Working Paper

Disaster Risk Reduction Expenditure Satellite Account

Issue Paper

Contents

Summary

The purpose of this paper is twofold:

- to review documents developed in relation to disaster risk reduction satellite accounting, and
- to identify and develop issues contributing to development of a satellite account for disaster risk reduction expenditure.

The proposed satellite account will be developed in conjunction with development of a common statistical framework for disaster related statistics.

It is expected that the common statistical framework will:

- Provide guidance on the production, dissemination, and use of disaster related statistics to inform national policies and plans. The framework should enable comparison over time and between administrative regions (including nations).
- Facilitate national reporting to internationally agreed development goals and agendas as they relate to disaster risk reduction. Recommendations in the framework are expected to enable compilation of statistics consistent with agreed definitions and existing guidelines for international reporting.[1]

All expenditures undertaken in a nation in a period, including disaster risk reduction expenditures, are recorded in the nations' national accounts. National accounts are compiled and presented according to the guidelines provided by the System of National Accounts[2](SNA). The SNA is used by all National Statistics Offices (NSOs) to compile and present national economic statistics.

The SNA also provides guidance for developing 'satellite accounts' linked to but separate from the core national accounts. Satellite accounts provide a framework that enables attention to be focussed on a certain field or aspect of economic and social life in the context of national accounts. Common examples are satellite accounts for the environment, unpaid household work, or tourism. By extension, it is possible to develop satellite accounts for disaster risk reduction expenditure.

An SNA based disaster risk reduction expenditure satellite account will use existing guidelines, consistent with internationally agreed definitions and reporting standards, to compile disaster-relevant expenditures. Over a longer period, the satellite accounts can build up time series of information to enable changes in disaster related expenditure patterns to be revealed.

Much of the discussion in this paper centers on issues pertinent to extending SNA recommendations for satellite accounts to disaster risk reduction statistics. As such, the SNA is extensively cited.

Throughout this paper, issues are highlighted that will need to be considered and resolved prior to development of a disaster risk reduction expenditure satellite account.

[1] Towards a common statistical framework on disaster-related statistics, IAEG Core Group for consideration, May 2021

[2] System of National Accounts, 2008, European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank,

Consolidated list of issues

Issues identified within the full text of the document are listed below for ease of reference.

The role of NSOs and the NSS

- DRRE satellite accounts should be developed in collaboration with NSOs and the NSS.
- Can NSOs be persuaded to embrace DRRE satellite accounts as part of their routine work?
- Will resources be made available to NSOs to enable development of disaster related expenditure statistics?
- The problem may not always be resources, but rather why DRRE satellite accounts should be produced. Articulation of the importance of DRREs will be necessary.

Scope

- Define the scope of hazardous events and disasters (HED) be counted in the proposed satellite account.
- Define the scope of DRRE satellite accounts.

Terminology

- Should the term 'disaster risk reduction expenditure' be replaced by 'disaster risk management expenditure'?
- Should the proposed satellite account be for expenditures on 'disaster risk reduction,' or 'disaster risk management'?
- A clear distinction between 'disaster risk management' and 'disaster impact management' is needed.

Identifying DRRE

- How can DRRE be separated from 'other' incomes and expenditures in transactions?

International agreements

- What international agreements are in place that call for disaster related accounts?

Classifying expenditures

- Identify DRRE related outlays within each of the functional classifications.
- Develop appropriate classifications to identify DRRE transactions.

Data

- Gathering appropriate data for these disaster related transactions will require targeted data collections.

Coverage

- Will a DRRE satellite account be snapshot of DRR activity in a specific period, or will the satellite account build a time series of DRR activity over consecutive periods?
- Consistent, comprehensive classifications will need to be maintained.

1. Review existing work on Disaster Risk Reduction Expenditure satellite accounting

Documents reviewed:

A. Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction[3]
B. Disaster Related Statistics Framework[4]
C. Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters[5]
D. Hazard, Definition and Classification Review, Technical Report[6]

Review of these documents centers on discussion of issues surrounding development of expenditure satellite accounts.

A. Sendai Framework (SF)

A disaster is: "A serious disruption of the functioning of a community or a society due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts."[7]

The SF provides explanatory guidance and describes the scope of reporting requirements for inputs into indicators and aggregated analyses of disaster impacts at the national and international level. Four priorities for action are identified:

1. Understanding disaster risk.
2. Strengthening disaster risk governance to manage disaster risk.
3. Investing in disaster risk reduction for resilience; and
4. Enhancing disaster preparedness for effective response and to "build back better" in recovery, rehabilitation, and reconstruction.

[3] Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction – Collection of Technical Notes on Data and Methodology, UN Office for Disaster Risk Reduction (UNISDR), 2017
[4] Disaster Related Statistics Framework, Expert Group on Disaster-related Statistics in Asia and the Pacific, UN Economic and Social Commission for Asia and the Pacific (ESCAP), 2018
[5] Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters, United Nations Economic Commission for Europe (ECE), 2019
[6] Hazard, Definition and Classification Review, Technical Report, United Nations Office for Disaster Risk Reduction (UNDRR), 2020
[7] The Sendai Framework Monitor and associated Technical Guidance (UNISDR, 2017), adopted by the UN General Assembly via the Report of the OEIWG (2016)

Strengthening disaster risk governance (2) and investing in disaster risk reduction (3) require expenditures that can be brought together in a Disaster Risk Reduction Expenditure (DRRE) satellite account.

The SF provides technical guidance to:

- Develop minimum standards and metadata for disaster-related data, statistics, and analysis with the engagement of national government focal points, national disaster risk reduction offices, national statistical offices, the Department of Economic and Social Affairs and other relevant partners.

- Develop methodologies for the measurement of indicators and the processing of statistical data with relevant technical partners.

Targets identified in Sendai included developing technical notes and data methodology across seven defined areas:

1. Estimating global disaster mortality
2. Number of effected people
3. Estimate direct economic loss
4. Estimate damages to infrastructure and disruptions to basic services
5. Estimate the global progress in the number of countries with national and local DRR strategies
6. Estimate the enhancement of international cooperation to developing countries to complement national actions
7. Estimate the availability of and access to multi-hazard early warning systems and disaster risk information and assessments

Target 4 provides guidance for estimating damage to critical infrastructure, using compound indicators (number by type of critical infrastructure damaged). However, it did not address disaster risk reduction expenditure. Sendai targets do not specifically address potential sources and methods for developing disaster risk reduction expenditure satellite accounts.

B. Disaster Related Statistics Framework (DRSF)

While the focus of the Sendai Framework is in 'disaster,' the Disaster Related Statistics Framework emphasises 'disaster risk.' Disaster risk "is the potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period, determined probabilistically as a function of hazard, exposure, vulnerability and capacity." (UNISDR, 2017), and "The focus in the DRSF is to clarify the role of official statistics and how they can be made as accessible as possible for risk assessments."[8]

The DRSF further noted "Whereas core concepts and indicators for disaster risk reduction (DRR) for international monitoring have been defined in the Sendai Framework and SDGs, there is a need to translate the agreed concepts and definitions into specific instructions and technical recommendations for production and dissemination of statistics."

The range of disaster impact statistics proposed in the DRSF includes:

[8] DRSF 3.1

1. Human impacts
2. Demographic and social disaggregation
3. Deaths or missing persons
4. Injured and ill
5. Displacement
6. Impacts to livelihood
7. Material impacts
8. Impacts to agriculture
9. Economic loss
10. Economic loss and poverty
11. Disruptions to basic services

Economic values (costs) can be attributed to several of these impacts – livelihood, material impacts, agriculture, economic loss, and disruptions to basic services. Economic costs associated with direct impacts of disasters - preparation, mitigation, and replacement are already incorporated explicitly within a countries' national accounts (SNA) as productive activities. In principle, values for the direct impacts to assets, valued in terms of losses to value of the asset base, are also already included, in this case explicitly, in the SNA, through a special recording called catastrophic losses. These losses are represented as a special type of change, other changes in volume, to the national balance sheet for physical assets. However, many countries do not produce national balance sheets as part of their national accounts. Even fewer countries produce accounts for 'other changes in the volume of assets.' So, while in principle, the SNA provides guidance for recording losses to a country's asset base resulting from disasters, in practice it is unlikely that most countries could record such losses in their national accounts.

Indirect impacts will implicitly affect gross domestic product (GDP) in the year of the disaster (and often subsequent years) but may be in the form of foregone income rather than direct costs or asset losses so will not be recorded in the accounts. Indirect income losses may occur during the accounting period, for example lost income in industries that rely on intermediate inputs from directly impacted industries to produce their output. Many indirect impacts will extend beyond the disaster accounting period.

A key point to note is that while disasters, and their impacts, may occur randomly and across overlapping periods of time, disaster risk reduction (and expenditure on DRR) is a continuous activity reported in the national accounts for discrete time periods. If specific disasters impact across multiple reporting periods it will not be feasible to match those impacts with specific disaster risk reduction expenditure in a national accounting framework that records transactions in a specific period. The total value of both direct and indirect disaster effects on GDP are thus uncertain within the national accounts.

The SF Technical Guidance recommends that for large-scale and slow-onset disasters with impacts accumulating over time, the "the data should be reported as the damage or disruptions in the year when it occurred, without waiting for the complete response phase or disaster to cease." [9] This recommendation accords with SNA treatment.

Disaster risk reduction activity

[9] Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction, p103

Disaster risk reduction related (DRR) activities are activities that boost coping capacities of society where a disaster occurs or may occur. The costs of investment in DRR are expenditures or transfers for activities with a DRR purpose. A main area of interest about disaster risk reduction activity statistics is national DRR expenditure. The size of this expenditure can be compared with other activities and with total GDP.[10]

The DRSF proposes creating sample Disaster Risk Reduction Expenditure and Transfers (DRRE) tables, to be developed as special functional accounts or 'satellite accounts' of the national accounts, following, as much as possible, the standard practices of the SNA.[11] The Accounts proposed in DRSF are shown in Annex 1 and 2 to this paper:

1. Production expenditure account (current plus investment) by characteristic activities
2. Transfers Expenditure Account, & DRR National Expenditure

The DRRE satellite accounting tables were developed to align with the standards and formats of the SNA. The information in these tables is, theoretically, extracted from the broader aggregated national accounting framework for the whole economy. In principle, the DRRE tables described could be derived from the same data sources that are used to compile the national accounts, but this will depend on being able to identify and isolate that part of a range of economic activities with a primary disaster risk reduction purpose.

For convenience, a portion of the suggested Production Expenditure Account, and Transfers Expenditure Account, are reproduced in Boxes 1 and 2, below.

Box 1 DRSF Production expenditure account by characteristic activities (sample)

		Providers of disaster risk reduction services (SNA institutional sectors)								
				General government (incl. non-profit institutions controlled by governments and social security)				Households		
		Non-financial corporations	Financial corporations	Central government	State government	Local government	Subtotal General government	Households owners of unincorporated enterprises	Employees and recipients of property and transfer incomes	Subt House
Activity expenditure account (current plus investment)										
1	**Disaster Risk Prevention**									
1.1	Risk prevention in advance of hazardous event									
1.2	Risk prevention in or after hazardous event									
2	**Disaster Risk Mitigation**									
2.1	Structural measures									
2.2	Non-structural measures									
2.3	Land-use planning									
2.4	Early warning systems management									
3	**Disaster Management**									
3.1	Preparedness									
3.2	Emergency management									
3.3	Other disaster responses									
3.4	Emergency supply of commodities									
4	**Disaster Recovery**									
4.1	Relocation									
4.2	Rehabilitation									
4.3	Reconstruction									

Box 1 shows a sample of the disaster related data needed to compile this account - current plus investment expenditure by institutional sector (and sub-sector) by activity type (disaster prevention, mitigation, management, and recovery). The account is incredibly detailed, each disaster activity

[10] DRSF 5.1, 5.2
[11] DRSF 7.30

type is further split into specific types of activity, risk prevention in advance, risk prevention in or after events, etc. Expenditure by purpose data at this level of disaggregation is not collected by NSOs such that would allow production of disaster related accounts at the level proposed by DRSF.

It may prove possible for additional data to be collected by NSOs to identify expenditures on risk reduction goods and services by the providers and consumers of these goods and services. However, it would prove difficult for most NSOs to develop the information reporting and recording systems proposed by DRSF within their existing resources.

Box 2 shows a sample of the transfers account proposed in the DRSF.

Much of the information needed to complete this account is likely to be already available within the national statistical system. Government Finance Statistics, Balance of Payments accounts, and accounts for financial corporations are integral to the national accounts and disaster related transfers are implicit within the transactions recorded in these accounts. However, published data is unlikely to identify transfers by purpose in sufficient detail to pinpoint disaster related payments (for example, see Annex 3 Government Finance Statistics, Australia). Sufficiently detailed information on disaster expenditure transfers should be available to NSOs on request. Herein lies the challenge.

Box 2 Transfers Expenditure Account (sample)

		Non-financial corporations	Financial corporations
Transfers expenditure account			
Total	**Transfers Paid (6.1)**		
6.1	**Disaster risk reduction characteristic transfers paid**		
6.1.1	Internal transfers between public government services (current or in capital)		
6.1.2	Risk transfers, insurance premiums and indemnities		
6.1.3	Disaster related international transfers (current or in capital)		
6.1.4	Public transfers to private (subsidies, transfers in capital…)		
6.1.5	Private transfers (taxes, voluntary…)		
6.1.6	Other transfers		
Total	**Transfers Received (6.2)**		
6.2	**Disaster risk reduction characteristic transfers received**		

In summary, the accounts proposed in DRSF provide a useful starting point for DRRE satellite accounts but data items in the Production Expenditure Account are not synchronized with NSO or National Statistical System (NSS) data collection systems.

ISSUE: DRRE satellite accounts should be developed in collaboration with NSOs and the NSS.

C. Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters (RROS)

This publication aims to clarify the role of NSOs and other members of the NSS in providing information related to hazardous events and disasters. It also aims to identify practical steps needed

for these organisations, in coordination with Disaster Risk Management Agencies (DRMAs) to better support disaster risk management efforts (RROS).

The leading roles that NSOs and the NSS would ideally assume in providing statistics relating to Hazardous Events and Disasters (HED) that conform with the recommendations of the Sendai Framework are described in this publication. RROS acknowledges that there is a long way to go before this can happen. Strengths that NSOs can bring to HED related information are noted.

> 'NSOs are often seen solely as providers of statistics. However, they also have other unique strengths and competencies that would be useful in measuring hazardous events and disasters and their impacts. As coordinators of NSS, NSOs have a strong network and experience in coordinating multiple information producers, including ensuring the use of common standards, classifications, and terminology. They have a mandate to provide information based on professional independence, strict quality criteria, use of sound, transparent, and commonly agreed methodologies, and a commitment to accessibility. NSOs also have established procedures for communicating and disseminating information and are well suited to providing a platform for regular dissemination of HED-related information.'[12]

The main challenges facing the NSS increased involvement in HED statistics were also noted, including:

a) Although NSS has information at its disposal that can be used in disaster risk management, this information is often not sufficiently used. NSOs are often not aware of the related requirements, and DRMAs are frequently not aware that this information is available.
b) The NSS is often not involved in producing HED-related statistics.
c) Roles of NSOs and other organisations within NSS related to HED are not clear. HED-related information needs are complex. Addressing these needs typically involves different agencies. While some needs can be met by NSS, others require quite distinct types of information which cannot be provided by official statistics. Therefore, it is important to clarify the roles of NSOs and the other organisations within NSS in providing HED-related information.
d) Official statistics are not fit for purpose. Official statistics are often not fit for measuring HED-related issues. For example, the time lag may be too long, or the required spatial disaggregation may not be available. Special approaches are needed to provide more timely statistics and to deal with confidentiality issues in cases of emergency. As production of these types of statistics often is of low priority, there is lack of funding to make existing official statistics more suitable for disaster risk management, and to develop new statistics in this area.

Of the challenges noted, that official statistics are not fit for HED purpose will be the most difficult to overcome. Official statistics are collected to meet defined national and international reporting obligations in respect of the economy and society. Imposing additional national statistical responsibilities so they are fit for HED purpose will require careful negotiation with NSOs and redefined legislative requirements.

Official statistics usually provide information on events or transactions occurring in a period (3 months, a year, or 5 years), depending on the data needed. The information is usually collected after that accounting period has ended.

[12] Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters, 1.3.d

An important challenge associated with data collection for the disaster related statistics is the issue of the temporal aspects for attribution and cut-off for data collection. UNISDR recommends countries report disaster data by event, so that complementary analysis can be undertaken to obtain trends and patterns in which such catastrophic events can be included or excluded. Impacts may occur close to the time of initial onset of the event, in which case finalizing data collection and declaring the data collected as final is straightforward. However, disaster related impacts will often extend over several periods such that collecting final data extends beyond the period in which the disaster occurred.

Official statistics are compiled and presented in agreed frameworks such as the SNA that facilitate national interest as well as international interest in key aspects of the economy and society. In the absence of a commonly agreed framework for production of HED (DRRE) statistics, NSOs will regard development of disaster related statistics as a low priority. Prioritisation of disaster related statistics will only follow development of an agreed framework, as well as access to appropriate funding for development of the statistics.

In summary, RROS publication raises critical issues to be resolved in developing disaster related statistics, especially regarding the role of the NSS, it does not provide guidance for the development of risk reduction expenditure satellite accounts

ISSUE: Will resources be made available to NSOs to enable development of disaster related expenditure statistics?

D. Hazard, Definition and Classification Review, Technical Report

'In May 2019, the UN Office for Disaster Risk Reduction (UNDRR) and the International Science Council jointly established a technical working group to identify the full scope of hazards relevant to the Sendai Framework as a basis for countries to review and strengthen their risk reduction policies and operational risk management practices...

As a scientific undertaking, the technical working group was guided by the definition of 'hazard' adopted by the United Nations General Assembly in February 2017; namely, "a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation". This definition covers a broader scope of hazards than has traditionally been the case in the field of disaster risk reduction and expands the definition of hazard to include processes and activities.'[13]

The implication of this report and of *Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters*, is that a clear definition of 'disaster' in relation to 'hazard' and 'hazardous events' needs to be agreed so that it can be integrated into development of a disaster risk reduction expenditure satellite account. Questions to be resolved for example include:

Is global warming a disaster in scope of the satellite account?
Is COVID-19 a disaster in scope of the satellite account?

[13] Hazard, Definition and Classification Review, Technical Report, United Nations Office for Disaster Risk Reduction (UNDRR), 2020

ISSUE: Define the scope of hazardous events and disasters (HED) be counted in the proposed satellite account.

2. Defining Disaster Risk Reduction Expenditure

Introduction

As noted earlier, the Sendai Framework defines a disaster as *'a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.'* (UNGA, 2016).

A disaster risk reduction expenditure satellite account will provide information to address some, but not all, economic aspects of disasters.

The Disaster-Related Statistics Framework (DRSF) notes: *'Basic requirements for the international indicator monitoring systems include comparability of concepts and methods for measurement across disaster occurrences. Thus, these systems depend heavily on coordination and consistency at the national and local levels, which can be accomplished via the adoption and application of a commonly agreed measurement framework.'*[14]

An expenditure satellite account will provide an agreed scaffold for specific HED economic statistics within that commonly agreed measurement framework.

Expenditure and other disaster risk reduction data

The second purpose of this Issues Paper is to examine issues related to developing a Disaster Risk Reduction Expenditure (DRRE) satellite account. DRRE is but one aspect of an overall disaster statistics framework that will encompass social and physical, as well as economic measures. Disaster-related statistics concerning social and physical impacts on populations, the natural and built environments, are excluded from consideration in this paper. It is also important to note that a DRRE satellite account is designed to measure expenditures incurred in relation to disaster risk reduction, not all disaster related expenditures. It is not designed to measure production lost or incomes foregone because of disasters. Nor would, for example, expenditures related to recovery of missing persons during an active disaster be covered. These issues may be addressed in other statistics within the overall disaster framework.

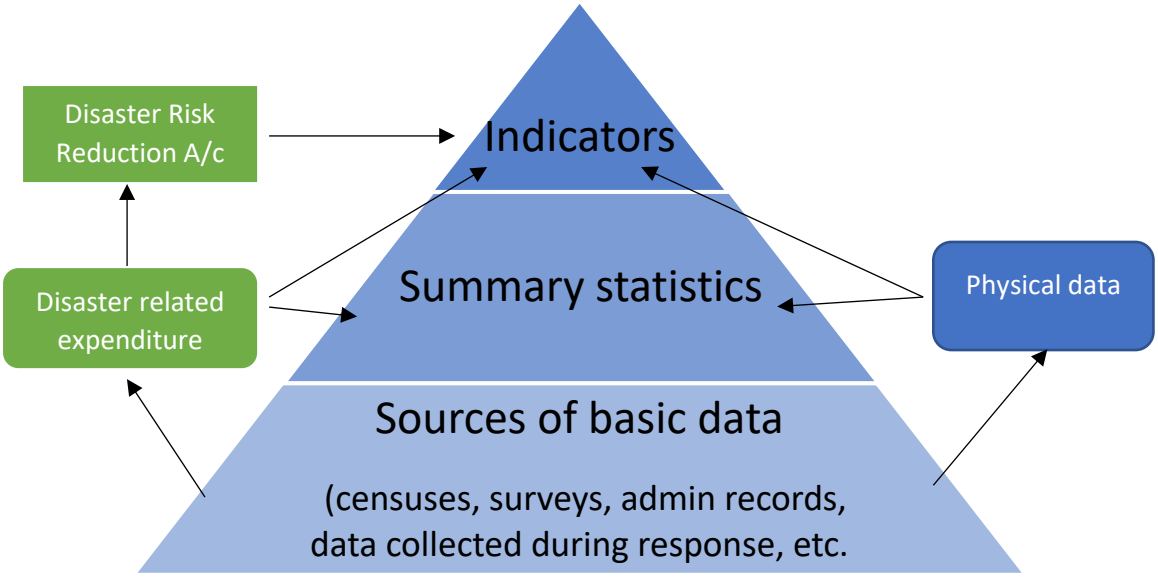
The link between sources of basic data, disaster related expenditures, summary statistics, and indicators – modelled on figure 1.1 from DRSF, is illustrated in Figure 1., below. The purpose of this representation is to illustrate that expenditure data is different from other basic (physical) data. Economic data (expenditure) is principally collected by NSOs but will likely also be collected by disaster risk management agencies. Physical data will be collected by a broad range of agencies connected to disaster risk management, including NSOs. As such, the approach to collecting and compiling expenditure data is necessarily different to that of compiling physical data.

[14] Disaster Related Statistics Framework, Demands for a statistical framework

Information from a DRRE satellite account will provide condensed, organized monetary information that will function principally as a set of indicators to managers, policy makers, and the international community, rather than as summary statistics.

A specific measurement framework is thus needed to compile summary statistics from expenditure data.

Figure 1: Information pyramid for disaster risk reduction statistics



Source: Adapted from DRRF

Defining 'disaster risk reduction expenditure'

What is 'disaster risk reduction'? The Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction (OEIWG) notes that "disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk…"[15] However, 'there is no universally agreed definition of 'disaster risk reduction' and this presents a problem for the formulation of a framework.'[16]

Scope

In the context of this paper, the design of a DRRE satellite account firstly needs to address the question: What is meant by 'disaster risk reduction expenditure'? Or, to put the issue into national accounts terminology, 'what is the scope of disaster risk reduction expenditure'? 'Scope' has specific meaning in national accounting and subsequently in satellite accounting.

[15] OEIWG, UN 2016

[16] An Operational Framework for Mainstreaming Disaster Risk Reduction, Thomas Mitchell, Benfield Hazard Research Centre Disaster Studies Working Paper 8, November 2003

For example, the System of Environmental-Economic Accounts[17] (SEEA), notes: *'The scope of environmental activities encompasses those economic activities whose primary purpose is to reduce or eliminate pressures on the environment or to make more efficient use of natural resources.'*[18]

The SEEA Central Framework is a satellite account based on agreed concepts, definitions, classifications, and accounting rules specified in the SNA. Both the SNA and SEEA enable information to be organized into tables and accounts in an integrated and conceptually coherent manner. DRRE transactions are implicitly recorded within the core national accounts framework though many cannot be easily identified owing to the structure of the accounts, or the types of classifications used.

Defining 'scope' for a DRRE satellite account

Adapting and paraphrasing the SEEA definition and scope of environmental activities to reflect a satellite accounting approach to DRRE, the definition and scope of DRRE could read something along the following lines:

> *DRRE satellite accounts record transactions in monetary terms between economic units that may be considered DRRE related. These transactions concern activity undertaken to preserve and protect society, the economy, and the environment from disaster.*

ISSUE: Define the scope of DRRE satellite accounts

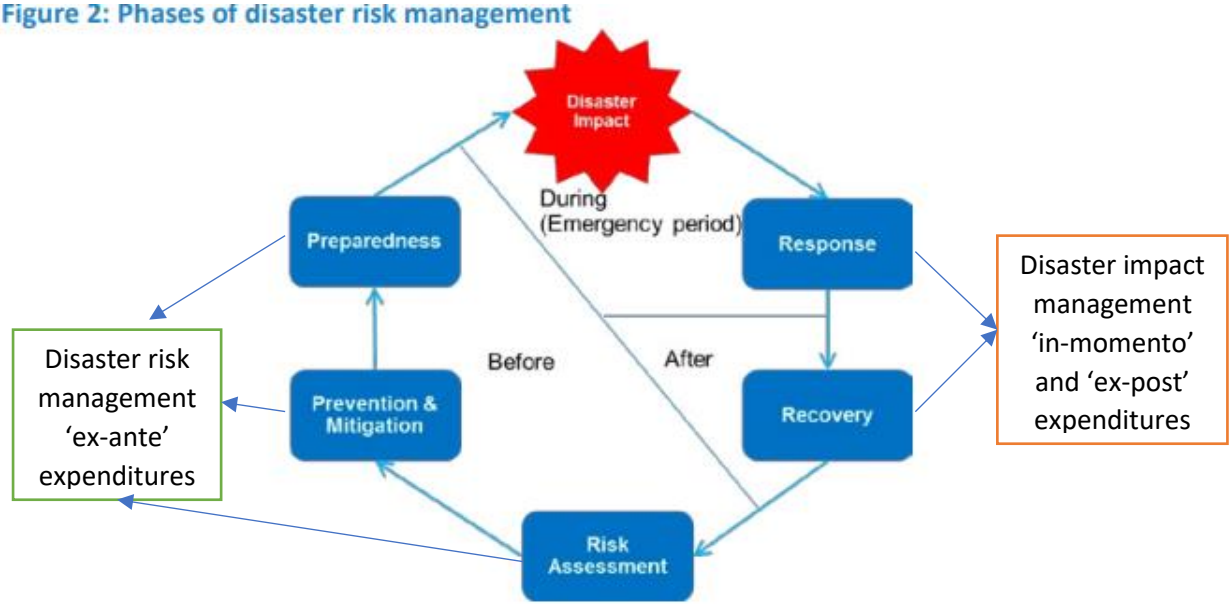
Disaster risk management vs. disaster risk reduction

Figure 2, Phases of disaster risk management (after ESCAP 2018), illustrates five distinct phases of disaster management, which have been further identified as either disaster risk management phases, or disaster impact management phases.

The three phases noted before a disaster impact, risk assessment, prevention and mitigation, and preparedness are clearly associated with disaster risk reduction. Expenditures prior to the disaster impact ('ex-ante') are disaster risk reduction expenditures, so are within the proposed scope of a DRRE satellite account. An alternative term to consider rather than 'disaster risk reduction' could be 'disaster risk management,' which perhaps more clearly reflects the 'ex-ante' purpose of these expenditures.

[17] System of Environmental-Economic Accounting 2012 - Central Framework, United Nations, 2014
[18] SEEA 4.11

Figure 2: Phases of disaster risk management



Source: ESCAP Expert Group, 2018

Disaster response expenditures, incurred during the disaster emergency period ('in-momento'), are expenditures incurred to manage the impacts of disasters. Disaster recovery ('ex-post') expenditure incurred after a disaster impact is undertaken to manage, or ideally, to reduce the scale of disaster impacts. In-momento and ex-post expenditures are not related to risk management, but rather to disaster management. Disaster management has a wider scope, it is the organization, planning and application of measures preparing for, responding to, and recovering from disasters.[19] In-momento and ex-post expenditures are outside the proposed scope of a DRRE satellite account.

UNISDR, 2017, defines of disaster risk reduction as 'Efforts at preventing new, reducing existing disaster risk, and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.'[20]

This definition leads to some ambiguity in defining the scope of a DRRE satellite account and raises the question, 'should the proposed satellite account be for disaster risk reduction, or for disaster risk management?' Though both terms are used interchangeably disaster risk management can be seen as the activity and disaster risk reduction as the outcome of this activity.[21]

Disaster risk management is a suite of activities (hazard monitoring, vulnerability assessments, impact assessments, etc.) that, if done well, will combine to result in a reduction of risk of impacts from any given hazard. For example, we undertake a series of activities related to management of earthquake risk that we hope will reduce the impacts associated with an actual earthquake if one occurs. But it is not necessarily the case that risk *management* will result in risk *reduction*. Sometimes, because of incompetence, bad luck, unknowns, etc., risks will not be reduced despite management efforts, and impacts will be as great as they would have been in the absence of risk management.

[19] OIEWG, UN 2016
[20] UNISDR, 2017
[21] Robert Smith, Midsummer Analytics, conversation 2021

Though this issue remains unresolved at present, for convenience 'disaster risk reduction' expenditure is assumed to be the same as 'disaster risk management' expenditure, that is, the ex-ante expenditures shown in Figure 2.

Disaster impact management expenditures, in momento and ex post expenditures, remain outside the scope of a DRRE (either a risk reduction or risk management) satellite account.

ISSUE: Should the term 'disaster risk reduction expenditure' be replaced by 'disaster risk management expenditure'?

ISSUE: Should the proposed satellite account be for expenditures on 'disaster risk reduction,' or 'disaster risk management'?

ISSUE: A clear distinction between 'disaster risk management' and 'disaster impact management' is needed.

3. Disaster Risk Reduction Expenditure Satellite Account

Economic statistics and the System of National Accounts (SNA)

Each country's economic statistics are presented according to the recommendations of the SNA. The SNA is the internationally agreed standard set of recommendations on how to compile measures of economic activity in accordance with strict accounting conventions based on economic principles. The recommendations are expressed in terms of a set of concepts, definitions, classifications, and accounting rules that comprise the internationally agreed standard for measuring such items as gross domestic product (GDP), the most frequently quoted indicator of economic performance. (SNA 1.1) The framework of the SNA provides accounts that are:

- Comprehensive, in that all designated activities and the consequences for all agents in an economy are covered.
- Consistent, because identical values are used to establish the consequences of a single action on all parties concerned using the same accounting rules.
- Integrated, in that all the consequences of a single action by one agent are necessarily reflected in the resulting accounts. (SNA 1.1)

There are of course certain limitations as to what may be accommodated directly by the SNA central framework against what a user may want, which has led to the development of 'satellite accounts.'

Satellite accounts

A range of issues associated with development of a DRRE satellite account are discussed below.

1. What is a satellite account?
2. Why have a DRRE satellite account?
3. Scoping a DRRE satellite account
4. DRRE transactions and transactions in kind
5. An industry, product, or sector approach?
6. Temporal aspect of a DRRE satellite account

1. What is a satellite account?

Satellite Account is a term developed by the United Nations to refer to an extension of the SNA (hence, a "satellite" of the SNA) for example, to measure the size of 'industries' such as tourism, that are not defined as industries in national accounts. See Annex 4, ISIC Broad Industry Classification.[22]

Another well-known satellite account of the SNA is the System of Environmental-Economic Accounting[23], a multipurpose conceptual framework for understanding the interactions between the environment and the economy. By providing internationally agreed concepts and definitions on environmental-economic accounting, it is an invaluable tool for compiling integrated statistics, deriving coherent and comparable indicators, and measuring progress towards sustainable development goals.

[22] International Standard Industrial Classification of all Economic Activities, Revision 4, United Nations, 2008
[23] The System of Environmental-Economic Accounting 2012—Central Framework

Satellite accounts provide a framework linked to the central accounts that enables attention to be focussed on a certain field or aspect of economic and social life in the context of national accounts. Tourism, for example, is an amalgam of industries such as transportation, accommodation, food and beverage services, recreation and entertainment, and travel agencies. Similarly, disaster risk reduction is an amalgam of targeted expenditures on different activities from industries such as manufacturing, construction, transport and storage, and public administration.

The SNA describes two types of satellite account. The first "involves some rearrangement of central classifications and the possible introduction of complementary elements. Such satellite accounts mostly cover accounts specific to given fields such as education, tourism and environmental protection expenditures and may be seen as an extension of the key sector accounts. They may involve differences from the central system, such as an alternative treatment of ancillary activities, but they do not change the underlying concepts of the SNA in a fundamental way… Many elements shown in a satellite account are invisible in the central accounts. Either they are explicitly estimated in the making of the central accounts, but they are merged for presentation in more aggregated figures, or they are only implicit components of transactions which are estimated globally." (SNA 29.5)

A satellite account of this type is a 'functionally oriented satellite account.' Functionally oriented satellite accounts concentrate on one field to give a full picture of it, in a systematic way, by establishing a specific accounting framework, articulated with the central framework. The satellite framework does not aim to cover all economic life; it is a self-consistent framework in a partial domain.

"The second type of satellite analysis is mainly based on concepts that are alternatives to those of the SNA. These include a different production boundary, an enlarged concept of consumption or capital formation, an extension of the scope of assets, etc. Often, several alternative concepts may be used at the same time. This second type of analysis may involve, like the first, changes in classifications, but in the second type the main emphasis is on the alternative concepts." (SNA 29.6)

Development of a disaster risk reduction satellite account is consistent with the principles of the satellite framework approach. Expenditure related to DRR can be collated and compiled in a satellite account that will link DRRE to core SNA concepts. The extent of a DRRE satellite account should be responsive to the needs and resources of the agencies compiling them, NSOs, and the users of the accounts, Disaster Management Agencies and to meet international obligations. A fully articulated DRRE satellite account would provide linkages to key economic aggregates such as national expenditures on capital formation, and expenditures by purpose by general government and other sectors. However, costs associated with producing full satellite accounts may be prohibitive in which case a truncated satellite account could be sufficient to meet initial requirements.

A DRRE satellite account will be a functionally oriented satellite account as described above and will not require change to the SNA production boundary, which is quite specific, nor does it require changed concepts of consumption or capital formation. It does however require identification and quantification of specific functions - expenditures associated with disaster risk management, which are not separately identified in the core accounts.

The satellite account aims to answer the questions 'how much is spent on disaster risk reduction?' and 'who spends the money?' and 'what is the money spent on?' These questions are not easy to

answer. To find answers to these questions, we must define (i) goods and services specific to the field, (ii) activities for which capital formation is required, and (iii) transfers specific to the field.[24]

As an example of the complexity of this question, consider 'Building Back Better.' Building Back Better (BBB) is a strategy aimed at reducing the risk to the people of nations and communities in the wake of future disasters and shocks. The BBB approach integrates disaster risk reduction measures into the restoration of physical infrastructure, social systems and shelter, and the revitalization of livelihoods, economies, and the environment. (Wikipedia)

'The principle of Build Back Better is generally understood to use the disaster as a trigger to create more resilient nations and societies than before. This was through the implementation of well-balanced disaster risk reduction measures, including physical restoration of infrastructure, revitalization of livelihood and economy/industry, and the restoration of local culture and environment'[25] The BBB principle was adopted by UN member states as one of four priorities in the Sendai Framework for disaster recovery, risk reduction and sustainable development.

Building Back Better – an example

During reconstruction from the earthquake of Central Java in March 2006, the Japan International Cooperation Agency Reconstruction team used the BBB concept to rebuild houses. They used earthquake-resistant technology and constructed more than 100,000 strengthened houses within two years under the leadership of Java Special Province. (Wikipedia)

How would the expenditure on construction of these dwellings and the services they provide be recorded in a DRRE satellite account?

In this example, part of the value (cost) of capital formation in constructing these homes, but not all, can be counted as DRRE. But the major function of a house is to provide housing services, not DRRE services. So, the total value of services provided by the houses will need to be split into DRRE and 'other' services in calculating the value of capital formation on dwellings. Only the DRRE service part of total value would be recorded in the satellite account. The difference between the cost of a standard house and a strengthened house may perhaps be regarded as an indicator of the value of the DRRE service provided.

Similarly, incomes associated with building these houses – the wages of the builders and the operating surplus of businesses that employ them, are not all DRRE incomes. Again, the difference in costs of strengthened and ordinary houses cold be a guide to allocating DRRE incomes.

ISSUE: How can DRRE be separated from 'other' incomes and expenditures in transactions?

[24] After - Lecture Notes, Introduction to Satellite Accounts, SIAP, 2009

[25] Japanese Delegation, Sendai Framework Conference

2. Why have a DRRE satellite account?

'A great strength of the SNA is that its articulation is sufficiently robust that a great deal of flexibility can be applied in its implementation while still remaining integrated, economically complete and internally consistent… Moving away from what is purchased to answer the question of why outlays are incurred adds considerably to the analytical power of the system.' (SNA 29.1)

A DRRE SA, compiled according to the principles outlined in the SNA would allow users of this information to learn, for example, what proportion of capital expenditure on infrastructure, by type, is directed at disaster risk reduction. A fully articulated DRRE satellite account would enable this information to be disaggregated into expenditures by, for example, general government, corporations, and by non-profit institutions serving households. This information could in turn be used to analyse the proportion of capital expenditure on DRR compared to total capital expenditure by type, by institutional sector. Current expenditures and transfers focused on disaster risk management could also be separated from other current expenditures, for example by general government, to quantify government outgoings on DRM as a proportion of total government outgoings.

A DRRE satellite account answers the question proposed in the SNA, 'why are these outlays incurred'?

Information on proportionate expenditure on DRM will help inform debate on adequacy of DRM preparedness in each country that produces a DRRE satellite account. By implication, is such expenditure sufficient to better guard against disaster impacts?

ISSUE: What international agreements are in place that call for disaster related accounts?

3. Scope of a functionally orientated DRRE satellite account

The starting point for a DRRE satellite account is to decide which products are of interest and which are the industries involved in their production. The resources devoted to the production of the items include not only current costs but also fixed capital used in production. (SNA 29.54)

A first step is to define the activities, goods and services that have a disaster risk reduction purpose. That is, those that have as their primary purpose, to reduce or eliminate disaster risks. The second step involves reorganising information in scope of the sequence of economic accounts to enable clear identification of the transactions associated with DRR activities and DRR goods and services.

The components of uses or national expenditure associated with DRRE are as follows: (SNA 29.64)

a) Consumption of specific goods and services,
b) Capital formation in specific goods and services,
c) Fixed capital formation of characteristic activities in non-specific products,
d) Specific current transfers,
e) Specific capital transfers.

One approach to collecting information on these components is the use of functional classifications of expenditure and outlays already used by NSOs. These functional classifications are central to the SNA and provide a useful starting point for satellite accounts. The SNA uses special classifications to analyse consumption, or more generally outlays, by different sectors according to the purpose for

which the expenditure is undertaken. Such classifications are referred to as functional classifications. The classifications concerned are:

a) Classification Of Individual Consumption by Purpose (COICOP).
b) Classification Of the Functions Of Government (COFOG).
c) Classification Of the Purposes of Non-profit Institutions serving households (COPNI).
d) Classification of Outlays of Producers by Purpose (COPP).

An adapted COFOG presentation, used by the Australian Bureau of Statistics to publish Government Finance Statistics, is shown in Annex 3. Full details of all the classifications can be found in *Classifications of Expenditure According to Purpose* (United Nations, 2000).[26]

ISSUE: Identify DRRE related outlays within each of the functional classifications.

4. DRRE transactions and transactions in kind

Expenditures on DRRE are 'transactions' in a national accounting sense. A transaction is an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that it is analytically useful to treat like a transaction, often because the unit is operating in two different capacities. (SNA 3.51)

The DRRE satellite account will record monetary transactions, where institutional units make payments (receive payments) or incur liabilities (receive an asset) stated in units of currency. The SNA records all flows in monetary terms, and this principle will extend to the satellite account.

Monetary transactions are interactions between institutional units; that is, all monetary transactions are two-party transactions. The following is a list of common monetary transactions:

a) Expenditure on consumption of goods and services,
b) Expenditure on capital formation (fixed assets and inventories),
c) Acquisition of a security (tradeable financial asset),
d) Wages and salaries,
e) Interest, dividends, and rent (property income),
f) Taxes,
g) Social assistance benefits in cash (current transfers to households). (SNA 3.56)

A DRRE satellite account could present comprehensive data on transactions in disaster related expenditures on consumption of goods and services (both individual and collective), capital formation, wages and salaries, and social assistance benefits. Transactions such as acquisition of securities, interest, dividends and rent, and taxes are less likely to be in scope of disaster related accounts.

Non-monetary transactions will also be an essential element of disaster related expenditures. Non-monetary transactions are transactions that are not initially stated in units of currency. The entries therefore represent values that are indirectly measured or otherwise estimated. In some cases, the transaction may be an actual one and a value must be estimated to record it in the accounts. Barter is an obvious example. In other cases, the entire transaction must be constructed and then a value estimated for it. (SNA 3.75)

[26] https://digitallibrary.un.org/record/409196?ln=en

Non-monetary transactions associated with disasters are likely to be associated with impact management rather than risk management. They will include remuneration in kind and transfers in kind. Remuneration in kind takes various forms. The most common types of goods and services provided without charge, or at reduced prices in the wake of disasters are likely to include meals and drinks, and housing services or accommodation.

Transfers in kind applies to government international cooperation, gifts, and charitable contributions. Government international cooperation, gifts, and charitable contributions are often made in kind for convenience, efficiency, or tax purposes. For example, international aid after a natural disaster may be more effective and delivered faster if made directly in the form of medicine, food, and shelter instead of money. (SNA 3.82) Transfers in kind may also be made in the risk management phase, for example, building stocks of medicines and disaster response equipment in advance of disaster.

Each of these disaster related non-monetary transactions should be assigned a monetary value for inclusion in the satellite account.

ISSUE: Gathering appropriate data for these disaster related transactions will require targeted data collections.

5. An industry, product, or sector approach?

There are several approaches to identifying DRRE that may be included in a satellite account, including:

a. An industry (sector) approach – where expenditures on DRR goods and services are recorded against the industries accruing these expenses. (See Annex 4 for the ISIC[27] classification of industries used in the SNA). It is customary practice in satellite accounting to refer to such groupings of industries as 'sectors' even though they do not constitute institutional sectors as the term is used in the SNA.
b. A product approach – where the value of discrete expenditures on DRR products are identified by type of product.
c. A sector approach – where expenditures on DRR goods and services are recorded against the institutional sector undertaking that expenditure, these are:
    The non-financial corporations sector
    The financial corporations sector
    The general government sector
    The non-profit institutions serving households sector
    The households sector.

Transactions involving the rest of the world, such as foreign aid transfers, are treated as a de-facto sixth institutional sector in a complete set of accounts.

DRRE satellite accounts will involve cross matching these approaches. For example, A DRRE table could match institutional sector by industry or product. A fully articulated DRRE satellite account would present expenditure data from each of these approaches, allowing internal verification of the estimated expenditures.

[27] International Standard Industrial Classification of all Economic Activities, Revision 4, United Nations, 2008

ISSUE: Develop appropriate classifications to identify DRRE transactions

6. Temporal aspect of a DRRE satellite account

'The general principle in national accounting is that transactions between institutional units have to be recorded when claims and obligations arise, are transformed or are cancelled. This time of recording is called an accrual basis.' (SNA 2.55)

It would be ideal to match DRRE with specific disasters to learn how effectively DRRE has provided risk reduction, mitigation, and recovery services in respect of that disaster. But spending on disaster risk reduction can occur long before a disaster impact and spending on mitigation and recovery from the effects of disasters can happen long after the initial impact. DRRE expenditure will not necessarily be confined to the accounting period in which the disaster occurs.

Satellite accounts, in line with general SNA principles, are compiled for specific time periods, usually a year. The implication of this is that matching DRRE with subsequent discrete disasters may not be feasible in a satellite account.

Many kinds of disaster can happen within a single accounting period. Some, a storm, or an earthquake for example, are single events that happen on specific days, though the consequences may extend over subsequent days, weeks, or months. Other disasters, such as climate change or a pandemic, extend over prolonged periods of time (years, decades) and have compound effects.

Ideally, DRRE satellite accounts should be produced as a time series. That is, the objective of the accounts is to produce regular series of comparable information that can be used for time-series analysis. Time series of satellite accounts, tourism for example, can show how that sector, industry, or issue changes over time in relation to the whole economy.

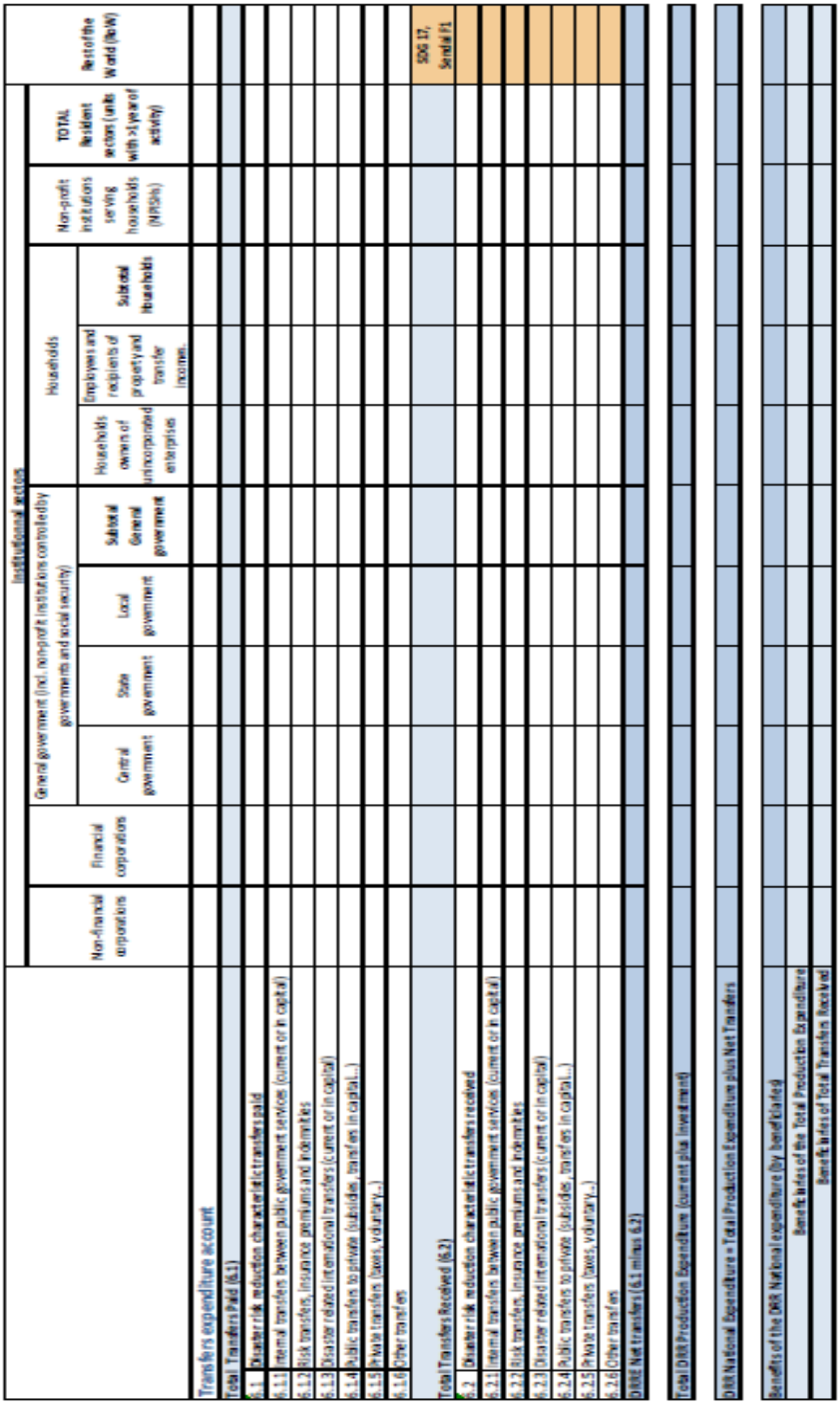
Ideally again, resources should be available to NSOs that they can use to develop and publish DRRE satellite accounts as part of a regular statistical production cycle.

ISSUE: Will a DRRE satellite account be snapshot of DRR activity in a specific period, or will the satellite account build a time series of DRR activity over consecutive periods?

Annex 1. DRRE (A) Production Expenditure Account (Current plus Investment) by characteristic activities Measurement units: Local currency *(US$ PPP)*

		Providers of disaster risk reduction services (SNA institutional sectors)											Rest of the World (RoW)
				General government (incl. non-profit institutions controlled by governments and social security)				Households			Non-profit institutions serving households (NPISHs)	TOTAL Resident sectors (units with at least 1 year of activity)	
		Non-financial corporations	Financial corporations	Central government	State government	Local government	Subtotal General government	Households owners of unincorporated enterprises	Employees and recipients of property and transfer incomes	Subtotal Households			
Activity expenditure account (current plus investment)													
1	**Disaster Risk Prevention**												
1.1	Risk prevention in advance of hazardous event												
1.2	Risk prevention in or after hazardous event												
2	**Disaster Risk Mitigation**												
2.1	Structural measures												SDG 11.c.1
2.2	Non-structural measures												
2.3	Land-use planning												
2.4	Early warning systems management												
3	**Disaster Management**												
3.1	Preparedness												
3.2	Emergency management												
3.3	Other disaster responses												
3.4	Emergency supply of commodities												
4	**Disaster Recovery**												
4.1	Relocation												
4.2	Rehabilitation												
4.3	Reconstruction												
5	**General Government, Research & Development, Education Expenditure**												
5.1	General government expenditure for Disaster Risk Reduction												
5.2	Research & Development, risk assessment, and information												
5.3	Education to Disaster Risk Reduction												
A	**Subtotal current production expenditure (SUM 1 to 5)**												
1	**Disaster Risk Prevention**												
1.1	Risk prevention in advance of hazardous event												
1.2	Risk prevention in or after hazardous event												
2	**Disaster Risk Mitigation**												
2.1	Structural measures												
2.2	Non-structural measures												
2.3	Land-use planning												
2.4	Early warning systems management												
3	**Disaster Management**												
3.1	Preparedness												
3.2	Emergency management												
3.3	Other disaster responses												
3.4	Emergency supply of commodities												
4	**Disaster Recovery**												
4.1	Relocation												
4.2	Rehabilitation												
4.3	Reconstruction												
5	**General Government, Research & Development, Education Expenditure**												
5.1	General government expenditure for Disaster Risk Reduction												
5.2	Research & Development, risk assessment, and information												
5.3	Education to Disaster Risk Reduction												
B	**Subtotal Gross formation of fixed capital (SUM 1 to 5)**												
6	**Acquisition less disposals of land and other non produced non-financial assets**												
6.1	Acquisition less disposals of land												
6.2	Acquisition less disposals of non produced non-financial assets												
C	**Investment production expenditure**												
Total DRR Production Expenditure (current plus investment)													

Annex 2. DRRE (B) Transfers expenditure account & DRR National Expenditure, Measurement units; Local currency *(US$ PPP)*



Transfers expenditure account	Institutional sectors													Rest of the World (RoW)
	Non-financial corporations	Financial corporations	General government (incl. non-profit institutions controled by governments and social security)					Households			Non-profit institutions serving households (NPISHs)	TOTAL Resident sectors (units with >1 year of activity)	
			Central government	State government	Local government	Subtotal General government	Households owners of unincorporated enterprises	Employees and recipients of property and transfer incomes.	Subtotal Households			
Total Transfers Paid (&1)													
&1.1 Disaster risk reduction characteristic transfers paid													
&1.1.1 Internal transfers between public government services (current or in capital)													
&1.1.2 Risk transfers, insurance premiums and indemnities													
&1.1.3 Disaster related international transfers (current or in capital)													
&1.1.4 Public transfers to private (subsidies, transfers in capital..)													
&1.1.5 Private transfers (taxes, voluntary..)													
&1.1.6 Other transfers													
Total Transfers Received (&2)													SDG 17, Serial #1
&2.1 Disaster risk reduction characteristic transfers received													
&2.2.1 Internal transfers between public government services (current or in capital)													
&2.2.2 Risk transfers, insurance premiums and indemnities													
&2.2.3 Disaster related international transfers (current or in capital)													
&2.2.4 Public transfers to private (subsidies, transfers in capital..)													
&2.2.5 Private transfers (taxes, voluntary..)													
&2.2.6 Other transfers													
DRRE Net transfers (&1 minus &2)													
Total DRR Production Expenditure (current plus investment)													
DRR National Expenditure = Total Production Expenditure plus Net Transfers													
Benefits of the DRR National expenditure (by beneficiaries)													
Benefits rates of the Total Production Expenditure													
Benefits rates of Total Transfers Received													

Annex 3. Government Finance Statistics, Australia

Australian Bureau of Statistics, 2021

Government Finance Statistics, Australia								
Table 10. Expense by purpose, general government sector, local government, 2019-20								
	NSW	**Vic**	**Qld**	**SA**	**WA**	**Tas**	**NT**	**Total**
	$m	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
General public services	3 102	1 706	2 945	147	896	191	194	9 180
Public order and safety	445	231	196	58	152	7	25	1 112
Economic affairs	705	460	424	162	191	37	23	2 003
Environmental protection	2 535	1 484	1 328	446	292	106	22	6 213
Housing and community amenities	1 244	658	1 484	219	402	71	59	4 137
Health	89	186	60	61	72	12	4	483
Recreation, culture and religion	1 893	1 847	1 276	594	929	138	67	6 745
Education	86	144	9	-	5	-	3	247
Social protection	423	935	60	134	194	19	40	1 805
Transport	2 058	1 721	2 749	533	1 111	205	50	8 427
Total expenses	12 580	9 373	10 530	2 354	4 244	785	487	40 354

Government Finance Statistics, Australia, 2019-20				
Table 1 All Levels of Government, Operating Statement - General Government				
	All levels of government			
	2019-20			
	$m			
GFS Expenses				
Gross operating expenses				
Depreciation	34,804			
Superannuation expenses	28,501			
Other employee expenses	176,529			
Social benefits to households in goods an	88,357			
Other non-employee expenses	142,171			
Total gross operating expenses	470,362			
Interest on defined benefit superannuation	10,099			
Interest expenses n.e.c.	25,559			
Other property expenses	4			
Current transfers				
Grant expenses to state governments	0			
Grant expenses to universities	0			
Grant expenses to local governments	0			
Grant expenses n.e.c.	3,918			
Subsidy expenses to public corporations	10,709			
Other subsidy expenses	65,767			
Other current transfers	195,291			
Capital transfer expenses	10,466			
Total GFS expenses	*792,174*			

Annex 4. ISIC Industry classification, Broad structure

Section	Divisions	Description
A	01–03	Agriculture, forestry and fishing
B	05–09	Mining and quarrying
C	10–33	Manufacturing
D	35	Electricity, gas, steam and air conditioning supply
E	36–39	Water supply; sewerage, waste management and remediation activities
F	41–43	Construction
G	45–47	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	49–53	Transportation and storage
I	55–56	Accommodation and food service activities
J	58–63	Information and communication
K	64–66	Financial and insurance activities
L	68	Real estate activities
M	69–75	Professional, scientific and technical activities
N	77–82	Administrative and support service activities
O	84	Public administration and defence; compulsory social security
P	85	Education
Q	86–88	Human health and social work activities
R	90–93	Arts, entertainment and recreation
S	94–96	Other service activities
T	97–98	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U	99	Activities of extraterritorial organizations and bodies

Acronyms

DMSF	Disaster Management Statistical Framework
DRM	Disaster Risk Management
DRMA	Disaster Risk Management Agency
DRME	Disaster Risk Management Expenditure
DRRE	Disaster Risk Reduction Expenditure
DRSF	Disaster Related Statistics Framework
GDP	Gross domestic product
HED	Hazardous Events and Disasters
ISIC	International System of Industry Classification
NPISH	Non-Profit Institutions Serving Households
NSO	National Statistics Office
NSS	National Statistical System
OEIWG	Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction, UN 2016
RROS	Recommendations on the Role of Official Statistics in Monitoring Hazardous Events and Disasters
SEEA	System of Environmental-Economic Accounting - Central Framework
SF	Sendai Framework
SNA	System of National Accounts, 2008
UNGA	United Nations General Assembly