disasters(SF) and the applicable phase in disaster cycle. NGIA executives and staff members as well as interested readers in GC can use this chart to check and understand how their measures and actions are related to SFDRR and SF. Using this chart, they may find the clues which part should be further committed in disaster risk reduction field.

2. The five Priorities for Action of Strategic Framework on Geospatial Information and Services for Disasters

Priority1: Governance and Policies

Priority2: Awareness Raising and Capacity Building

Priority3: Data Management

Priority4: Common Infrastructure and Services

Priority5: Resource Mobilization

3. The number of Disaster Phase

1: Before Disaster

2: During Disaster

3: After Disaster

The number of each item					The Serial number of each item			
	1: Before Disaster	2: During Disaster	3: After Disaster	SUM		1: Before Disaster	2: During Disaster	3: After Disaster
Priority1: Governance and Policies	5	0	0	5	Priority1: Governance and Policies	1,5,10,33,34	-	-
Priority2: Awareness Raising and Capacity Building	46	0	3	49	Priority2: Awareness Raising and Capacity Building	others	-	13,55,56
Priority3: Data Management	1	0	0	1	Priority3: Data Management	19	-	-
Priority4: Common Infrastructure and Services	3	0	1	4	Priority4: Common Infrastructure and Services	47,51,53	-	57
Priority5: Resource Mobilization	1	0	0	1	Priority5: Resource Mobilization	36	-	-
SUM	56	0	4	60				

Serial number	Paragraph	Line	Description in the SFDRR	Potential area for contribution of GC including NGIAs	Priorities for Action of Strategic Framework	Disaster Phase
1	1(b)	1	(b)Complete the assessment and review of the implementation of the Hyogo Framework for Action 2005-2015: Building Resilience of Nations and Communities to Disasters;	In view of the fact that the implementation status of Hyogo Framework for Action 2005-2015 has been assessed and reviewed, GC will need to work by imagining how contribution from geospatial information sector, especially from NGIAs will be appreciated when Sendai Framework for Disaster Risk Reduction 2030 will be reviewed.	Priority1: Governance and Policies	1: Before Disaster

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2	6	3	...needs to be focused on tackling underlying disaster risk drivers, such as...unplanned and rapid urbanization, poor land management...	Unsustainable use of natural resources as a result of unplanned and rapid urbanization and insufficient land administration will cause disaster risk. Their aggravation can be prevented by administration in understanding the situation using geospatial information provided by GC.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
3	14	2	...monitoring, assessing and understanding disaster risk...	GC especially NGIAs can inform of disaster risk by providing crustal movement and landform information through map expressions.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
4	14	8	...enhancing multi-hazard early warning systems...	GC can make a platform and provide geospatial information in coordination with relevant organizations to create early warning systems.	Priority2: Awareness Raising and Capacity Building; Priority4: Common Infrastructure and Services	1: Before Disaster
5	16	6	...the present framework aims to achieve the following outcome over the next 15 years: <i>The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries</i>	GC need to be conscious of how their efforts employed lead to the SFDRR outcome through what kind of value chains to be build.	Priority1: Governance and Policies	1: Before Disaster
6	18(e)	1	...increase the number of counties with national and local disaster risk reduction strategies by 2020	GC can contribute to making good disaster risk reduction strategies by providing information on location of important infrastructures and vulnerability to disasters.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
7	18(e)	1	...increase the number of counties with national and local disaster risk reduction strategies by 2020	GC can contribute to national disaster risk reduction and disaster risk mitigation by incorporating GC's own work into national disaster risk reduction strategies.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
8	18(f)	1	...substantially enhance international cooperation to developing countries...	By joining cooperation activities and the network of GGIM, GGIM WG-Disasters and GGIM-AP, GC can mutually enhance its abilities.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
9	18(g)	1	...substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments.	GC can exercise its leadership in geospatial information aspect by providing early warning systems and disaster risk information and assessments, thereby contributing to enhancing their availability.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
10	19(b)	1	...responsibilities be shared by central governments and relevant national authorities.	NGIAs bear part of the responsibility in public administration related to geospatial information towards mitigating disaster risk at national level.	Priority1: Governance and Policies	1: Before Disaster

Serial number	Paragraph	Line	Description in the SFDRR	Potential area for contribution of GC including NGIAs	Priorities for Action of Strategic Framework	Disaster Phase
11	19(f)	2	...it is necessary to empower local authorities and local communities.	GC can empower local authorities and local communities with disaster risk reduction abilities by providing knowledge and technology related to geospatial information.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
12	19(j)	1	Addressing underlying disaster risk factors through disaster risk-informed public and private investments.	GC can contribute to investments resilient to disasters before the occurrence of disasters by addressing underlying risk of lands and sharing relevant information.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
13	19(k)	1	...it is critical to prevent the creation of and to reduce disaster risk by "Building Back Better"	GC especially NGIAs can contribute to Build Back Better by making base maps needed for restoration and reconstruction, and inform anew of the disaster risk of the given affected area.	Priority2: Awareness Raising and Capacity Building; Priority3: Data Management	3: After Disaster
14	24(a)	1	Promote the collection, analysis, management and use of relevant data and practical information.	GC can collect and provide important information on disaster risk. In cooperation with relevant people, GC can also promote collection and dissemination of disaster risk information by adding location information.	Priority2: Awareness Raising and Capacity Building; Priority3: Data Management	1: Before Disaster
15	24(a)	2	Ensure its(relevant data and practical information) dissemination as appropriate.	GC can promote the spatial understanding of the people about disaster risk by providing information on disaster risks as geospatial information such as paper maps and Web maps.	Priority2: Awareness Raising and Capacity Building; Priority4: Common Infrastructure and Services	1: Before Disaster
16	24(b)	1	Encourage the use of and strengthening of baseline and periodically assess disaster risks...at the relevant social and spatial scale...	In order to assess disaster risk in an appropriate spatial scale, GC can provide geospatial information in cooperation with relevant organizations.	Priority2: Awareness Raising and Capacity Building; Priority4: Common Infrastructure and Services	1: Before Disaster
17	24(c)	1	Develop, update periodically and disseminate..., location-based disaster risk information, including risk maps...	GC can develop, update and provide geospatial information on disaster risk by itself. GC can also support and facilitate other organizations in the development, update and provision of geospatial information on disaster risk.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
18	24(c)	3	...by using, as applicable, geospatial information technology.	GC can develop and provide geospatial information technology by itself. GC can also promote the use of geospatial information technology by instructing it to other organizations and relevant people.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
19	24(e)	1	Make non-sensitive hazard exposure, vulnerability, risk, disasters... freely available and accessible.	GC especially NGIAs can promote open data policy to make the data freely available and accessible by providing the public with a platform which enables them to access geospatial information.	Priority3: Data Management; Priority 4: Common Infrastructure and Services	1: Before Disaster

Serial number	Paragraph	Line	Description in the SFDRR	Potential area for contribution of GC including NGIAs	Priorities for Action of Strategic Framework	Disaster Phase
20	24(f)	1	Promote real-time access to reliable data, make use of space and in situ information, including geographic information systems (GIS)...	In order to promote data access using GIS, GC can provide relevant real-time maps such as background map and crustal movement map by itself or in cooperation with other organizations.	Priority2: Awareness Raising and Capacity Building; Priority3: Data Management; Priority4: Common Infrastructure and Services	1: Before Disaster
21	24(g)	1	Build the knowledge of government officials at all levels, civil society, ... through... training and education on disaster risk reduction.	GC can cultivate the knowledge of government officials and civil society on disaster risks from the viewpoint of geospatial information through training and education, etc.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
22	24(g)	1	Build the knowledge of government officials at all levels, civil society, ... through... training and education on disaster risk reduction.	GC can provide government officials at all levels and civil society with practical knowledge on geospatial information technology.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
23	24(h)	1	Promote and improve dialogue and cooperation among scientific and technological communities...	GC can improve abilities of works on geospatial information for mitigating disaster risk by understanding and acquiring the most up-to-date trend of scientific technology.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
24	24(i)	1	Ensure the use of traditional, indigenous and local knowledge and practices.	It is important to ensure the use of traditional, indigenous and local knowledge and practices. GC can support systems to express these knowledge and practices on maps by adding location information and contribute to the society by sharing them.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
25	24(k)	1	Promote investments in innovation and technology development in long-term, multi-hazard and solution-drive research in disaster risk management.	GC especially NGIAs can provide information on crustal movement caused by plate movement, volcanic activity and landform. GC can contribute to promoting communication between the public and experts through employing sophisticated cartography, as a communication medium.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
26	24(k)	1	Promote the incorporation of disaster risk knowledge,... in formal and non-formal education.	In order to disseminate disaster risk reduction knowledge based on mapping, surveying and geospatial information effort through education, GC can support educational administration agencies, teachers and students.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
27	24(m)	1	Promote national strategies to strengthen public education and awareness in disaster risk reduction...	For lifetime education, GC can enter into communities and raise the people's awareness of disaster risk through visiting lectures, lecture meetings, and field excursion on landform and the environment.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
28	24(o)	1	Enhance collaboration among people at the local level to disseminate disaster risk information, ...	To local communities and NGOs, GC especially NGIAs can provide topographic maps, map-related materials to indicate disaster risk and know-how to fully use them. This enables to support disaster risk reduction efforts rooted in local community.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster

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29	25(a)	1	Enhance the development and dissemination of science-based methodologies and tools... to strengthen disaster risk modelling, assessment, mapping, ...	GC especially NGIAs can set up opportunities to mutually improve its abilities by sharing efforts (good practices) in GGIM and other processes.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
30	25(b)	1	Promote the conduction of comprehensive surveys on multi-hazard disaster risks and the development of regional disaster risk assessments and maps, ...	GC can contribute to multi-hazard disaster risk survey by providing data and getting involved in mapping.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
31	25(f)	7	...to promote a culture of disaster prevention, resilience and responsible citizenship, generate understanding of disaster risk, support mutual learning, share experiences...	GC can play a role in a campaign to promote understanding of disaster risk in cooperation with other organizations and stakeholders.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
32	25(g)	1	Enhance the scientific and technical work on disaster risk reduction and its mobilization ... in order to ... disseminate risk information with the best use of geospatial information technology...	NGIAs can contribute to sharing, sending and technological development of disaster risk information as a custodian of fundamental national geospatial information and national geospatial information infrastructure.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
33	27(a)	2	Review and promote the coherence and further development,...of national local frameworks of laws, regulation and public policies, which, by defining roles and responsibilities, ...	It is important to work on to firmly define the NGIA's roles and responsibilities in national laws, frameworks, and public policies related to disaster risk mitigation.	Priority1: Governance and Policies	1: Before Disaster
34	27(b)	1	Adopt and implement national and local disaster risk reduction strategies and plans...	NGIAs' contribution can be made public by stipulating the items which should be implemented by NGIAs in strategies and plans for disaster risk mitigation.	Priority1: Governance and Policies	1: Before Disaster
35	27(d)	2	...ensure high levels of compliance with existing safe-enhancing provisions of sectoral laws and regulations, including those addressing land use and urban planning...	GC can contribute to integration of policies by providing related organizations with geospatial information, and data on landform and geodesy needed to better consider disaster risk related to land use and urban planning.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
36	27(i)	1	Encourage parliamentarians to support the implementation of disaster risk reduction...	NGIAs can explain the importance of geospatial information related to disaster risk also to the members of the national parliament and make a point of legitimacy of budget allocation.	Priority5: Resource Mobilization	1: Before Disaster
37	27(j)	1	Promote the development of quality standards, such as certifications and awards for disaster risk management...	NGIAs can get publicity of the public by awarding excellent practices in using geospatial information, especially those related to the use of geospatial information to mitigate disaster risk.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
38	27(k)	1	Formulate public policies... aimed at addressing the issues of prevention or relocation... of human settlements of in disaster risk zones.	In prevention and relocation of human settlements in high disaster risk zone, geospatial information related to disaster risk is important. Better decision-making can be facilitated by GC's and especially NGIAs' positively providing these geospatial information.	Priority2: Awareness Raising and Capacity Building; Priority3: Data Management	1: Before Disaster

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39	28(d)	1	Promote transboundary cooperation to enable and plan for the implementation of ecosystem-based approaches...,	GC can contribute to mitigation of disaster risk of watershed and coast by sharing geospatial information in a transboundary form.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
40	28(e)	1	Promote mutual learning and exchange of good practices and information, ...	GC can set up opportunities to mutually improve their abilities by sharing efforts (good practices) in GGIM and other processes.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
41	30(b)	1	Promote mechanisms for disaster risk transfer and insurance...	GC can contribute to making mechanisms for disaster risk transfer and insurance by providing disaster risk information in a form of geospatial information and by making other platforms.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
42	30(c)	1	Strengthen... disaster resilient public and private investments... through... disaster risk prevention and reduction measures in critical facilities in particular schools and hospitals and physical infrastructures...	GC can promote disaster risk prevention and reduction measures of schools and hospitals by providing them with information on locations which have critical disaster risk such as active faults, landslides and floods.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
43	30(f)	1	Promote the mainstreaming of disaster risk assessments into land-use policy development and implementation...	GC especially NGIAs can contribute to land-use policy development and implementation by providing information on land use and landform data.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
44	30(g)	1	Promote the mainstreaming of disaster risk assessment, mapping and management into rural development planning and management...	In order to add disaster risk aspects in rural development planning process, GC can contribute to relevant organizations by providing them with geospatial information, supporting them in mapping and in visualization of geospatial information.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
45	30(g)	4	... identification of areas that are safe for human settlement...	In order to identify areas that are relatively safe for human settlement, GC can provide elevation data and landform data.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
46	30(n)	2	... implement integrated environmental and natural resource management approached that incorporate disaster risk reduction	GC can incorporate disaster risk reduction approach into natural resource management and environmental management jointly with relevant people by providing topographic map and thematic geospatial information.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
47	30(o)	2	Ensure continuity of services and integrate disaster risk management into business models and practices.	NGIAs ensure reliability of their own services, assuming the case that NGIAs themselves suffer damage, by making Business Continuity Plan (BCP) and exercising to enable to conduct their services with minimum required number of people.	Priority4: Common Infrastructure and Services	1: Before Disaster
48	30(q)	1	Promote and integrate disaster risk management approaches throughout the tourism industry...	GC can plan and implement geospatial information and services which can make visitors from outside the country and foreign residents recognize disaster risk of their destination and residence area for subsequent action.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster

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49	33(a)	1	Prepare or review and periodically update disaster preparedness and contingency policies, plans and programmed...	GC can have its role recognized through the effort in stipulating its role in emergency response policies and plans.	Priority1: Governance and Policies; Priority2: Awareness Raising and Capacity Building	1: Before Disaster
50	33(b)	1	Invest in, develop, maintain and strengthen... disaster risk and emergency communication mechanisms... and hazard-monitoring telecommunications systems...	GC can review telecommunication and means of communication and improve environment to provide necessary geospatial information before and after disaster.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
51	33(c)	1	Promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities...	In order to maintain critical infrastructure, GC can facilitate region-wide planning and maintenance by preparing information and background maps.	Priority2: Awareness Raising and Capacity Building; Priority3: Data Management; Priority4: Common Infrastructure and Services	1: Before Disaster
52	33(f)	1	Trains the existing workforce and voluntary workers in disaster response and strengthen technical and logistical capacities...	GC can provide maps and know-how necessary for disaster response policies. GC can establish channels for data provision through trainings before the disaster.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
53	33(g)	1	Ensure the continuity of operation and planning...	NGIAs ensure reliability of their own services, assuming the case that NGIAs themselves suffer damage, by making Business Continuity Plan (BCP) and exercising to enable to conduct their services with minimum required number of people.	Priority4: Common Infrastructure and Services	1: Before Disaster
54	33(h)	1	Promote regular disaster preparedness, response and recovery exercises, including evacuation drills, training, ...	In order to use geospatial information during disaster effectively in the society, NGIAs can exercise or response drills in cooperation with various organizations. It includes cooperation in making scenario and provision of information on maps and crustal movement.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
55	33(j)	4	Use opportunities during the recovery phase to develop capacities that reduce disaster risk... through the development of measures such as land use planning...	GC can support the development of land use planning during the recovery phase by providing aerial photos of affected areas and maps expressing disaster damage.	Priority2: Awareness Raising and Capacity Building; Priority3: Data Management	3: After Disaster
56	33(k)	1	Develop guidance for preparedness for disaster reconstruction, such as on land use planning...	GC can support the development of land use planning during the recovery phase by providing aerial photos of affected areas and maps expressing disaster damage.	Priority2: Awareness Raising and Capacity Building; Priority3: Data Management	3: After Disaster
57	33(l)	1	Consider the relocation of public facilities and infrastructures to areas outside the risk range...	GC can contribute to consideration of relocation of public facilities and infrastructures by providing information on distribution of active faults, landslides and risk areas of tsunamis.	Priority4: Common Infrastructure and Services	3: After Disaster

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58	34(b)	3	...facilitate information sharing on lessons learned and best practices for policy practice and post-disaster reconstruction programmed;	GC can set up opportunities to mutually improve their abilities by sharing efforts (good practices) in GGIM and other processes.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
59	36(a)(ii)	1	Children and youth are agents of change and should be given the space and modalities to contribute to disaster risk reduction...	GC provide local information such as geographical context and disaster risk through education and can contribute to the next generation in creating disaster-conscious culture.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster
60	36(d)	1	(States should encourage) Media to take an active and inclusive role... in contributing to the raising of public awareness and understanding... in close cooperation with national authorities...	GC provide media with geospatial information on disaster risk and disaster status in an easy-to-understand way and can widely disseminate these information to the public.	Priority2: Awareness Raising and Capacity Building	1: Before Disaster