

DISASTER RISK MANAGEMENT PUBLIC EXPENDITURE AND INSTITUTIONAL REVIEWS (DRM-PEIR) FOR LAO PDR, THAILAND AND VIETNAM



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Discussion Paper on Lessons Learned



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LESSONS LEARNED

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EXPENDITURE AND INSTITUTIONAL REVIEWS
(DRM-PEIR) FOR LAO PDR, THAILAND
AND VIETNAM**

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ABBREVIATIONS

BBB	Build Back Better
CBDRM	Community Based Disaster Risk Management
COA	Chart of Accounts
CPEIR	Climate Public Expenditure and Institutional Review
DRM	Disaster Risk Management
DRM-PEIR	Disaster Risk Management Public Expenditure and Institutional Review
DRR	Disaster Risk Reduction
EWS	Early Warning System
GFDRR	Global Facility for Disaster Reduction & Recovery
MDGs	Millennium Development Goals
MLSW	Ministry of Labour and Social Welfare
MoAC	Ministry of Agriculture and Cooperatives
MARD	Ministry of Agriculture and Rural Development
MoC	Ministry of Communication
Mol	Ministry of Interior
MoNRE	Ministry of Natural Resources and Environment
MPWT	Ministry of Public Works and Transportation
PDR	Peoples Democratic Republic (of Lao)
SDGs	Sustainable Development Goals
SEADRIF	Southeast Asia Regional Disaster Resilience Insurance Fund
UNDP	United Nations Development Programme
UNISDR	United Nations Office for Disaster Risk Reduction



EXECUTIVE SUMMARY

Introduction

UNDP is working with selected governments in Asia and the Pacific to consider the implications for national and sub-national planning and budgeting processes of the recently agreed Sustainable Development Goals (SDGs) and Agenda 2030. The support provided has focused primarily on cross cutting elements of the 2030 Agenda, such as disaster risk management (DRM), which do not neatly fit under the remit of a single government ministry. To support the implementation of the 2030 Agenda and the Sendai Framework for Disaster Risk Reduction (DRR)¹, UNDP Bangkok Regional Hub, in partnership with the Asian Development Bank (ADB), the Government of Canada provided financial support, through Global Affairs Canada, to the ADB-managed Integrated Disaster Risk Management Fund.

This report summarises the results of the DRM-PEIRs undertaken in Lao PDR, Thailand and Vietnam during 2016.²

The DRM-PEIRs, building on UNDP's work on Climate Public Expenditure and Institutional Reviews (CPEIRs), recommend further budget reforms to strengthen policy and institutional frameworks for DRM. The recommendations also aim to mainstream DRM concerns into national policy, planning and budget systems leading to a greater awareness and prioritisation of DRM across public investment portfolios. Such developments should also contribute to the implementation of Agenda 2030, and help achieve the SDGs relating to sustainability, resilience and climate change, as well as providing strong support to poverty reduction.



Institutional structures for DRM

Responsibility for managing disaster risks is cross-sectoral; and the benefit of disaster resilience impact a wide-range of ministries and agencies. While many ministries and agencies play a role, the DRM-PEIRs undertaken in Lao PDR, Thailand and Vietnam, found that in practice, and in terms of expenditure, only about six to eight ministries and agencies in each country are responsible for the majority of DRM-related public expenditure through national budgets⁵. However, as disasters impact all sectors of an economy, strong, clearly defined and well-coordinated policy and planning should be required for all relevant agencies.

The three countries reviewed demonstrated extensive and cross-cutting institutional structures and processes for DRM.

Weaknesses in these structures were observed in relation to the following factors:

- Multiple agencies with overlapping responsibilities, interests and agendas may be involved in aspects of DRM, most notably at the relief and subsequent stages of recovery and reconstruction. However, responsibilities for disaster risk reduction and preparedness interventions in advance of a disaster striking, are often not well planned, responsibilities are not clearly defined or practiced in advance, and this can lead to a less than optimum response for those most affected.
- Legislation, mandates, regulations, standard operating procedures and responsibilities are not always clearly defined and kept up-to-date as institutions evolve and disasters as institutions evolve and disasters

continue to manifest due to poorly planned development interventions. There is a need to improve detailed planning measures for DRM and address the duplication of responsibilities, uncertainty and gaps.

- Institutional structures for the management of DRM often exist on paper but may not be established in practice, especially at provincial and lower administrative levels. This could be the result of insufficient financial or capacity resources: it is often a combination of the two.
- There is poor coordination and cooperation between, and sometimes within responsible ministries and agencies.
- Financial management systems and financial regulations could be strengthened to improve timely access to resources in post-disaster situations, especially for the transfer of resources from central to provincial administrations.

Consequently, DRM is not fully mainstreamed or prominent in sector priorities. Planning and implementation for DRM policies, investments and responses be improved.

It is therefore recommended to:

- Conduct a thorough review and overhaul of DRM-related legislation, institutional structures and processes with the aim to:
 - › Streamline and mainstream the treatment of DRM in national policy and planning
 - › Build effective cooperation and coordination to improve implementation
 - › Prioritise DRM in national development strategies.

¹ Sendai Framework for Disaster Risk Reduction 2015-2030, UNISDR 2015; <www.unisdr.org>

² A draft of this paper summarising the findings of three DRM-PEIRs was considered at a regional workshop at the UNDP Bangkok Regional Hub on 28 February and 1 March 2017. The recommendations and suggestions for the way forward that were identified at this workshop have been incorporated into this final report.

³ The analyses generally exclude expenditure by national security and defense agencies which does not appear in published budget documentation.

- Appoint a dedicated, full-time and high-level DRM coordinator or focal point with a clear mandate, and authority to:
 - › Lead and strengthen overall coordination, planning and management of DRM, including the establishment of a network of DRM focal points across all stakeholders.
 - › Guide DRM mainstreaming across all government (central and local) and private sector agencies.
 - › Advocate DRM risks across all levels and stakeholders, including government and private sector management, through innovative communication tools and the development of DRM-focused policy briefs highlighting DRM-issues.
- › Support the development of public-private partnership initiatives for DRM.
- › Undertake research on disaster risks, DRM needs, policies, strategies, financing options and gaps.
- Strengthen capacity on disaster risk assessments at all levels, to better understand the impacts of natural hazards and to establish national frameworks for disaster cost-benefits analyses.
- Improve and expand the scope of statistics, research and analysis on all aspects of DRM.

Identifying monitoring and tracking tools for DRM-related expenditure

In some of the budget data available for analysis, notably in Lao PDR, expenditure on DRM-related activities was not clearly identified. As the expenditure analysis indicates, DRM-related expenditure is often embedded as a minor component in other investment projects, and cannot therefore be explicitly identified.

The allocation of expenditure between pre- and post-disaster activities is also complicated by the fact that DRM-related expenditure on disaster risk reduction and preparedness is often embedded as a component in larger interventions. Similarly, budget documents do not always make clear whether investments are entirely new, or whether they are sometimes part of longer term reconstruction from an earlier disaster event.

Classification of expenditure on DRM therefore relies on consultations with budget-owners, project managers and general local

knowledge. It is recognised that there is likely to be some subjectivity in allocating classifications and it is intended to reach a consensus with project or budget line owners on the classifications wherever possible.

The level of budget line detail available for analysis varied considerably between the three countries. In Thailand, budget lines contained considerable detail, enabling a more systematic assessment of DRM-relevance. In Vietnam, the budget information available for analysis was pre-screened for relevance to climate change adaptation (as an input into the Vietnam CPEIR). In Lao PDR, the descriptive detail available in the budget line to assist the analysis of DRM-relevance was very limited. Much more reliance was therefore placed on consultations with project managers in Lao PDR than in the other two countries.

In order to assist in overcoming these constraints to classification and analysis it is recommended to introduce a “budget tagging” system into:

- 1) National budgeting and financial management information systems; and
- 2) National budget and public investment planning cycle.

Aggregate Expenditure for DRM

The DRM analysis of available budget data in the three countries revealed the below findings:

DRM-relevant expenditure relative to GDP

Over the four-year periods that⁴ budget data was analysed; A) in Lao PDR, total DRM-relevant expenditure for both government and provincial budgets was estimated at 1.9 percent of GDP. This included 1.7 percent for central government expenditure and 0.2 percent for provincial expenditure. B) In Thailand, provincial budget data was not included in the detailed analysis. At the central level, government expenditure relevant to DRM was estimated at 0.9 percent of GDP⁵. C) In Vietnam, where only limited “climate adaptation” data was available⁶ for DRM analysis, the proportion of DRM-relevant expenditure was estimated to at 0.2 percent of GDP⁷.

DRM-relevant expenditure relative to total government budgets

In Lao PDR, it is estimated that DRM-related expenditure accounted for an average of 5.6 percent of total combined ministry and provincial budgets over the four years. This comprised an estimated 7.1 percent of total ministry expenditure and 2.1 percent of provincial expenditure. In Thailand, the comparable central government expenditure was estimated at 4.6 percent of total budget expenditure. In Vietnam, estimated DRM-relevant expenditure in relation to the central government budget was estimated at 8.9 percent. For the three provinces analysed in Vietnam, DRM-relevant expenditure was estimated at 22.3 percent of the combined total expenditure.

DRM-relevant expenditure by ministry

Disaggregating expenditure by ministry indicated that in all three countries only a few ministries manage the DRM-relevant expenditure. In Lao PDR and Vietnam, the Ministry of Public Works and Transport, and Ministry of Transport and Construction in the two countries respectively accounted for around half of all DRM-relevant expenditure. In Thailand, the Ministry of Interior contributed the largest DRM-relevant expenditure at 17 percent. Over the analysis period, Thailand’s DRM-relevant expenditure was dominated by the Central Fund, which

provides support in post-disaster situations. Severe flooding during the review period resulted in significant expenditure on relief and recovery to this flood event.

The ministries of agriculture were also a primary source of DRM-relevant expenditure in all three countries. In Vietnam this ministry ranked the highest at 39.4 percent of all DRM-relevant expenditure; in Lao PDR the agriculture ministry recorded 18.4 percent of total DRM expenditure and in Thailand 10.1 percent of total DRM expenditure.

⁴ FY2010/11-2013/14

⁶ The data covered five ministries and one province from the CPEIR

⁵ FY2011-2014

⁷ FY2010-2015

The ministries of natural resources and environment contributed 2.4 and 3.1 percent of total DRM-relevant expenditure in Lao PDR and Thailand. In Vietnam, this ministry contributed 10.1 percent to the total DRM-relevant expenditure.

Within the ministries of agriculture it was estimated that 28.3 percent of the ministry budget in Vietnam was relevant to DRM. In Lao PDR and Thailand, the DRM-relevant share of the agriculture ministry budgets was estimated at with 20.1 percent and 14.8 percent respectively.

The ministries of natural resources and the environment record the next highest

proportion of DRM-relevance in their budgets. In Lao PDR and Thailand, 12.1 percent and 12.2 percent of their budgets were relevant to DRM. In Vietnam, the proportion was 26.5 percent. The ministries responsible for public works and construction had the third highest levels of DRM-relevance within their own budgets. In Lao PDR, ministries related to transport and construction recorded 16.4 percent of the combined budgets as having DRM-relevance, with Thailand and Vietnam recording 6.2 percent and 6.8 percent relevance to DRM in their respective ministry budgets.

DRM-relevant expenditure by type and function

DRM expenditure by budget line type

The analysis indicates that most DRM-relevant expenditure was allocated to budget lines focusing on disaster risk reduction and preparedness, primarily through capital investment expenditure. Projects and investments of this type (A4)⁸ accounted for 87.6 percent of all estimated DRM-relevant expenditure in Lao PDR, 43.1 percent in Thailand and just over two-thirds in Vietnam. There were no budget lines or projects specifically focused on DRM policy and institutional development in Lao PDR and only 0.3 percent of DRM-related expenditure was recorded for these activities in Thailand. In Vietnam, DRM investment focus was recorded at 6.6 percent of the expenditure.

Awareness and capacity building, research, early warning systems and hazard mapping accounted for only 1.6 percent and 1.1 percent of expenditure in Lao PDR and Thailand respectively, and an estimated 18.3 percent in Vietnam. Projects and budget lines

specifically focused on post-disaster activities (types B1 and B2)⁹ accounted for an estimated 10.8 percent, of DRM expenditure in Lao PDR, 55.5 percent in Thailand and 6.3 percent in Vietnam. The high expenditure in Thailand was a response to severe flooding in 2011.

A lack of specific investment focused on awareness, capacity building and research may indicate low priority of DRM in policy, planning and budget cycles.

DRM Expenditure by Functional End-Use

The final level of analysis assessed the functional end-use of the DRM-relevant expenditure. In Lao PDR, it was estimated that approximately three-quarters of DRM-relevant expenditure was focused on physical infrastructure investment (functional type A4), two-thirds in Vietnam and less than half in Thailand.

Additionally, Thailand allocated 8.2 percent of DRM-relevant expenditure to disaster relief (functional category B1) and 27.3 percent to recovery and reconstruction.

⁸ Figure 1: Classification by Type and function of DRM-relevant expenditure, page 25

⁹ Figure 1: Classification by Type and function of DRM-relevant expenditure, page 25

In Lao PDR and Vietnam, allocation to functional categories of expenditure was 11.3 percent and 7.7 percent respectively.

Although no budget lines or investment projects focused specifically on policy and institutional development for DRM, it was estimated that 2.5 percent of DRM-relevant expenditure in Lao PDR, 0.3 percent in Thailand and 6.7 percent in Vietnam, contributed to building policy and institutional capacities. These activities would have been embedded in other larger projects. The other two categories of pre-disaster functional type (A2 & A3)¹⁰ accounted for an estimated 8.3 percent of DRM-relevant expenditure in Lao PDR, 1.1 percent in Thailand and 19.0 percent in Vietnam.



Summary findings and recommendations for DRM-relevant expenditure

DRM-PEIR found that expenditure in support of DRM appears to be low in Lao PDR, Thailand and Vietnam in relation to GDP.

Expenditure on DRM-relevant activities is concentrated few government ministries and agencies with similar areas of responsibility across each of the three countries. These ministries include those responsible for agriculture, irrigation, natural resources, environment and construction. None of the three countries has a specific DRM ministry, and the agencies that have nominal responsibility for disaster policy and management have limited authority or financial resources. The ministries that host the DRM policy mandate therefore need easier access to funds for significant DRM interventions.

DRM-relevant expenditure is principally comprised of small, embedded components within other projects, investments, or recurrent budget lines. These are concentrated in physical infrastructure

investments. DRM components and impacts need to be more clearly defined.

It is recommended to build capacity on the role of DRM in the project cycle and performance-based budgeting in ministries of finance and in sector ministries and agencies. This will assist in improving cross-sectoral linkages and benefits of disaster resilience investments, helping minimise unforeseen post-disaster costs. Sector ministries could strengthen their performance-based budget submissions, ensuring that DRM measures are fully incorporated and clearly identified in all new policies, activities and projects.

It is also recommended to revise project planning cycles and appraisal processes to ensure that DRM is considered in the performance budget process. For example, each budget submission or capital investment proposal should include an outcome/output matrix indicating the contribution of the

¹⁰ Figure 1: Classification by Type and function of DRM-relevant expenditure, page 25

expenditure or investment to a range of cross-cutting issues, including DRM, climate change and the environment. This could perhaps be incorporated into a standard Environmental Impact Assessment (EIA) submission. Ministries of finance could then rank priorities for allocating budget resources.

Recognising that there are significant overlaps between DRM interventions and climate change adaptation measures, it is recommended to integrate DRM and climate change expenditure reviews where DRM-PEIR and/or CPEIR have not previously been undertaken.

DRM-relevant expenditure on activities including DRM policy, community awareness, capacity building, early warning and research is limited. With a rise in the frequency and intensity of natural hazards arising from climate change, and the increasing vulnerability of the rural poor, it is recommended to prioritise investment in DRM. All sector ministries and agencies should be made aware of the cross-cutting role of DRM, and the importance of incorporating and mainstreaming DRM components into

all investments to ensure resilience and sustainability.

Recognising that rural poor are most vulnerable to natural hazards, it is recommended that disaster risk reduction and preparedness, including awareness raising, early warning systems and capacity building for disaster response, as well as community-based disaster risk management (CBDRM), should be mainstreamed at the provincial level. Additionally, it is recommended that the funding needs of CBDRM should be separately identified in DRM budget tagging and/or monitoring system.

It is recommended to establish specific “disaster/emergency” funds at all levels of government with legislative authority and the ability to access the funds at the appropriate times, meeting the needs of the vulnerable efficiently, transparently, and with accountability.

As capacities for disaster risk financing evolve, it is recommended to institute disaster insurance cover for damage and losses caused by natural hazards to public infrastructure and other assets, business, crops, and homes.

1. Context

UNDP is working with target governments in Asia and the Pacific to consider the implications for national and sub-national planning and budgeting processes of the recently agreed Sustainable Development Goals (SDGs) and Agenda 2030. This support focuses on cross-cutting elements of the 2030 Agenda, which do not neatly fall under the remit of any one government ministry. For example, budget reforms aiming to mainstream climate change and biodiversity considerations within public investments across different sector ministries.

In support of the Sendai Framework for Disaster Risk Reduction (SFDRR)¹¹, UNDP

Bangkok Regional Hub, in partnership with the Asian Development Bank, and UNDP Country Offices in the region, are supporting Disaster Risk Management Public Expenditure and Institutional Reviews (DRM-PEIR). These reviews draw on UNDP’s work on Climate Public Expenditure and Institutional Reviews (CPEIR), which have been undertaken in more than thirty countries globally, including Bangladesh, Cambodia, Nepal, Samoa, Thailand, Vietnam and in the Asian-Pacific region. The DRM-PEIRs provide recommendations for further budget reforms supporting mainstreaming DRM into national policy, planning and budget systems. These efforts

¹¹ Sendai Framework for Disaster Risk Reduction 2015-2030, UNISDR 2015; <www.unisdr.org>

are expected to lead to a greater awareness and prioritisation of DRM across the public investment portfolios of participating countries. It is expected that such developments will also contribute to the implementation of Agenda 2030, and in particular, to the achievement of the SDGs relating to sustainability, resilience and climate change, as well as providing strong support to poverty reduction.

The DRM-PEIR undertaken in Lao PDR, Thailand and Vietnam assessed the institutional basis for disaster risk management at the national and provincial level through an analysis of institutional structures, strategic policies and action plans for DRM. The

reviews also provide an assessment of the levels, types, functions and objectives of public expenditure on related activities.

The DRM-PEIR covers natural hazards including floods and landslides, tropical cyclones and storms, forest or grass-fires, droughts, hazards from unseasonal or extreme cold weather, earthquakes and building collapse and tsunamis as well as human epidemics, smog, insect infestations and animal diseases¹². Many of these natural hazards overlap with climate change risks. In Vietnam, this is demonstrated by the fact that the data analysed for the DRM-PEIR was drawn from the “climate adaptation” component of the CPEIR.

2. DRM-PEIRs

2.1. Introduction

Building on country-level CPEIR studies in climate finance, the three DRM-PEIRs have adapted and refined a methodology for classification of, accounting for, and tracking of recurrent expenditure and capital investment for DRM. The reviews also include assessments of the institutional framework/ institutional structures for DRM-related activities within each government. Overall, the reviews and analyses promote a better understanding of the expenditure on DRM-related activities at national and sub-national/provincial levels. The analyses identify spending on DRM-related activities in each of the three countries, how the expenditure links to national DRM policies and strategies. Additionally, the review proposes how DRM can be more effectively mainstreamed and integrated into national policy, planning and budgetary processes and systems.

The DRM-PEIR supports the Sendai Framework and its associated priorities for action priorities by providing governments with a clearer indication of the resource allocation to promote disaster risk reduction (DRR) and build disaster resilience by:

- 1) Integrating disaster and climate risk considerations into development planning
- 2) Developing a financing platform for DRM investments
- 3) Promoting community-based DRM
- 4) Developing information and communications technology for DRM
- 5) Establishing risk financing mechanisms to mitigate the impact of natural and other hazards

¹² The reviews do not generally include disasters that might be attributable to terrorism and/or civil unrest, pollution and/or industrial or commercial accidents, even though these types of disasters may be classified as disasters in national disaster legislation.

DRM-PEIRs have added an additional level of analysis to include assessments of the project- type and functional-nature of DRM-related expenditure with specific reference to the four Sendai priorities.

Within this framework, the three reviews provide analysis and recommendations on the categorisation and tracking of financial flows for DRM-relevant interventions over the following periods:

- Lao PDR: four years FY 2010/11 through FY2013/14
- Thailand: four years FY2011 through FY2014
- Vietnam, four years FY2010 through 2013 with some additional data for FY2014 and 2015

2.2. Institutional framework and expenditure priorities for DRM

Global commitments to disaster risk reduction are encapsulated in the four priorities for action in the Sendai Framework for DRR which was endorsed in early 2015. DRR and DRM-related policies and expenditure should therefore aim to achieve one of these four priorities (see Box 1).

Building resilience and sustainability are central to the achievement of the SDGs and Agenda 2030. The poor are disproportionately impacted by disasters and climate change and therefore mainstreaming DRM, together with climate change, must be central to successfully realising poverty reduction strategies. Many poverty reduction interventions will be targeted at improving livelihoods and public services to the poor. To achieve their fullest impact, these interventions need to include measures to build resilience against external shocks and the impacts of natural hazards. Expenditure on DRM can therefore contribute significantly to ensuring that poverty reduction achievements are sustainable.

Within the SDGs and Agenda 2030, the poverty reduction goal (Goal 1) is the primary outcome to be achieved. Through building resilience in livelihoods, DRM contributes to this goal. DRM also contributes to interventions primarily aimed at ensuring the sustainable management of water, infrastructure and cities, terrestrial and marine eco-systems and resilience to the impacts of climate change¹³. These interventions require DRM to be mainstreamed if they are to be realised effectively. Incorporating DRM interventions explicitly into policies, planning and budgets can therefore assist governments to better understand, monitor and evaluate the importance of DRM in national socio-economic development.

¹³ Goal 6: Ensure availability and sustainable management of water and sanitation for all
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12: Ensure sustainable consumption and production patterns
Goal 13: Take urgent action to combat climate change and its impacts



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BOX 1

SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION

Priority 1: Understanding disaster risk: Policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for pre-disaster risk assessment, for prevention and mitigation and for the development and implementation of appropriate preparedness and effective response to disasters.

Priority 2: Strengthening disaster risk governance to manage disaster risk: Disaster risk governance at the national, regional and global levels is of great importance for an effective and efficient management of disaster risk. Clear vision, plans, competence, guidance and coordination within and across sectors, as well as participation of relevant stakeholders, are needed. Strengthening disaster risk governance for prevention, mitigation, preparedness, response, recovery and rehabilitation is therefore necessary and fosters collaboration and partnership across mechanisms and institutions for the implementation of instruments relevant to disaster risk reduction and sustainable development.

Priority 3: Investing in disaster risk reduction for resilience: Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment. These can be drivers of innovation, growth and job creation. Such measures are cost-effective and instrumental to save lives, prevent and reduce losses and ensure effective recovery and rehabilitation.

Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction: The steady growth of disaster risk, including the increase of people and assets exposure, combined with the lessons learned from past disasters, indicates the need to further strengthen disaster preparedness for response, take action in anticipation of events, integrate disaster risk reduction in response preparedness and ensure that capacities are in place for effective response and recovery at all levels. Disasters have demonstrated that the recovery, rehabilitation and reconstruction phase, which needs to be prepared ahead of a disaster, is a critical opportunity to plan to “Build Back Better”, including through integrating disaster risk reduction into development measures, making nations and communities resilient to disasters. Recognising that many disadvantaged groups are particularly vulnerable in times of disaster it would be highly desirable to empower women and persons with disabilities to become leaders and promoters of gender equitable and universally accessible response, recovery, rehabilitation and reconstruction approaches.

(Sendai Framework for Disaster Risk Reduction 2015)

2.3. Linking institutional structures and resources allocations for DRM

The DRM-PEIR process extends the approach used in the global CPEIRs to address DRM activities and to examine the links between:

- Institutional structures developing and channelling DRM policy
- National DRM policies, strategies and investment
- Resource allocation where public funding (both national and international) is made available for the implementation of DRM-relevant projects and programmes

A challenge in the review of DRM-relevant recurrent expenditure and investment projects is that expenditure related to DRM is not clearly identified or linked to specific DRM objectives under the present planning and budgeting systems in any of the three countries.

While many DRM-relevant projects might be categorised as climate change adaptation relevant investments (and vice versa), there are many other areas of recurrent and investment expenditure that implicitly contribute to DRM. Current budget processes should more clearly identify these projects or expenditure items to enable tracking of DRM spending. The DRM- PEIR methodology used in the three reviews helps establish a simple process for identifying and classifying DRM projects/expenditure as an integral step in the planning and budgeting cycle.

Establishing an effective DRM monitoring and evaluation (M&E) reporting system will require strengthening project design procedures, appraisal processes and the full mainstreaming of DRM into project documentation. It will potentially have wider implications for budget formulation and expenditure tracking.

2.4. Data Entry Points for the DRM Expenditure Analysis

Each of the three countries included in the DRM-PEIRs have separate data entry points as follows:

Lao PDR: State Budget Revenue and Expenditure Implementation Reports for the Fiscal Years 2010-2011 through 2013-2014 are obtained from State Budget Department, Ministry of Finance. At the national level, 23 line ministries and agencies are responsible for implementing the National Budget. Data is also included in the State Budget Reports for the 17 provinces and the capital city¹⁴. The budget reports for each ministry and province follow the same chart- of-accounts (COA) and budget line coding systems. Each ministry/

provincial budget has over 200 identical budget lines of which 32, under four budget divisions, were identified as likely to include DRM-related expenditure. It is estimated that seven ministries accounted 92.6 percent of all DRM-related expenditure.

More information and data are needed regarding the specific outputs expected from each budget line. As a result, the assumptions used in disaggregating and analysing the expenditure for DRM-relevance and function, relied on the experience gained from the Thailand and Vietnam analyses and on consultations with ministries and agencies responsible for the expenditure.

¹⁴ A new province, Xaisomboun was created in FY2013/14 from parts of Xiangkhuang, Vientiane, and Bolikhamxay provinces



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Thailand: Complete budget proposal data was provided by the Ministry of Finance for FY2011 through FY2014. This data was comprehensive in terms of being whole-of-central government¹⁵, with three output-levels being identified for each budget line in the overall COA. These output-levels levels include budget line references to:

- Sector/ Strategic Plan Outcomes
- Project Outputs
- Specific Activities related to the individual budget line item

Vietnam: As recorded in CPEIR, the expenditure data available for analysis was related to “climate change adaptation”¹⁶. The CPEIR included five key line ministries and three selected provinces; thus, the DRM-PEIR analysed this data-set. The CPEIR noted that expenditure relevant to climate change interventions accounted for 18 percent of the expenditure: 88 percent relating to adaptation, 2 percent to mitigation and 10 percent to a combination of adaptation and mitigation. The expenditure available for the DRM analysis is about 17.5 percent of total government expenditure.

3. Institutional Systems for DRM

3.1. Summary of findings

Recognising their vulnerability to natural hazards and climate change, Lao PDR, Thailand and Vietnam have made significant progress in building resilience in recent decades. All three countries have wide ranging institutional structures to address DRM. Many ministries and agencies are involved in various aspects of DRM, particularly in post-disaster situations; however, many have overlapping responsibilities and mandates, and consequently there is a need to improve management, coordination, decision-making, investment and resource allocation processes for DRM-related interventions.

A key institutional issue challenging governments is the coordination of all the involved agencies. It is recommended for governments to resolve or clarify overlapping mandates, which in

some cases may be unavoidable, and to clearly set out responsibilities and chains-of-command related to decision-making and budget allocation processes. Strengthening coordination could support more effective implementation before, during, and post-natural hazards, providing more effective access to relief funds. Sufficient financial allocations made from the central government level would help support implementation.

Lao PDR is working to improve coordination, but many of the decrees and regulations on DRM are in a draft form and define broad mandates and functions. These decrees and regulations could assign clearer responsibilities and specific mandates or standard operating procedures, to address coordination and management responsibility challenges.

¹⁵ Only Chang Rai Province was selected for analysis and thus only central government expenditure is discussed in detail.

¹⁶ Vietnam Climate Public Expenditure and Investment Review Report, June 30, 2014, Ministry of Planning and Investment (MPI), the World Bank and United Nations Development Programme (UNDP)

All three governments have established comprehensive DRM planning and policy frameworks, which could be updated to reflect the current circumstances and underlying institutional mandates and responsibilities. In some instances, there may be overlaps between responsibilities for DRM and for climate change effecting the implementation process. For example, recently, DRM was reassigned from the Ministry of Natural Resources and Environment (MoNRE) back to the Ministry of Labour and Social Welfare (MLSW); from where it was originally located.

In Thailand, the government structure is compartmentalised, and high-level inter-agency cooperation and coordination should be improved to make management and coordination of DRM-activities more effective.

Institutional weaknesses experienced during Thailand's floods in 2011 suggest that more attention should be given to building disaster resilience into investment projects, and that disaster-resilience components should be explicitly identified.

3.2. Recommendations for strengthening institutional processes for DRM

These recommendations aim to improve the institutional framework for DRM and achieve mainstreaming, coordination and cooperation between ministries and agencies:

- Governments should undertake reviews and assessments of their respective institutional processes for DRM with the objective to strengthen coordination and communication between government entities that have been assigned responsibilities for activities related to disaster risk management; this would include those responsible for communicable disease control as well as other disasters, and other government departments as well as with civil society organisations and the international community.
 - Update or develop overarching legal instruments to enhance the coordination and effectiveness of the institutional framework for DRM.
 - Regularly review legislation, regulations, policies, plans and related documents to ensure clear lines of responsibility, communication and resource allocation, at all levels.
- Establish a full-time and high-level DRM coordinator or focal point with a clear mandate, and with sufficient authority to:
 - › Lead and strengthen overall coordination, planning and management of DRM, including the establishment of a network of DRM-focal points across all stakeholders.
 - › Lead, guide and support work on main streaming for DRM across all government (central and local) and private sector agencies.
 - › Lead, guide and support advocacy on DRM risks across all levels and stakeholders, including public and private sector through innovative communication tools and the development of DRM-focused policy briefs on DRM-issues.
 - › Monitor DRM-related expenditure and provide analytical reports in support of the planning and budget process.
 - › Support the development of public-private partnership initiatives for DRM.
 - › Research national hazard risks, DRM needs, policies, strategies, financing options and gaps.

- Build capacity to strengthen disaster risk assessment at all levels, to assess the impacts of disasters and to establish national frameworks for disaster cost-benefits analyses.
- Improve statistics research and analysis on all aspects of DRM and consider integrating DRM and climate change expenditure reviews where DRM-PEIR and/or CPEIR have not been undertaken.

4. Financial Management for DRM

4.1. Summary of findings

The three DRM-PEIRs found that identifying DRM-relevant expenditure was challenging, most especially in Lao PDR where budget line detail in the published budget expenditure documents was very limited. In Thailand, improvements to annual planning, budgeting and monitoring processes to better identify and implement priorities and policies for DRM (climate change and other sectoral areas) could be achieved through modifications to the various national financial management information systems. One way to achieve this would be through the introduction of budget tagging procedures for DRM-relevant expenditure tracking.

Budget tagging for specific policy areas, including gender, climate change and poverty has been introduced in some countries, including Nepal and Bangladesh. How tagging is introduced depends on the nature of the financial management information systems in place, and the flexibility contained in the structure of the associated charts-of-account. It also depends on the level of change encouraged by the Ministry of Finance. Budget tagging could either focus on a specific policy area, such as DRM, or could be introduced on a much wider scale.

A starting point for the introduction of budget tagging could be the development of an output/outcome-based planning and budgeting system. This would require that ministries/ agencies

- 1) Define their programmes and activities in relation to their objectives and outcomes, including DRM and other priority sectors, and
- 2) Establish verifiable expenditure and progress monitoring indicators, for example relevant DRM-related SDGs or nationally identified indicators in line with the global Sendai priorities.

Incorporating a DRM-expenditure tagging system into the annual planning and budgeting procedures could facilitate improved identification and coordination of DRM priorities.

In recent years following the fiscal challenges caused by the global economic and financial crisis, many governments introduced performance-based budgets in an effort to improve the efficiency and effectiveness of public expenditure, in terms of both the recurrent and capital budgets. However, the practicalities of implementation have often failed to deliver on the expectations of improved budget performance outcomes. Ministries of Finance is in need to build capacity on results-based management systems in a way that actively adjusted resource allocations according to performance.

Results-based financial management can be difficult to operate effectively even within a single ministry or focused sector. The challenge for DRM, and climate change also,

is their cross sectoral implications. Natural hazards and climate change effect all aspects of the socio- economy of a nation. These issues are a concern for every ministry, but no single ministry or agency has total responsibility for all DRM outcomes including disaster risk reduction, preparedness, relief, recovery and reconstruction.

If DRM is to be fully mainstreamed into national planning and budget systems a cross-sectoral approach must be implemented. In India for example, DRM screening of government investments is required. The Ministry of Finance made it mandatory in 2009 for all project proposals in excess of Rs. 1 billion (\$16 million) to include a disaster impact assessment. Related risk reduction measures are required to be included in the project costing¹⁷.

An alternative, could be through the use of EIAs, as they are required by legislation and are standard components of policy analysis, budget and project planning cycles in most countries. Additionally, climate-proofing of investment expenditure is now becoming a common requirement in project design. Many governments require expenditure and investments to consider potential environmental impacts and incorporate climate-proofing. Separate legislation could consider amendments to existing EIA

legislation to providing consideration of DRM within the scope of the EIA itself.

There are two clear entry points:

- Ministries of finance should strengthen their appraisal capacities so that their performance and results-based budget systems work effectively.
- Secondly, sector ministries and agencies should strengthen their policy, planning and budget-development systems to ensure that DRM (as well as climate change, environment and other similar cross-cutting issues) are mainstreamed into policies, plans and budgets.

Providing greater detail on DRM in budget and investment submissions could help raise awareness to hazard risks and their implications on poverty. Drought, floods, cold weather and insect infestations in the three countries have demonstrated the direct links between the occurrence of natural hazards and increases in poverty. Greater attention to disaster resilience, coupled with effective relief and support for those affected can reduce the impacts of disasters on the lives and livelihoods or the poor. Mainstreaming DRM into the project and budget cycle can therefore also assist in poverty reduction strategies.

4.2. Recommendations for improved financial management for DRM

The DRM-relevant expenditure analysis has identified that there are only limited budget allocations for specifically for DRM, most DRM-relevant expenditure is embedded into other infrastructure investments and activities. This is particularly the case for DRM-relevant expenditure in disaster risk reduction and preparedness. Often only expenditure for

post-disaster relief, recovery, and reconstruction can be clearly identified as wholly relevant to DRM.

In order to improve the ability to analyse DRM-relevant expenditure the DRM-PIER identified the following recommendations:

- Introduce DRM budget-tagging to monitor DRM-expenditure more effectively

¹⁷ Dhar Chakrabarti, Prabodh G; Understanding Existing Methodologies for Allocating and Tracking DRR Resources in India; UNISDR in collaboration with ADPC under the IAP project Regional Stocktaking and Mapping of Disaster Risk Reduction Interventions for Asia and the Pacific, January 2012.

- Introduce and include a cross-cutting issue matrix in all budget and project submissions to indicate, in broad-terms, the relevance of the expenditure to the selected cross-cutting issues.
- Clearly state criteria and processes governing access to immediate post-disaster needs for easy implementation.
- Develop DRM focused activities including preparedness, awareness raising, early warning systems and capacity building for DRM response. Mainstream CBDRM, down to at least the provincial level.
- Identify funding needs of CBDRM in the DRM budget tagging and/or monitoring system.
- Mandate budget allocations for agencies and provincial administration with specific DRM responsibilities. This funding should be made available as necessary through the central government budgets.
- Establish legal and institutional mechanisms to enable the collecting authorities to access the local revenues when needed.

Special emergency or contingency funds exist in all three countries within the structures. In Vietnam, central government and local administrations are required to allocate between 2 percent to 5 percent of total annual expenditure into a contingency fund which can be used for a range of unforeseen events, including natural hazards. In other countries, these allocations are not always consistent from year-to-year and specific resource targets, either in terms of annual allocations, or minimum/maximum balances, for the funds are not always identified.



Credit: iStock.com/joakimbkk

Even where such funds exist, the procedures for accessing the funds in a disaster/emergency situation are not always clear or straightforward.

It is further recommended to:

- Establish specific “disaster/emergency” funds at all levels, as well as in the national budget providing clear legislative authority together with standard operating procedures for replenishment and access at the appropriate times. Access should be quick and flexible for those most in need, as well as transparent and accountable. Such funds should be able to accumulate from year-to-year if not required for disaster-related purposes. Examples of this can be found in Philippines¹⁸ and Tonga¹⁹. In the Philippines, the fund can be used for DRR as well as relief; while in Tonga the funds may only be used for response activities. In both cases, annual appropriations from the budget are mandated to enable the fund to accumulate.
- Explore innovative post-disaster financing mechanisms including parametric insurance and contingent credit facilities.

As capacities for DRM finance and management evolve, it is recommended to:

- Provide long-term, secure financial insurance for losses and damage caused by natural hazards including loss of crops and damaged buildings and houses. This could be explored, for example, through the proposed Southeast Asia Regional Disaster Resilience Insurance Fund (SEADRIF)²⁰.

¹⁸ The Philippines Calamity Fund is a lump sum fund appropriated under the General Appropriations Act (GAA) to cover aid, relief, and rehabilitation services to communities/ areas affected by man-made and natural calamities, repair and reconstruction of permanent structures, including capital expenditures for pre-disaster operations, rehabilitation and other related activities. http://www.dbm.gov.ph/?page_id=2584

¹⁹ The Tonga Emergency Fund provides that the Fund and the accumulated interest shall be used exclusively for the purpose of providing timely and efficient relief and reconstruction in any emergency. http://www.paclii.org/to/legis/num_act/efa2008148/

²⁰ Southeast Asia Regional Disaster Resilience Insurance Fund will be aimed at providing participating governments with immediate financial resources to support relief and early recovery. The initiative is supported inter alia by the Global Facility for Disaster Reduction and Recovery (GFDRR).

5. Thematic Expenditure Analysis: Methodology

5.1. DRM-relevant expenditure in national & sub-national budgets

The expenditure analyses conducted in the DRM-PEIR follow a three-step methodology:

The first step is to assess if the budget line available for analysis is relevant to DRM. In Lao PDR, 32 of approximately 200 budget lines would be included in the analysis. In Vietnam, CPEIR filtered this stage in respect of climate

change adaptation. In Thailand, a more systemic approach was taken using a “multiple key-word” filter to identify those budget lines that would be included in the second step. A selection of the key words is included in Box 2.

BOX 2

SELECTED KEY-WORDS USED TO DETERMINE POTENTIAL RELEVANCE TO DRM

Policy, Preparedness, Response

- Disaster, policy, capacity, protection, early warning, safety, community awareness, escape routes
- DRM, DRR, climate, prevention, sustainable, resilience, adaptation, mitigation, emergency, relief, recovery, rehabilitation, reconstruction

Disaster Types

- Typhoon, storm, flood, inundation, surge, salinity, infestation, earthquake, landslide, tsunami, sea-level rise, fog, drought, cold, epidemic

Sector/Project

- Forest/forestry, irrigation, agriculture, water resources, hydrology, meteorology, watershed
- Dyke, embankment, seawall, dam, weir, sluice, canal, harbor, bridge
- Public health, bio-security

5.2. Relevance to DRM

Once the primary filter identified budget lines to have DRM-relevance, they were examined to determine their level of DRM-relevance. This secondary level classification identified whether each budget line as complete/very high, high, mid, low, minor or no relevance to

DRM outcomes. This screening/filter process was based on the Climate Budget Tagging system, which has been adapted to address DRM rather than climate-related expenditure²¹.

²¹ Climate Budget Tagging, The Case Studies of: Bangladesh, Indonesia, Nepal and the Philippines; Governance of Climate Change Finance Team, UNDP, July 2015



Credit: iStock.com/sutiporn

The decision on which classification to be applied to each discrete expenditure line was determined on a review of project documentation, consultations with implementing agencies, and with the local knowledge and research on how similar projects and programmes may have been classified in other DRM-PEIR, or in CPEIR where relevant. It is recognised that there is likely to be some subjectivity in allocating classifications and the objective has been to reach a consensus on the classifications wherever possible. A model for assessing the secondary level DRM-relevance classification is in Box 3.

The third level of classification for DRM-relevance captures the type of investment, and its purpose or the functional nature of the expenditure in relation to DRM. The classifications are separated into six categories under two principal heads: disaster risk reduction (primarily pre-disaster expenditure) covering disaster risk reduction and preparedness, and post-disaster relief, recovery and reconstruction. The six categories were identified to assist in reporting towards the priorities of the Sendai Framework (See Box 1).

BOX 3

GUIDELINES FOR THE CLASSIFICATION OF DRM-RELEVANT BUDGET EXPENDITURE

Level of DRM Relevance	DRM Relevance Index	DRM Relevance Expenditure Weighting	Relevance Criteria
Complete/ Very High	5	100%	Objective of the intervention is to: a) reduce disaster risk or strengthen preparedness; or b) meet expenditure for relief, recovery and reconstruction.
High	4	75%	Clear primary objective is delivering targeted and visible outcomes that reduce disaster risk or strengthen preparedness
Medium	3	50%	Activities with secondary disaster risk reduction or preparedness activities, or that embed disaster risk reduction or preparedness components as part of broader projects
Low	2	25%	Indirect disaster risk reduction and preparedness measures
Minor	1	10%	Only very indirect or tenuous links to disaster risk reduction and preparedness
None	0	0%	No relevance to disasters

5.3. Classification of DRM expenditure by project or investment type and function

Within these classifications the final step is to identify broad project types and the functional classification of expenditure. Disaggregation of expenditure by type and functional classification are intended to provide a basis for reporting on progress towards the four Sendai priorities described earlier.

Using these criteria, DRM relevant expenditure is disaggregated in two ways:

- Firstly, the primary purpose of the expenditure in the budget line focuses on policy (type A1), advocacy (A2) or research and early warning (A3); or it is a budget line that involves capital investment and infrastructure spending (A4). For post-disaster expenditure the classification is for immediate relief (B1) and for recovery and reconstruction, including build-back-better components (B2).
- The second disaggregation takes each of the first categories of expenditure by type, and then applies weights to identify the “functional classification” of expenditure within each of the types. This is done by ranking each type of disaster-relevant project/programme or recurrent budget item according-to the matrix as in Figure 1: Classification by Type and Function of DRM-Relevant Expenditure.

It is predicated that in most of the selected budget lines there would be components of policy, advocacy and research that could contribute to the overall design and implementation of DRM.

These aspects may not always be clearly identifiable, even in detailed budget documentation, but are intuitively present at some stage. For example, every DRM-relevant investment or activity must have some basis in

policy and a decision making process (Functional Classification: A1); almost every investment project will involve some element of advocacy, awareness and/or capacity building, if only for the beneficiaries of the project (A2); almost every DRM-relevant project will also involve some consideration of disaster risk research and assessment, contributing to project design (A3); and the main capital investment will be clear (A4). For post-disaster expenditure classification B1 expenditure is deemed to be completely for immediate relief. In Classification B2, expenditure is disaggregated across the functional classifications in a similar manner as for the pre-disaster categories.

How the three components of a) level of relevance, b) type of expenditure and c) functional classification of the expenditure come together in the analysis of the Lao PDR budget data is illustrated in Figure 2: Lao PDR: DRM-Relevant Expenditure Classifications in Ministry Budgets.





Figure 1: Classification by Type and Function of DRM-Relevant Expenditure

PROJECT TYPE CLASSIFICATION	DISASTER RISK REDUCTION AND PREPAREDNESS				POST-DISASTER RELIEF, RECOVERY AND RECONSTRUCTION	
	Policy & Institutional Development to Reduce Disaster Risk A1	Community, Business or Official Awareness/ Advocacy Programmes and Capacity Building A2	Disaster Research, Early Warning Systems, Disaster Risk Analysis etc. A3	Disaster Risk Reduction Capital Investment (infrastructure, construction, equipment etc). A4	Post-Disaster Relief B1	Recovery and Reconstruction: including Build-Back-Better (BBB) Components to be identified separately if possible B2
A1	95%	5%				
A2	5%	95%				
A3	2.5%	2.5%	95%			
A4	2.5%	2.5%	5%	90%		
B1					100%	
B2a	5%	2.5%	2.5%			90% Reconstruction to restore pre-disaster conditions, no upgrading or BBB
B2b	5%	2.5%	2.5%	20%		70% Reconstruction project involving BBB measures that contribute to DRM in the future e.g. raising the level of a dyke, or deepening and widening a flood prevention canal

Figure 2:
Lao PDR:
DRM-Relevant
Expenditure
Classifications
in Ministry
Budgets

No.	Budget Division and Item	DRM Relevance Index	Project Type/ Functional Expenditure Classification
I	Normal Administration Expenditure		
1	Roads and Bridges	2	A3
2	Erosion Prevention	4	A3
3	Irrigation	3	A3
II	Subsidies and Contributions		
4	Rural Development	1	A3
5	Goods production promotion	1	A4
6	Preventive and treatment and healthcare	1	A2
7	Improvement of media communication	2	A3
8	Indemnities for natural hazards	5	B1
9	Incentives for people working on disaster relief	5	B1
III	Other Expenditure		
10	Social welfare contribution	1	A2
IV	Capital Expenditure		
11	Externally Financed Investment	1	A4
12	Bridge construction	1	A4
13	Road construction (clay, asphalt & concrete roads)	1	A4
14	Waterway marking	2	A4
15	Embankment construction	5	A4
16	Water supply projects (reservoir, pipelines)	2	A4
17	Electricity supply projects (electricity grid, hydropower, dams)	1	A4
18	Telecommunications projects	1	A4
19	Irrigation projects	3	A4
20	Other infrastructure projects	1	A4
21	Heavy Machinery Purchase (earth excavation)	1	A4
22	Seeds & offspring	1	B1
23	Bridge maintenance	1	A4
24	Road maintenance (clay, asphalt & concrete roads)	1	B2
25	Waterway marking maintenance	2	A4
26	Embankment maintenance	5	A4
27	Water supply maintenance (reservoir, pipelines)	2	A4
28	Power station & Electricity supply maintenance (electricity grid, hydropower, dams)	1	A4
29	Telecommunications maintenance	1	A4
30	Irrigation maintenance	3	B2
31	Heavy Machinery Maintenance (earth excavation)	1	A4
32	Other infrastructure/fixed asset maintenance	1	A4

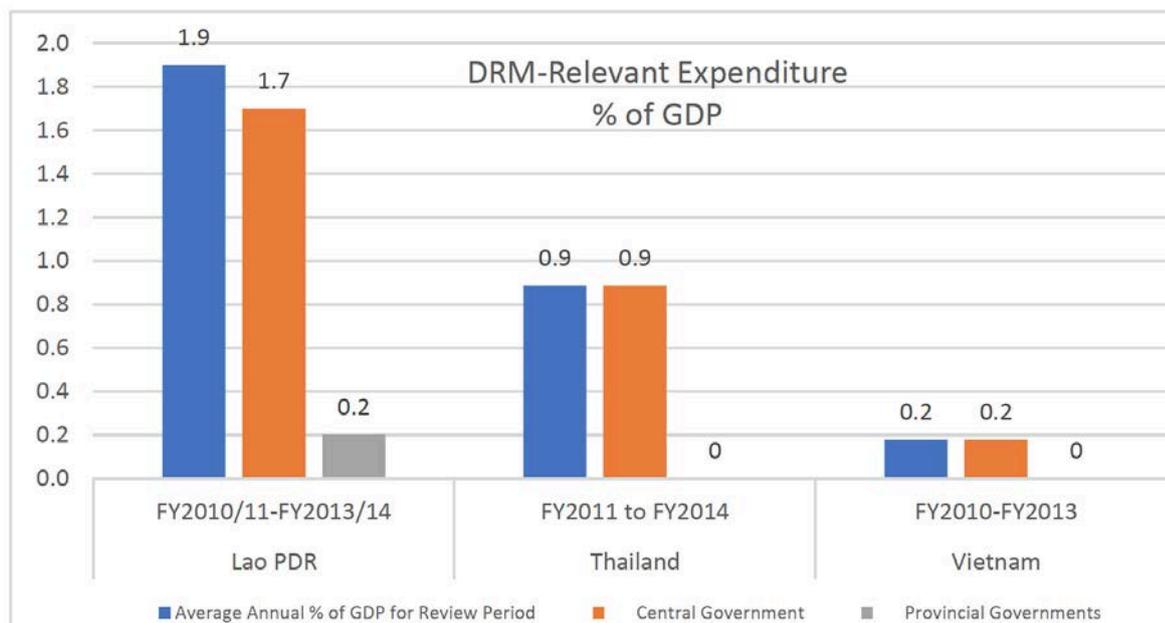
6. DRM Expenditure Analysis

6.1. DRM-relevant expenditure: National comparisons

As explained in Section 2.4, the underlying time periods and scope of the budget data available for analysis varied across the three countries. The inter-country analysis of

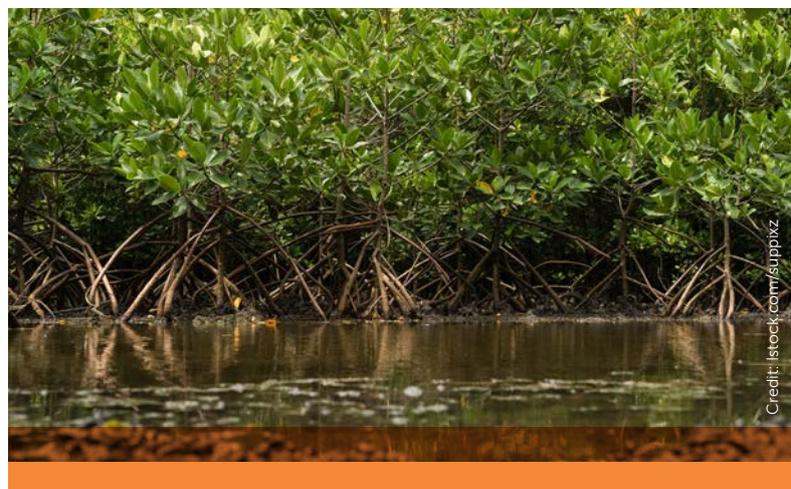
DRM-relevant expenditure should therefore be interpreted as a guide only. The level of DRM-relevant expenditure in relation to GDP in the three countries is illustrated in Figure 3.

Figure 3: DRM-Relevant Expenditure: Percent of GDP



Note: Vietnam five ministries and three provinces only

In Lao PDR total DRM-relevant expenditure for both government and provincial budgets was estimated at about 1.9 percent of GDP. This was comprised 1.7 percent for central government expenditure and 0.2 percent for provincial expenditure. In Thailand, the central government expenditure relevant to DRM was estimated at 0.9 percent of GDP²². In Vietnam, the proportion of DRM-relevant expenditure was equivalent to 0.2 percent of GDP²³. If whole-of-government expenditure was available for analysis Vietnam's figure would likely have been higher.



²² Thailand CPEIR 2012 for found that climate change expenditure was equivalent to an estimated 0.5 percent of GDP.

²³ Vietnam CPEIR 2015 for found that climate change expenditure in the five ministries under review was equivalent to an estimated 0.1 percent of GDP.

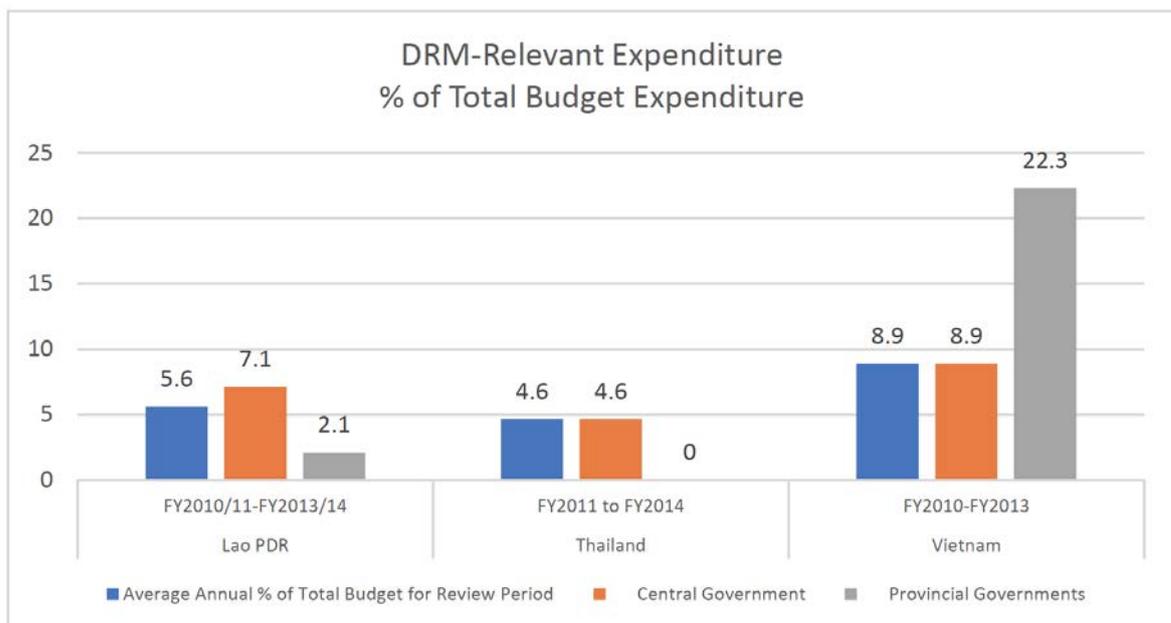
Figure 4: DRM-Relevant Expenditure: Percent of Total Budget Expenditure illustrates estimated DRM-relevant expenditure as a proportion of the total budget expenditure analysed²⁴. In Lao PDR it is estimated that DRM-related expenditure accounted for an average of 5.6 percent of total combined ministry and provincial budgets over the four years, this comprised an estimated 7.1 percent of total ministry expenditure and 2.1 percent of provincial expenditure. In Thailand, the comparable central government expenditure was estimated to have been equivalent to 4.6 percent of total budget expenditure²⁵. In Vietnam, estimated DRM-relevant expenditure in relation to the central government budget was estimated at 8.9 percent²⁶. For the three provinces analysed in Vietnam, DRM-relevant expenditure was estimated at 22.3 percent of the combined total expenditure.

Estimated DRM-relevant expenditure in the three countries is therefore generally

comparable in terms of its proportion of total budget expenditure and percent of GDP. Expenditure on DRM is always likely to vary between countries depending on the assessed hazard carrying forward. This appears to have been the case, for example, in Lao PDR for 2010/11 where expenditure on post-disaster relief, recovery, and reconstruction was reported as being high when no disaster occurred in that year. What the comparison of the DRM-relevant expenditure between the three countries tends to show is that while different, the differences may be explained by these various factors.

The following sections analyse DRM-relevant expenditure by levels of relevance, spending ministries and agencies, and by the type and functional classification of the expenditure. Together these provide a comprehensive overview of expenditure on DRM in the three countries.

Figure 4: DRM-Relevant Expenditure: Percent of Total Budget Expenditure



Note: Vietnam five ministries and three provinces only

²⁴ Lao PDR: whole-of-central government budget & all provinces

Thailand: whole-of-central government budgets plus one province (not included)

Vietnam: five ministries as selected for the CPEIR, plus three provinces

²⁵ Thailand CPEIR 2012 found that CC expenditure was equivalent to an estimated 2.7 percent of total budget expenditure.

²⁶ Vietnam CPEIR 2012 found that CC expenditure in the five ministries under review was equivalent to an estimated 18 percent of total expenditure in these five ministries.

6.2. DRM-relevant expenditure by relevance

The aggregate levels of DRM-relevance assessed for expenditure across the three countries for their respective review periods is indicated in Table 1: DRM-Relevant Expenditure by Assessed Level of Relevance. In Lao PDR, only 10.3 percent of estimated DRM-relevant expenditure was related to expenditure that was “completely/very-high/highly” related to DRM activities. In Thailand, the comparable figure was estimated at 49.4 percent. In Vietnam expenditure was 23.5 percent for the five central government ministries and 6.9 percent for the three provinces.

The difference in this categorisation of relevance relates to the detail available in Thai and Vietnam datasets. In Thailand, the three levels of detail in the budget lines enabled a high level of granularity to be determined for each expenditure line. In Vietnam, the pre-selection of the dataset through the CPEIR meant that the basic data was previously assessed as relevant to climate change adaptation. In comparison, the CPEIR also found that the majority of climate change response projects under implementation (58 percent on average)

and 42 percent of annual climate change response allocations could be characterised as “low” or “marginal” relevance to climate change response, as classified by the Typology of Climate Change Response Expenditure. These projects consist of activities that display attributes where indirect adaptation and mitigation benefits may arise but are not explicitly listed in project objectives or stated results/outcomes.



Table 1: DRM-Relevant Expenditure by Assessed Level of Relevance

DRM-RELEVANT EXPENDITURE BY ASSESSED LEVEL OF RELEVANCE						
%						
Level of Relevance to DRM	Lao PDR FY2010/11 to FY2013/14			Thailand FY2011 to FY2014	Vietnam (FY2010 to FY2015 Central & FY2010 to FY2013 Provinces)	
	Central Govt	Provincial Govt	Total	Central Govt	Central Govt	Provincial Govt
Complete/Very High	10.3	9.3	10.2	44.2	23.5	6.9
High	-	0.2	0.1	5.2	-	-
Mid	5.7	25.8	8.0	31.2	23.1	45.1
Low	0.7	4.7	1.2	2.0	53.4	48.0
Minor	83.1	59.9	80.6	17.4	0.0	-
Total	100.0	100.0	100.0	100.0	100.0	100.0

6.3. DRM-relevant expenditure by ministries

The following section analyses the level of total DRM-relevant expenditure across all ministries, and within the respective budgets of the individual ministries. The various ministries and their respective mandates/responsibilities, are not identical across the three countries, thus the expenditure recorded in the following analyses are indicative and not directly comparable.

Disaggregating the expenditure by individual ministries/agencies indicates that in all three countries a small number of key ministries account for a significant majority of DRM-relevant expenditure. (See Table 2: Total DRM-Relevant Expenditure: Percent by Key Ministries). In Lao PDR and Vietnam, the ministries of public works & transport, and transport and construction respectively accounted for around half of all DRM-relevant

expenditure in the two countries. In Thailand, the corresponding ministry, (Ministry of Interior), was the largest contributor to total DRM-relevant expenditure at 17.0 percent of the total. Over the period of the analysis the Thai DRM-relevant expenditure was dominated by the Central Fund²⁷, providing support in post-disaster situations. This agency accounted for 53.9 percent of total DRM-relevant expenditure. All of this was allocated to post-disaster relief, recovery, and reconstruction, primarily in response to the severe flooding in 2011.

The ministries of agriculture in the three countries were the primary sources of DRM-relevant expenditure, with Vietnam ranking the highest at 39.4 percent; followed by Lao PDR at 18.4 percent and Thailand 10.1 percent of total DRM expenditure in the

Table 2: Total DRM-Relevant Expenditure: Percent by Key Ministries

TOTAL DRM-RELEVANT EXPENDITURE: PERCENT BY KEY MINISTRIES			
	Lao PDR	Thailand	Vietnam
Total DRM-Relevant Expenditure: % by Key Ministries	FY2010/11 to FY2013/14	FY2011 to FY2014	FY2010 to FY2013
Public Works and Transport/Mol/MoT&MoC	46.4	17.0	52.0
Agriculture and Forestry/MoAC/MARD	18.4	10.1	39.4
Organisations & Provincial Administration	12.1	-	-
Labour and Social Welfare	6.1	-	-
Education	3.6	-	-
Science and Technology	3.2	-	-
Public Health/Public Health	2.6	10.1	-
Natural Resources and Environment	2.4	3.1	8.4
Industry and Trade	-	-	0.2
Federal Budget/Central Fund	-	53.9	-
Others	5.0	5.8	-
Total All Ministries//Five Ministries	100.0	100.0	100.0

²⁷ The Thai Government's Central Fund is a special or contingency fund that can be used for different purposes that have not otherwise be included in the budget. Expenditure from the Fund can be used for disaster relief as well as medical care of civil servants, compensation for construction costs, pensions and gratuities (Thailand DRM-PEIR).

respective countries. The ministries of natural resources and environment contributed 2.4 percent and 3.1 percent in Lao PDR and Thailand respectively. In Vietnam, this ministry contributed 8.4 percent of total DRM expenditure.

Almost the same ministries record the highest proportion of their own ministry budgets being DRM-relevant as illustrated in Table 3: DRM-Relevant Expenditure: Percent of Key Ministry Budgets. The ministries responsible for agriculture are all recorded as having amongst the highest proportions of their budgets relevant to DRM. In Vietnam, it was estimated that 28.3 percent of the agriculture ministry budget had some relevance to DRM. Lao PDR and Thailand reported similar figures with 20.1 percent and 14.8 percent respectively.

The ministries of natural resources and the environment record the next highest

proportion of DRM-relevance in their budgets, in Lao PDR and Thailand having 12.1 percent and 12.2 percent and Vietnam 26.5 percent of their budgets relevant to DRM. The ministries generally responsible for public work and construction had the third highest levels of DRM-relevance within their own budgets. In Lao PDR, the ministries of transport and construction recorded 16.4 percent of the combined budgets as having DRM-relevance with Thailand (ministry of interior) and Vietnam (transport and communications) at 6.2 percent and 6.8 percent relevance to DRM in their respective ministry budgets. It may be noted that agencies with nominal responsibility for disaster policy and management tend to have limited authority and access to funds.

Table 3: DRM-Relevant Expenditure: Percent of Key Ministry Budgets

DRM-RELEVANT EXPENDITURE; % OF KEY MINISTRY BUDGETS			
	Lao PDR	Thailand	Vietnam
DRM-Relevant Expenditure; % of Key Ministry Budgets	FY2010/11- FY2013/14	FY2011 to FY2014	FY2010- FY2013
Agriculture and Forestry/Mag&Co-ops/MARD	20.1	14.8	28.3
Public Works and Transport/Interior/MoT&MoC	16.4	6.2	6.8
Natural Resources and Environment	12.1	12.2	26.5
Labour and Social Welfare	10.1	-	-
Science and Technology	9.0	-	-
Organisations & Provincial Administration	3.7	-	-
Public Health	2.5	5.4	-
Education	1.3	-	-
Industry and Trade	-	-	6.9
Federal Budget/Central Fund	-	16.9	-
Others	3.4	0.4	-
Average All Ministries	7.1	4.6	11.8

The DRM-relevant expenditure shown in Tables 2 and 3 relate to expenditure in response to the flooding in 2011. The Thai Central Fund is a type of contingency fund to be used for unforeseen expenditure, such as disaster response.

These results indicate that the agriculture, forestry, fisheries and natural resource and environment sectors, which often also involve projects and activities for irrigation, watershed management and sustainable livelihoods, should be the focal points for additional DRM support.

6.4. DRM-relevant expenditure by type of investment (budget line)

This section compares the type of DRM-related expenditure from the perspective of the type of recurrent or investment expenditure, including the categorisation of each budget line according to the overall output/objective of the expenditure (See Table 4: DRM-Relevant Expenditure by Type of Investment) Secondly, the DRM-relevant expenditure is classified by its function within the various investment

types, providing an indication of the function or purpose of the expenditure in relation to the Sendai priorities (See Table 5: DRM-Relevant Expenditure by Functional Purpose (Sendai Priority/Function). The figures represent the aggregate annual averages over the three review periods.

Table 4: DRM-Relevant Expenditure by Type of Investment²⁸

DRM-RELEVANT EXPENDITURE BY TYPE OF INVESTMENT					
DRM-Relevant Expenditure by Sendai Priority/Function	Lao PDR FY2010/11 to FY2013/14			Thailand FY2011 to FY2014	Vietnam FY2010 to FY2015
	Central Govt	Provincial Govt	Total	Central Govt	Central Govt
A1 DRM Policy & Institutional Development	-	-	-	0.3	6.6
A2 DRM Awareness/Advocacy & Capacity Building	1.0	1.4	1.1	0.5	7.9
A3 DRM Research, EWS, Hazard Mapping & Analysis etc.	0.4	1.6	0.5	0.6	10.4
A4 DRM Risk Reduction & Capital Investment.	87.1	91.3	87.6	43.1	68.8
B1 Post-Disaster Relief	7.2	0.6	6.4	28.2	-
B2 Post-Disaster Recovery & Reconstruction	4.3	5.1	4.4	27.3	6.3
Total Expenditure by Function	100.0	100.0	100.0	100.0	100.0

²⁸ As defined in 5.3 Classification of DRM expenditure by project or investment type and function

Table 4: DRM-Relevant Expenditure by Type of Investment illustrates that the largest proportion of DRM-relevant expenditure was allocated to budget lines focused on risk-reduction and capital investment expenditure. Projects/investments of this type (A4) accounted for 87.6 percent of all estimated DRM-relevant expenditure in Lao PDR, 43.1 percent in Thailand and just over two-thirds in Vietnam.

There were no budget lines or projects specifically focused on policy and institutional development (type A1) in Lao PDR and only 0.3 percent of DRM-relevant expenditure was specifically focused on this project type in Thailand. Investment in type A1 was, however, recorded at 6.6 percent in Vietnam. The other two categories of pre-disaster project type (A2 & A3) awareness, capacity building and research, early warning systems and hazard mapping together accounted for only 1.6

percent and 1.1 percent of expenditure in Lao PDR and Thailand respectively. In Vietnam, an estimated 18.3 percent of expenditure was of these types.

Projects and budget lines specifically focused on post-disaster activities (types B1 and B2) accounted for about 10.8 percent of DRM-expenditure in Lao PDR, and 6.3 percent in Vietnam. In Thailand, the major post-disaster expenditure on flood relief, recovery, and reconstruction boosted expenditure in these types of investment to account for 55.5 percent of all DRM-related expenditure. Much of this expenditure was incurred in FY2011; 96 percent of all post-disaster expenditure came through the "Central Fund", and this accounted 53.9 percent of total DRM-relevant expenditure over the four years.



6.5. DRM-relevant expenditure by functional classification (end-use)

Table 5: DRM-Relevant Expenditure by Functional Purpose (Sendai Priority/Function) illustrates the analysis of the functional purpose of the DRM-expenditure providing an indication of expenditure directly related to the four Sendai priorities. In all three countries the largest proportion of DRM-relevant expenditure is estimated to have been allocated to disaster risk reduction and infrastructure investment (type A4). These types of functional investment may

cover a wide range of sectors but, as seen in Section 6.3 above, the expenditure is centred on a small number of ministries.

In Lao PDR, approximately three-quarters of DRM-relevant expenditure focused on physical investment (functional type A4); in Vietnam, the proportion was two-thirds, while in Thailand it was estimated at 37.1 percent of total DRM-relevant expenditure. The proportion expended on this type of pre-disaster investment

Table 5: DRM-Relevant Expenditure by Functional Purpose (Sendai Priority/Function)

DRM-RELEVANT EXPENDITURE BY FUNCTIONAL PURPOSE (SENDAI PRIORITY/FUNCTION)							
DRM-Relevant Expenditure by Type of Investment	Lao PDR FY2010/11 - FY2013/14			Thailand FY2011 to FY2014	Vietnam (FY2010-FY2015 Central & FY2010 to FY2013 Provinces)		
	Central Govt	Provincial Govt	Total	Central Govt	Central Govt	Provincial Govt	Total
A1 DRM Policy & Institutional Development	2.5	2.7	2.5	2.7	6.8	7.6	6.7
A2 DRM Awareness/ Advocacy & Capacity Building	3.3	3.8	3.3	3.4	7.7	6.1	7.7
A3 DRM Research, EWS, Hazard Mapping & Analysis etc.	4.8	6.2	5.0	4.0	17.0	18.2	11.3
A4 Disaster Risk Reduction & Capital Investment.	77.5	80.7	77.9	37.1	63.5	50.1	66.6
B1 Post-Disaster Relief	7.2	0.6	6.4	28.2	-	-	-
B2 Post-Disaster Recovery & Reconstruction	4.8	6.0	4.9	24.6	4.9	18.1	7.7
Total Expenditure by Function	100.0	100.0	100.0	100.0	100.0	100.0	100.0



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(functional type A4) was lower in Thailand as expenditure on post-disaster activities was much higher in response to flood relief at 28.2 percent of expenditure (functional category B1) and to recovery and reconstruction (functional category B2) at 24.6 percent of DRM expenditure. This totaled 52.8 percent of all DRM-relevant expenditure in Thailand. In Lao PDR and Vietnam, the amounts being allocated to these two post-disaster functional categories of expenditure were much lower at an aggregate of 11.3 percent and 7.7 percent respectively.

As seen in the previous Table, only a very small number and amount of budget line or

investment expenditure was identified as being wholly focused on policy and institutional development for DRM (functional expenditure category A1). However, it was estimated that 2.5 percent of DRM-relevant expenditure in Lao PDR, 2.7 percent in Thailand and 6.7 percent in Vietnam, would have made some contribution to building policy and institutional capacities. The other two categories of pre-disaster functional type (A2 & A3) accounted for an estimated 8.3 percent of DRM-relevant expenditure in Lao PDR, 7.4 percent in Thailand and 19.0 percent in Vietnam.

6.6. Summary findings and recommendation relating to expenditure for DRM

The DRM-PEIRs found that expenditure in support of DRM appeared to be low in relation to both GDP and total budget expenditure in the three countries. Estimated expenditure on DRM-related activities was however higher than that estimated to have been relevant to climate change investments in the CPEIR conducted in both Thailand and Vietnam.

Expenditure on DRM-relevant activities is concentrated in a small number of similar ministries and agencies across each of the three countries. These ministries include those responsible for agriculture, irrigation, natural resources, environment and construction. Agencies that have nominal responsibility for

disaster policy and management tend to have limited authority to implement DRM measures, such as in agricultural livelihoods, or infrastructure, or in the delivery of emergency assistance, that are frequently under the mandates of other ministries and agencies. Additionally, accessibility to funds for major DRM interventions by those DRM-policy agencies is limited. DRM-relevant expenditure generally comprises small, embedded components within other projects/investment or recurrent budget lines. DRM-related expenditure is also concentrated in physical infrastructure investments.

DRM-relevant expenditure specifically focused on activities related to DRM policy, community awareness, capacity building, early warning and research is very small. Where expenditure in these areas has been identified it has comprised of embedded components in other projects and investments. While expenditure on similar DRM-relevant activities at the provincial levels appears to be higher in relative terms, it is lower in absolute terms than in central government budgets.

With the increasing risks and frequencies of natural hazards, there is a need to better assess DRM in all major projects, investments and budget lines. As the costs resulting from disaster impacts and recovery/reconstruction increase there is a need to pre-emptively finance disaster risk reduction. However, hazard risk analysis, developing early warning systems and building resilience require investment and cooperation across all sectors.

It is therefore recommended to:

- Provide capacity building opportunities on all aspects of the project cycle at the ministries of finance and in sector ministries and agencies. Ministries of finance should have a clear understanding of the cross-sectoral linkages and benefits of DRM investments that build resilience, thereby helping to minimise future post-disaster costs. Sector ministries should have capacity building to ensure that DRM measures are fully mainstreamed and incorporated into all policies, activities and projects.
- Conduct research to determine the appropriate level of DRM expenditure in relation to national hazard risks; this would include analysis of regional and global DRM expenditure; identification of best practices from elsewhere for allocating resources to DRM; and better understanding how DRM expenditure are measured and monitored.

- Revise project planning cycles and appraisal processes to ensure that DRM is considered. For example, each budget submission or capital investment proposal should include an outcome/output matrix indicating the contribution of the expenditure or investment to a range of cross-cutting issues, including DRM, climate change and the environment. This could be incorporated into a standard EIA submission. Using a matrix, ministries of finance could be supported with capacity building to devise a weighting system to assist in ranking priorities for allocation of scarce budget resources.
- Introduce a budget-tagging system for DRM into the annual budget process.

With the increase and frequency of natural hazards resulting from climate change, and the consequences that this could have for the livelihoods of the rural poor, it is further recommended to:

- Prioritise investments in disaster risk reduction. This would support the achievement of the Sendai priorities and would also contribute to the achievement of Agenda 2030 by focusing on the resilience and sustainability of all aspects of livelihoods and coping strategies for the poor.

ANNEX 1

Classification of Expenditure for DRM Relevance

CRITERIA AND TYPOLOGY SELECTED EXAMPLES			
Relevance to DRM	DRM Relevance Index & Weighting	Relevance Criteria	Typology & Selected Examples (not complete)
Very High Relevance	5 100%	Objective is to improve preparedness and provide greater disaster resilience Relief, recovery and reconstruction expenditure	<ul style="list-style-type: none"> ■ Development of disaster management policies and/or plans all levels ■ Strengthening disaster awareness and management capacity in provincial administrations or in village communities ■ Flood protection for river-side village/town (dykes, seawalls etc.) ■ Tsunami/storm surge protection for coastal village/town ■ Retaining walls or hill-side stabilisation for highland village protection from landslides ■ Relocation of villages away from vulnerable locations ■ Vaccination/screening against trans-border or unusual disease outbreaks (human/ animal/plant) ■ Relief, recovery and reconstruction expenditure
High Relevance	4 75%	Objective is to deliver concrete and visible outcomes that improve disaster preparedness and resilience alleviating disaster impacts	<ul style="list-style-type: none"> ■ Disaster risk management and disaster risk reduction capacity building, communications, advocacy and awareness ■ Research and development relating to DRM, including changing design of a programme to improve disaster preparedness &/or resilience (e.g. extra costs of construction/ design modifications), beyond routine maintenance and/or rehabilitation) ■ Strengthening coastal or river protection systems or irrigation systems against storm surges/tsunamis; e.g. embankments, dykes etc. ■ Public health and other healthcare activities that relate directly to disasters or disaster-sensitive diseases; e.g. water-borne infections ■ Improvements to water quality management that reduce risks to water quality from extreme rainfall events and flooding ■ Construction of fishing harbours for disaster shelter ■ Reservoir improvement with multiple purpose objectives ■ Flood prevention, retardation, discharge and regulation ■ Any short term or other programmes for disaster relief and/ or reconstruction (incl. humanitarian aid) ■ Activities that respond to recent disaster events where the activity will have longer-term incremental benefits for future disaster protection/resilience; e.g. protection of water resources, relocation of roads; strengthening bridges etc.

**CRITERIA AND TYPOLOGY
SELECTED EXAMPLES**

Relevance to DRM	DRM Relevance Index & Weighting	Relevance Criteria	Typology & Selected Examples (not complete)
Mid-relevance	3 50%	Activities with secondary objectives related to building disaster preparedness or resilience; or sector-type programmes with a range of activities that are not easily separated but include at least some that promote disaster preparedness or resilience	<ul style="list-style-type: none"> ■ General irrigation projects (improvement of irrigation system, canal system, sluice/water intake, pump station, dredge of canal bed for drainage) ■ Agriculture/Forestry and agro-forestry activities that are targeted primarily at economic or livelihood objectives, but which will have major disaster resilience benefits; irrigation systems, water management systems; steep slope forestry plantations ■ Water storage, water efficiency and/or irrigation that is targeted primarily at improving basic services and/or livelihoods but which will also provide protection against drought, flooding and/or disaster related diseases ■ Environmental protection (including eco-tourism, mangrove conservation), that is targeted primarily at improving livelihoods but which will also encourage communities to put an economic value on ecosystems and raise awareness of the impact of disasters ■ Energy resilience (e.g. renewable energy reducing dependence on grid)
Low Relevance	2 25%	Indirect preparedness and resilience measures; activities with other primary and secondary objectives but which still have identifiable DRM benefits	<ul style="list-style-type: none"> ■ General livelihood measures, motivated by poverty reduction, including building household reserves and assets and reducing vulnerability; and also including social protection measures aimed at vulnerable communities ■ Agricultural or similar research activities that may have some minor but unquantified disaster resilience benefits ■ General planning capacity, either at national or local level, unless it is explicitly linked to disaster resilience, in which case it would be high ■ Programs aimed specifically at protecting watersheds and/or improving water quality or providing power/communications to unserved communities ■ Law & order, defence and national security activities that indicate some disaster linkages (could be classification 3 if more relevant to disaster relief) ■ Any other activities that meet criteria for climate resilience and adaptation
Minor Relevance	1 10%	Only very indirect and theoretical links to disaster preparedness and resilience	<ul style="list-style-type: none"> ■ Administrative and other public services that do not have a specific disaster-related component ■ Agricultural or other research activities that do not have any explicit disaster-relevant components ■ Rural water supply and sanitation systems ■ Monitoring stations for aqua-disease prevention
Zero Relevance	0 Zero	No relevance to disasters	<ul style="list-style-type: none"> ■ Construction of government and other administrative buildings ■ Education and health programmes that do not have any explicit disaster-relevant components (but note that if schools have disaster awareness in curriculum this should be counted as DRM expenditure).

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May 2018

Published by:



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