

***The results of a feasibility exercise conducted among  
Member States on the indicators for the global targets of  
the Sendai Framework.***

*Inputs to the second informal consultations of the Chair of the Open-ended Intergovernmental Expert Working Group on Terminology and Indicators relating to Disaster Risk Reduction (OIEWG), Geneva, 10-11 October 2016*

*Jointly conducted by seventeen Member States:*

*Australia, Cambodia, Colombia, Czech Republic, Ecuador, Fiji, Guatemala, Indonesia, Jamaica, Japan, Mexico, Mongolia, Myanmar, the Philippines, Sri Lanka, Switzerland and the United States of America*

*10-11 October 2016*

## **1. Background**

The UNISDR submitted “Technical collection of concept notes on indicators for the Seven Global Targets of the Sendai Framework for Disaster Risk Reduction (10 June 2016)” (herein after referred to as “the Concept Note”), which included indicators to measure the achievement of Targets A-F. The Government of Japan had tested how feasible those indicators in the Concept Note were by cross-referencing its actual national disaster damage and loss data by then and has shared the results and encouraged Member States to conduct the feasibility exercise as described in the Note Verbal from the Permanent Mission of Japan, dated on 24 June 2016.

Twenty-six Member States expressed their interests to participate in this exercise, and seventeen Member States completed their assessment as of 23 September 2016. This document outlines the results of the feasibility exercise. The Government of Japan served as a facilitator of this process.

## **2. Participating Member States**

Seventeen Member States participated in the feasibility exercise and the drafting process of this summary. They include:

***Australia, Cambodia, Colombia, Czech Republic, Ecuador, Fiji, Guatemala, Indonesia, Jamaica, Japan, Mexico, Mongolia, Myanmar, the Philippines, Sri Lanka, Switzerland and the United States of America***

## **3. Process of the feasibility exercise**

The feasibility exercise took the following steps.

- (1) Among all indicators in the Concept Note, the Government of Japan selected thirty-five indicators as highly relevant indicators. The feasibility exercise prioritised those selected indicators in the interest of time.
- (2) Participating Member States assessed the feasibility of indicators in the Concept Note by mainly considering the following four points. They used a template provided by the Government of Japan for their assessment.
  - i) Whether Member States regularly collect data that would account for the relevant indicators.
  - ii) Whether data cover a wide range of hazardous events, without only limiting to specific major events.
  - iii) Even though Member States do not have data now, they possess methodologies to collect them.
  - iv) Whether Member States have the established methodology to collate data using raw data, which are already available or easily be available.

(3) Assessment result of each indicator by each Member State was categorised in **three groups** in reference to the four points described in the (2): “feasible indicator = ○”, “feasibility is not sure = △” and “not feasible indicator = ×”.

“Feasible indicators”: Member States are positive in all the four points.

“Feasibility is not sure”: Member States have some doubt in more than one point. They need further study to know whether it is “feasible” or “not feasible.”

“Not feasible indicators”: Member States are **not** positive in more than one point.

(4) According to the summed number of participating Member States which categorised the indicator as “feasible indicator”, “feasibility is not sure” and “not feasible indicator”, each indicator was classified whether to be recommended as “**global indicators**” or “**country specific indicators**”.

- If more than a half of the participating Member States categorised the indicator “feasible”, then, that indicator is evaluated as “**strongly supported**” (**strong**). Such indicators are recommended as **global indicators**.
- If more than one-third of the participating Member States categorised the indicator “not feasible”, then, that indicator is evaluated as “supports are weak” (**weak**). Such indicators are recommended as **country specific indicators**.
- If less than a half of the participating Member States categorised the indicator “feasible” or less than one-third of the participating Member States are “not feasible”, then that indicator is evaluated as “mixed support” (**mixed**). Such indicators are recommended as **country specific indicators**.

*(Note) All the Member States are required to use global indicators while country specific indicators are only used by Member States in which they think such indicators are relevant.*

#### **4. Results**

The results of the feasibility exercise by seventeen Member States are listed in the annexes, 1) by country (ANNEX 1) and 2) summed numbers (ANNEX 2).

##### Global targets

- **Fourteen global indicators** were categorised as global targets.
- Most of the participating Member States meant “hazardous events” as “large-scale events.”

Setting some of the global indicators need further discussion, because there are significant numbers of participating Member States which classified them as “not feasible indicators.” For example, many participating Member States requested elaborated and clear definition of “B-1: Number of affected people by hazardous event”. Depending on the definition, the classification may have different results.

- Member States which evaluated the global targets as “not feasible” need to consider alternative proxies to measure them. It needs further discussion to what extent such

proxies have to share commonality among Member States, so that they could be used as “global targets”.

### Country specific indicators

- **Fourteen** indicators were categorised as country specific indicators (mixed and weak indicators).
- **Six** indicators which were evaluated as “mixed supports” need further discussion. For example, by what methodologies are data for those indicators available/not available for each participating Member States? Are they desirable indicators that have to be used for global target in the long term (because of the early development stage of the data collection system, it is currently unavailable for some countries, but needs further improvement in the future.)

## **5. Recommendations**

As a result of this feasibility exercise jointly conducted by seventeen voluntary Member States, we would recommend the following global indicators to monitor the Sendai Framework targets A to D, for their accountability and availability of data.

1. Number of death due to hazardous events (A-2)
2. Number of missing persons due to hazardous events (A-3)
3. Number of affected people by hazardous event (B-1)
4. Number of injured people due to hazardous events (B-2)
5. Number of people whose houses were damaged or partially destroyed due to hazardous events (B-4)
6. Number of people whose houses were totally destroyed due to hazardous events (B-5)
7. Direct agricultural loss due to hazardous events (C-2)
8. Direct economic loss due to houses damaged by hazardous events (C-5)
9. Direct economic loss due to houses destroyed by hazardous events (C-6)
10. Direct economic loss due to damage to critical infrastructure caused by hazardous events (C-7)
11. Number of health facilities destroyed or damaged by hazardous events (D-2)
12. Number of educational facilities destroyed or damaged by hazardous events (D-3)
13. Number of transportation infrastructures destroyed or damaged by hazardous events (D-4)
14. Number of water and sanitation infrastructures destroyed or damaged by hazardous events (D-14)

ANNEX 1: Results of the feasibility exercise by country

“feasible indicator” = ○, “feasibility is not sure” = △ and “not feasible indicator” = ×.

Cod e	Indicators in the Concept Note	Japan	Austra lia	Camb odia	Colom bia	Czech Repub lic	Ec uador	Fiji	Guate mala	Indon esia	Jamai ca	Mexic o	Mong olia	Myan mar	Philip pines	Sri Lanka	Switze rland	U.S.A.
A-1	[Number of [deaths / deceased] and [missing [persons] / presumed dead] due to hazardous events per 100,000.]	○	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○
A-2	Number of [deaths / deceased] due to hazardous events.	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
A-3	Number of [missing [persons] / presumed dead] due to hazardous events.	○	○	×	○	△	○	○	○	○	○	○	○	○	○	○	△	×
A-1 alt.	[Number of deaths, missing, injured, displaced or [evacuated] due to hazardous events per 100,000.]	×	○	×	×	×	○	○	○	×	○	×		○	○	×	--	×
B-1	[Number of affected people [by hazardous event / due to hazardous events] per 100,000.]	×	○	○	○	×	○	○	○	×	○	○	○	×		×	○	○
B-2	[Number of injured or ill people due to hazardous events.]	○	○	×	○	○	○	○	○	○	○	○	○	×	△	×	△	○
B-3	[Number of people who left their [places of residence / home][and places where they are] due to hazardous events. ]	×	×	○	△	○	△	○	○	○	○	×	×	×		○	×	○
B-4	[Number of people whose [houses / dwellings or homes] were [damaged / partially destroyed] due to hazardous events.]	○	○	○	○	○	○	○	○	○	○	○	○	○		○	△	○
B-5	[Number of people whose [houses / dwellings or homes]	○	○	○	○	○	○	○	○	○	○	○	○	○		○	△	○

Code	Indicators in the Concept Note	Japan	Australia	Cambodia	Colombia	Czech Republic	Ecuador	Fiji	Guatemala	Indonesia	Jamaica	Mexico	Mongolia	Myanmar	Philippines	Sri Lanka	Switzerland	U.S.A.
	were [totally] destroyed due to hazardous events.]																	
B-6	[Number of people who [received / required] [food relief aid / aid including food [and non-food] and medical aid] [among other things] due to hazardous events.]	x	x	x	o	o	Δ	o	o	x	o	o	x	x		o	x	x
B-7	[Number of people whose livelihoods were disrupted, destroyed or lost due to hazardous events.]	x	Δ	x	o	x	x	o	o	x	o	x	x	x		x	x	x
C-1*	[Direct economic loss due to hazardous events [in relation to global gross domestic product.]]	x	x	x	o		o	o	x	x	o	o	x	x		x	--	o
C-2*	Direct agricultural loss due to hazardous events.	o	Δ	o	o	o	o	o	Δ	o	o	o	o	o		o	Δ	o
C-3*	Direct economic loss due to industrial facilities damaged or destroyed by hazardous events.	o	x	x	Δ	Δ	o	o	x	o	o	o	x	x		x	Δ	x
C-4*	Direct economic loss due to commercial facilities [and services] damaged or destroyed by hazardous events.	o	x	x	Δ	Δ	x	o	x	o	o	Δ	o	o		x	Δ	x
C-5*	[Direct economic loss due to houses damaged by hazardous events]	o	x	o	o	o	x	o	o	o	o	o	o	o		o	Δ	o
C-6*	[Direct economic loss due to houses destroyed by hazardous events]	o	x	o	o	o	x	o	o	o	o	o	o	o		o	Δ	o
C-7*	[Direct economic loss due to damage to [critical infrastructure / public infrastructure] caused by hazardous events.]	o	x	o	o	o	o	o	o	o	o	o	o	o		x	Δ	o

Cod e	Indicators in the Concept Note	Japan	Austra lia	Camb odia	Colom bia	Czech Repub lic	Ec uador	Fiji	Guate mala	Indon esia	Jamai ca	Mexic o	Mong olia	Myan mar	Philip pines	Sri Lanka	Switze rland	U.S.A.
C-8*	[Direct economic loss due to cultural heritage damaged or destroyed by hazardous events.]	x	x	x	x	○	○	○	○	x	○	△	△	x		x	x	△
C-9*	[Direct economic loss due to environment degraded by hazardous events.]	x	x	x	x	x	x	○	x	x	○	△	△			x	x	○
C-10*	[Financial transfer and access to insurance.]	x	x	x	○		x		x	x		△	△	x		x	x	x
C-11*	[Direct economic loss due to disruptions to basic services.]	x	x	x	x	x	x		○	x		△	△	x		x	x	x
C-12*	[Direct economic loss due to services sectors (such as transportation, tourism, finance) caused by hazardous events.]	x	x	x	x	x	○	○	x	x	○	△	△	x		x	x	x

D-1*	Damage to critical infrastructure due to hazardous events.	x	x	x	○	x	○	○	△	x	○	○	x	x		x	-	○
D-1 bis*	[Number of electricity plants and transmission towers destroyed or damaged by hazardous events.]	x	x	x	x	△	○	○	x	x		○	○	○		○	△	△
D-2*	[Number / percentage] of health facilities [including mental health services] destroyed or damaged by hazardous events.	○	x	○	△	△	○	○	x	○	○	○	x	○		○	△	△
D-3*	[Number / percentage] of educational facilities destroyed or damaged by hazardous events.	○	x	○	△	△	○	○	△	○	○	○	x	○		○	x	△

Cod e	Indicators in the Concept Note	Japan	Austra lia	Camb odia	Colom bia	Czech Republic	Ec uador	Fiji	Guate mala	Indon esia	Jamai ca	Mexic o	Mong olia	Myan mar	Philip pines	Sri Lanka	Switze rland	U.S.A.
D-4*	[Number / percentage] of [major] transportation [units and] infrastructures destroyed or damaged by hazardous events.	○	×	○	△	○	×	○	×	○	○	○	○	○		○	△	△
D-5*	[Number / Length / Percentage] of [time / days / person days] basic services have been disrupted due to hazardous events.	○	×	×	△	○	○		○	○	○		○	×		×	△	×
D-7*	[Number / percentage] of security service structures destroyed or damaged by hazardous events.	×	×	×	×	×	○		×	×		×	×	×		○	×	×
D-8*	[Number / percentage] of tourist infrastructure facilities destroyed or damaged by hazardous events.	×	×	×	×	×	○	○		×	○	×	×	×		○	×	×
D-10*	Number of communication infrastructure destroyed or damaged by hazardous events.	×	×	×	×	×	×	○	×	×	○	○	×	○		○	×	△
D-13*	Number of agricultural facilities destroyed or damaged by hazardous events.	○	×	×	×	×	○	○	×	○	○	○	×	○		×	×	×
D-14*	Number of water and sanitation infrastructures destroyed or damaged by hazardous events.	○	×	○	○	○	○	○	○	○	○	○	×	○		○	×	○
D-15*	Number of days financial services have been disrupted due to hazardous events.	×	×	×	×	×	○		×	×	○	×	×	○		×	△	×



ANNEX 2: Results of the feasibility exercise by the summed number of Member States for each proposed indicator

Code	Indicators in the Concept Note	Number of countries Step (3)			Evaluation : Step (4)	
		Feasible	Not sure	Not feasible	Strong/Mixed/Weak	Recommended global indicators
A-1	[Number of [deaths / deceased] and [missing [persons] / presumed dead] due to hazardous events per 100,000.]	16	0	1	Strong	<i>Country specific indicator</i>
A-2	Number of [deaths / deceased] due to hazardous events.	17	0	0	Strong	<b>Global indicator 1</b> Number of death due to hazardous events.
A-3	Number of [missing [persons] / presumed dead] due to hazardous events.	13	2	2	Strong	<b>Global indicator 2</b> Number of missing persons due to hazardous events.
A-1 alt.	[Number of deaths, missing, injured, displaced or [evacuated] due to hazardous events per 100,000.]	7	0	6	Mixed	<i>Country specific indicator</i>

**Target A**

**Target B**

Code	Indicators in the Concept Note	Number of countries: Step (3)			Evaluation : Step (4)	
		Feasible	Not sure	Not feasible	Strong/Mixed/Weak	Recommended global indicators
B-1	[Number of affected people [by hazardous event / due to hazardous events] per 100,000.]	11	0	5	Strong	<b>Global indicator 3</b> Number of affected people by hazardous event
B-2	[Number of injured or ill people due to hazardous events.]	12	2	3	Strong	<b>Global indicator 4</b> Number of injured people due to hazardous events
B-3	[Number of people who left their [places of residence / home][and places where they are] due to hazardous events. ]	9	2	6	Mixed	<i>Country specific indicator</i>
B-4	[Number of people whose [houses / dwellings or homes] were [damaged / partially destroyed] due to hazardous events.]	15	1	0	Strong	<b>Global indicator 5</b> Number of people whose houses were damaged or partially destroyed due to hazardous events.
B-5	[Number of people whose [houses / dwellings or homes] were [totally] destroyed due to hazardous events.]	15	0	0	Strong	<b>Global indicator 6</b> Number of people whose houses were totally destroyed due to hazardous events.
B-6	[Number of people who [received / required] [food relief aid / aid including food [and non-food] and medical aid] [among other things] due to hazardous events.]	6	1	6	Mixed	<i>Country specific indicator</i>

B-7	[Number of people whose livelihoods were disrupted, destroyed or lost due to hazardous events.]	4	1	11	Weak	Country specific indicator
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### Target C

Code	Indicators in the Concept Note	Number of countries : Step (3)			Evaluation : Step (4)	
		Feasible	Not sure	Not feasible	Strong/Mixed/Weak	Recommended global indicators
C-1*	[Direct economic loss due to hazardous events [in relation to global gross domestic product.]]	6	0	10	Weak	Country specific indicator
C-2*	Direct agricultural loss due to hazardous events.	13	3	0	Strong (Note 1)	<b>Global indicator 7</b> Direct agricultural loss due to hazardous events.
C-3*	Direct economic loss due to industrial facilities damaged or destroyed by hazardous events.	6	3	7	Weak	Country specific indicator
C-4*	Direct economic loss due to commercial facilities [and services] damaged or destroyed by hazardous events	6	4	5	Mixed	Country specific indicator
C-5*	[Direct economic loss due to houses damaged by hazardous events]	13	1	2	Strong	<b>Global indicator 8</b> Direct economic loss due to houses damaged by hazardous events
C-6*	[Direct economic loss due to houses destroyed by hazardous events]	12	2	3	Strong	<b>Global indicator 9</b> Direct economic loss due to houses destroyed by hazardous events
C-7*	[Direct economic loss due to damage to [critical infrastructure / public infrastructure] caused by hazardous events.]	13	1	3	Strong	<b>Global indicator 10</b> Direct economic loss due to damage to critical infrastructure caused by hazardous events
C-8*	[Direct economic loss due to cultural heritage damaged or destroyed by hazardous events.]	5	2	8	Weak	Country specific indicator
C-9*	[Direct economic loss due to environment degraded by hazardous events.]	3	2	10	Weak	Country specific indicator
C-10*	[Financial transfer and access to insurance.]	1	2	10	Weak	Country specific indicator
C-11*	[Direct economic loss due to disruptions to basic services.]	1	2	10	Weak	Country specific indicator
C-12*	[Direct economic loss due to services sectors (such as transportation, tourism, finance) caused by hazardous events.]	3	3	11	Weak	Country specific indicator

(Note 1) It has to be coordinated with FAO.

## Target D

Code	Indicators in the Concept Note	Number of countries : Step (3)			Evaluation: Step (4)	
		Feasible	Not sure	Not feasible	Strong/Mixed/Weak	Recommended global indicator
D-1*	Damage to critical infrastructure due to hazardous events.	6	1	8	Weak	<i>Country specific indicator</i>
D-1 bis*	[Number of electricity plants and transmission towers destroyed or damaged by hazardous events.]	5	3	6	Mixed	<i>Country specific indicator</i>
D-2*	[Number / percentage] of health facilities [including mental health services] destroyed or damaged by hazardous events.	9	4	3	Strong	<b>Global indicator 11</b> Number of health facilities destroyed or damaged by hazardous events.
D-3*	[Number / percentage] of educational facilities destroyed or damaged by hazardous events.	9	3	2	Strong	<b>Global indicator 12</b> Number of educational facilities destroyed or damaged by hazardous events.
D-4*	[Number / percentage] of [major] transportation [units and] infrastructures destroyed or damaged by hazardous events.	9	2	3	Strong	<b>Global indicator 13</b> Number of transportation infrastructures destroyed or damaged by hazardous events.
D-5*	[Number / Length / Percentage] of [time / days / person days] basic services have been disrupted due to hazardous events.	8	1	6	Mixed	<i>Country specific indicator</i>
D-7*	[Number / percentage] of security service structures destroyed or damaged by hazardous events.	2	0	12	Weak	<i>Country specific indicator</i>
D-8*	[Number / percentage] of tourist infrastructure facilities destroyed or damaged by hazardous events.	4	0	11	Weak	<i>Country specific indicator</i>
D-10*	Number of communication infrastructure destroyed or damaged by hazardous events.	5	0	10	Weak	<i>Country specific indicator</i>
D-13*	Number of agricultural facilities destroyed or damaged by hazardous events.	8	0	8	Weak	<i>Country specific indicator</i>
D-14*	Number of water and sanitation infrastructures destroyed or damaged by hazardous events.	13	0	3	Strong	<b>Global indicator 14</b> Number of water and sanitation infrastructures destroyed or damaged by hazardous events.
D-15*	Number of days financial services have been disrupted due to hazardous events.	3	1	10	Weak	<i>Country specific indicator</i>

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