

**Consultancy on Understanding Existing Methodologies for Allocating and Tracking DRR  
Resources in 6 Countries in the Americas: (Colombia), Costa Rica, Guatemala, Mexico, Panama  
and Peru**

**Final Report**

**This Version: October 31, 2012**

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**Introduction**

This Final Report puts together the lessons learned from the study of five (six) national experiences on methodologies for allocating and tracking disaster risk reduction (DRR) resources. The study took place from August to October (November) of 2012 and included country visits and a workshop with national delegations. The Consultation Forum “Understanding Public Investment for Disaster Risk Reduction”, that took place in San Cristobal de las Casas, Chiapas, Mexico, on September 27<sup>th</sup> and 28<sup>th</sup>, brought together teams of state officials who are carrying out the implementation of novel DRR instruments reported here.

Overall, the comparative study of this set of Latin American countries shows a regional trend and national variation. First, the regional trend is with respect to the implementation of budgetary and planning policies to increase, improve and quantify public investment for DRR, and disaster risk management broadly understood. Without exception, all national public finance systems are immersed in processes to achieve Hyogo-set goals. However, processes are at early stages so that their overall impact on public finance systems is still marginal.

Secondly, the national variation is with respect to the form that DRR policies and instruments take. National experiences are different. In particular, Mexico has made remarkable progress in developing a financial protection strategy, which entails developing a financial market for disaster risk. Other countries, such as Peru and Costa Rica, have done significant progress in developing methodologies and rather comprehensive risk analysis toolkits to feed their national system of public investment planning. Paradoxically, while Mexico has not advanced in incorporating DRR criteria in its federal-level system of investment planning, Peru and Costa Rica have not pursued

the financial management track. Guatemala and Panama offer exercises of DRR-tracking (Peru is a nuanced third case), which are still preliminary. The finance bureaucracies of these last set of countries are also eager for making progress on public investment planning and financial management aspects.

The evidence collected for this report is indicative of the impact that the Hyogo Framework has on national processes of public finance. The World Conference on Disaster Reduction (WCDR, 18-22 January 2005, Kobe, Hyogo, Japan) represented a landmark in worldwide understanding and commitment to implement a disaster risk reduction agenda. At the nation-level, this report finds that international cooperation has incorporated the Hyogo Framework in its regular practice. Such an international development push enables national actors at the political and public finance systems who champion the introduction of DRR criteria for investment planning and budgeting. The World Bank, the Inter-American Development Bank and the GIZ, in particular, have supported a wide range of initiatives taking place at finance ministries, planning bureaus and sub-national levels of government. Diverse local actors, from vice-presidents of the Republic to budgetary officials, passing by a network of policy advisers working for the international cooperation and the national public finance systems, take advantage of the country-specific opportunity structures set up by the availability of donor resources and the quality of political will.

Following the goals for the consultancy as defined by the Terms of Reference, the remainder is organized as follows: Section 1 exposes the consultation process followed by the consultancy (Objective B in the ToR). Section 2 analyzes the national experiences on classifying, measuring and accounting public investment for DRR (Objective A in the ToR). Section 3 concludes by highlighting findings and advancing policy recommendations (Objective C in the ToR).

### **1. Facilitation of Consultation, Peer Review and Consensus Building**

This consultancy was set to contribute in the production of two outcomes: a series of five (six) case studies and a consultation forum to share and discuss national practices. The objective established for the case studies was to systematize DRR national practice. In turn, at the San Cristobal

Consultation Forum, the consultant was instructed to facilitate the discussion and further systematization of national experiences.

### 1.1. Case Studies Drafting

The methodology pursued for the case studies followed five steps. First, UNISDR carried out an initial coordination with a national “contact person”, a high-level public servant of the national public finance system (bureaucrats at the ministry of finance or the ministry of planning). Secondly, the consultant established a direct communication with the national contact person and carried out a country visit in August to define the scope of the case study, to gather data and secondary sources for the production of the document, and to interview relevant policy actors. Thirdly, the drafting of the case studies, by either the consultant or a national team, took place since mid-August to mid-September. Fourthly, a process of internal consultation took place, in order to get an “approval” of the drafted case studies by the contact persons. National partners were told that the case studies would be compiled and made available to San Cristobal Forum participants. Finally, a two-week period for revision was established so that the national delegations could carry out adjustments to the drafts presented at San Cristobal.

The designated contact persons are listed in Table 1. The variety of state organizations listed gives a first indication on the variation of DRR national experiences, since the leading agencies have different mandates, such as planning, budgeting and the development of financial instruments.

**Table 1. Case Study Drafting: Contact Persons and Organizations**

Country	Contact Person	State Organization
Colombia	Juan Dionisio Arabia	Ministry of Finance and Public Credit, General Directorate of Public Credit and National Treasury
Costa Rica	Francisco Tula	Ministry of Planning and Economic Policy, Investments Unit
Guatemala	Jorge Guillermo Escobar	Ministry of Economy and Finance
Mexico	Salvador Prieto	Ministry of Finance and Public Credit, Unit of Insurance, Pensions and Social Security

Panama	Alejandro Vernaza	Ministry of Economy and Finance, Directorate of the Budget
Peru	Jorge Escurra	Ministry of Economy and Finance, Directorate of Investments Planning

Research in Peru worked as a pilot case study. Interviews and data gathering were carried out in early August, taking advantage of the residence of the consultant and the early designation of a contact person. Then, a general guideline (see Annex 1, *Ayuda Memoria*) was elaborated and sent over the remaining national contact persons, as soon as the contact with governments was established by UNISDR.

## 1.2. The San Cristobal Forum

The participation of the consultant in the San Cristobal Forum took the form of supporting the organization of the actual event, chairing some of the sessions, summarizing exchanges and lessons learned for forum participants at the end of day one, delivering a first comparative analysis of national experiences on day two, and facilitating communication among delegations and the dissemination of national experiences throughout the event. A total of 23 representatives from Ministries of Finance and Planning from 6 different countries participated: Francisco Tula, Alvaro Montero, Johanna Salas, Roberto Flores, and Rosaura Trigueros Elizondo (Costa Rica); Jorge Guillermo Escobar and Luis Ovando (Guatemala); Salvador Pérez, Laura Gurza, Anne Lice Hernández, Luis Eduardo Pérez, Luis Miguel García, Liliana López, Ana Laura Ayala, and Rubem Hofliger Topete (Mexico); Alejandro Vernaza, Vladimir Vásquez, Manuel Bernal and Julio Miranda (from Panama); and Wilfredo Huarcaya, Martín Orellana, Jaime Saavedra and Wilmer Chuquilín (Peru).

The San Cristobal Forum started with two questions that resonated in much of what was discussed during the two days: whether there was investment for development or only disaster reconstruction expenditure and how could DRR get institutionalized. With regard to the question of development expenditure, expositors showed that much of the progress done with regard to DRR steams from national processes of planning system strengthening. The presentations of the

Panama, Costa Rica and Peru experiences, in particular, showed that the improvement of planning practice enables the improvement of DRR practice. Regarding the question on institutionalizing DRR, expositors showed that the actual way by which DRR concern and practice have unfolded takes diverse national forms: data banks and disaster risk maps; pre-investment risk analysis, including manuals, capacitation, and public investment regulations mandating risk analysis; budgetary exercises to track DRR expenditure; budgetary programs to account for multi-sectoral and multi-level DRR expenditure, and financial instruments to manage and transfer catastrophe risk.

Another lesson learned at San Cristobal as well as during the case study research was the importance of policy leadership. All of the cases have experienced an improvement on enabling conditions. Disasters have improved in intensity worldwide and the public pays more attention to it, thanks to the visibility given by the global climate change debate. Political stability enhances the continuity of macro policy processes. Economic stability also constitutes a general achievement for the region. National political authorities are more sympathetic to DRR policies. And there is willingness and resources from the international cooperation to implement DRR policies. In sum, conditions are much more favorable than two decades ago. With all, the diverse forms that policy progress has taken in the six studied cases are a function of the leadership role played by a network of politicians, technocrats and supportive experts.

Having already mentioned the role played by the international cooperation, it is important to highlight that the diffusion of DRR policies appears to be a case of synergetic partnership among international development agencies. Time and again, interviewed technocrats manifested their satisfaction with the support of WB, IADB and GIZ projects, while considering that such initiatives supported one to the other, rather than produce a duplication of efforts which is not an uncommon observation in development practice.

The content of the case studies is schematized and reported in Section 2.

Functionaries of the hosting country presented evidence and reflections not developed in the case study. FONDEN General Director Rubem Hofliger Topete presented the Mexican experience of

reconstruction with a risk prevention approach, with estimations of how more profitable it is “to build back better” than to get infrastructure back to its-pre disaster state. In the case of Tabasco, in particular, after the 2007 floods, reconstruction followed a DRR approach, using upgraded construction codes, building on ad-hoc hydrology studies to understand the complexities of the river basin system of the state of Tabasco as well as on ad-hoc urban planning and human geography (*acondicionamiento del territorio*) studies. The presentation aimed to show the importance of resilience in the face of severe disasters. The information system built over the years by the government of Mexico documents very clearly that in 2010 infrastructure damage was smaller than in 2007 despite rain intensity was much higher.

FONDEN is working in partnership with the World Bank to develop a series of relevant macro studies: an integrative evaluation of DRR investment, an assessment of the use of data banks on disaster risks in policy making, an analysis of the impact of DRR investment, as well as more specific studies. The World Bank is working on a final report that will be made available to the public.

Forum dynamics during the second day revolved on exchanges at working tables. The working table on how-to-track-DRR found important similarities between the tracking exercises carried out in Mexico and Philippines. Yet, while the study on the Philippines has worked only direct DRR expenditure, the World Bank study on Mexico is developing a methodology that aims to quantify embedded expenditure as well. This issue raised a discussion. For some experts, embedded investment is a problem with no apparent solution, since incremental costing is not easy to disentangle. Another issue raised was that of institutionalization: how would the exercise of tracking DRR could become a recurrent and standardized governmental practice?

The budgetary table produced an insightful discussion too. There was awareness that the methodology designed to classify expenditure might not have a correspondence with the actual classification because of the lack of training of functionaries from spending units and because they could think that the tool could be used to assign rather than to classify. Thus, there was a recommendation to support a long-term process of training and capacity building with methodological guidelines.

In addition, the table discussed what to do with old public investment. There was the opinion that old public investment is depreciated at that should be accounted by the public finance system. In addition, expenditure targeted to repair old infrastructure constitutes a reposition of depreciated capital more than the addition of new one. From a risk management perspective, moreover, such a form of expenditure does not fit in DRR criteria.

Finally the enabling conditions table discussed extensively on the roles played by politicians and the international cooperation in the construction of DRR practice. An issue raised was the awareness needed for the perverse incentives that DRR initiatives can create. Discussants agreed in the view that if there is a fund for DRR investments, such a device could create the incentives on sub-national levels of government and expending agencies to ask for more and more resources and do less and less on their own

In the afternoon session of the second day, UNISDR presented a Road Map (see Annex 3). Forum participants requested minor modifications that were incorporated into it. A recurrent call made to UNISDR was to help in normalizing risk analysis variables, risk assessment methodologies, budgetary classifiers and so on. A second request was the set up by UNISDR of a mechanism for the continuity of practice exchanges.

Asian experts told the consultant that they were satisfied with the forum and that expected the exchange of experiences would continue in a near future at an Asia forum.

## **2. Analysis of the Practice in Classifying, Measuring and Accounting DRR Investments**

This section summarizes the lessons learned from the case studies on national practices for the accounting of DRR investments. Following the ToR, the section starts by documenting existing mechanisms for allocating and tracking DRR investments. Then, it explains the unfeasibility of differentiated stand-alone and mainstreamed investments with the general level of information and within the timeframe of the study. Finally, the section identifies good practices, lessons learned and knowledge gaps.

### **2.1. Mechanisms for Allocating and Tracking DRR Investments**

The public finance systems of Guatemala and Peru have produced the most systematized mechanisms for allocating and tracking DRR expenditure. By incorporating risk analysis criteria to their investment planning systems, Costa Rica and Panama have developed instruments that can favor a future systematization of DRR investments. Mexico has not advanced in this direction. However, the study carried out in collaboration with the World Bank should conduce to the production of systematic DRR accounting.

#### **Costa Rica**

The Ministry of Planning (MIDEPLAN) has advanced in the development of instruments for pre-investment design and evaluation that incorporate risk analysis criteria. This means that eventually investment projects could provide information on how much of a specific project is allocated to reduce the disaster risk associated to it. If new regulations succeed in making risk analysis criteria an integral part of investment planning and the budgetary system is properly linked to the planning system, the changes undergone will produce a mechanism for tracking DRR investments. In terms of criteria and mechanisms developed to allocate DRR investment, there is no apparent development. As the new planning regulation mandates, all projects passing by the SNIP need to carry out risk analysis and DRR investment. In the vision of the policy set, all investments that involve disaster risk should plan for investments that reduce it. Other than that, there is no guideline or methodology to prioritize DRR expenditure. In other words, there is no apparent definition of types of investments, associated to disaster-prone sectors or geographies that should be privileged.



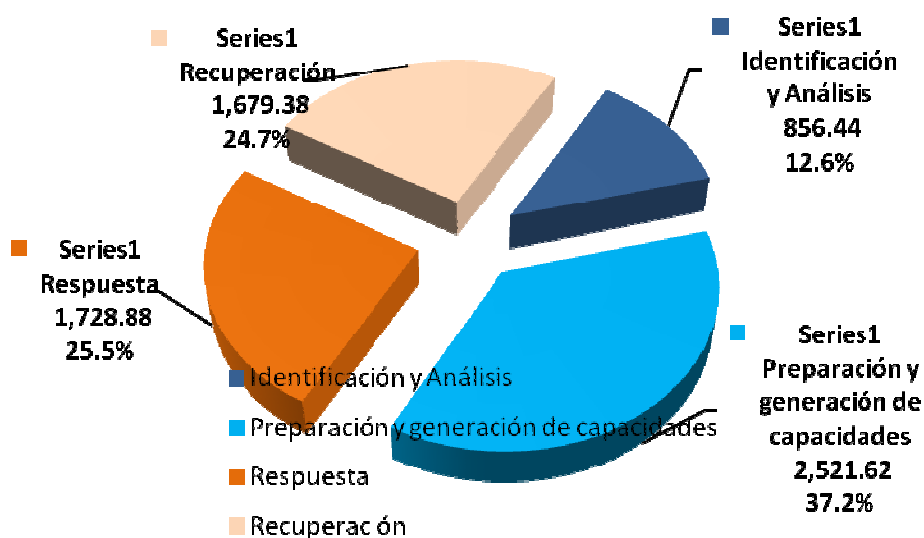
## Guatemala

The only attempt of producing a comprehensive indicator of DRR expenditure has been done by Guatemala's Ministry of Finance (MINFIN) in 2010. The tool is called the *etiquetador* ("label maker") for Attention of Disasters and Risk Management. For 2010, the *etiquetador* amounted more than US\$800 million.

The mechanism to determine what gets accounted for the *etiquetador* is as follows. First, at each spending agency the financial administration unit and the planning unit determine what expenditures should be incorporated. Then MINFIN reviews the classification and an eventual iterative process follows until the classification is agreed.

The *etiquetador* can be assigned for four dimensions of disaster risk management expenditure: (i) identification and analysis, (ii) preparation and capacity making, (iii) disaster response, and (iv) disaster recovery. Thus, the indicator gets together both disaster risk reduction and disaster response types of expenditure. While DRR expenditure reduces the vulnerability to loose assets, disaster response expenditure replaces lost assets. Thus, in principle, the *etiquetador* would produce an over-estimation of actual DRR investment. The following graph show the budgetary classification produced by the instrument.

**Picture 1. Guatemala: Expenditure in Disaster Risk Reduction Management, Year 2010**



Source: Guatemala Case Study.

The actual coding of expenditures follows the general budgetary three-level system, of two digits per level. From generic to specific, the levels are “goal”, “function” and “division”. The goal (finalidad) Attention to Disasters and Risk Management has the code 04. The function Service of Prevention and Control of Fires gets the code 0401. Within it, the division Service of Prevention and Control of Fires and Emergency Rescue is coded 040101. And so on.

**Table 2. The *Etiquetador Presupuestario* of Guatemala**

Código			Descripción
Finalidad	Función	División	
01			SERVICIOS PÚBLICOS GENERALES
02			DEFENSA
03			ORDEN PÚBLICO Y SEGURIDAD CIUDADANA
04			ATENCIÓN A DESASTRES Y GESTIÓN DE RIESGOS
	01		Servicios de Prevención y Control de Incendios, y Servicios de Rescate y Auxilio
		01	Servicios de prevención y control de incendios, y servicios de rescate y auxilio
	02		Gestión para la Reducción de Riesgos a Desastres
		01	Gestión respectiva de riesgos a desastres
		02	Gestión correctiva o compensatoria de desastres
	03		Investigación y Desarrollo Relacionados con la Atención a Desastres y Gestión de Riesgos
		01	Investigación y desarrollo relacionados con Atención a Desastres y Gestión de Riesgos
	04		Atención a Desastres y Gestión de Riesgos
		01	Atención a Desastres y Gestión de Riesgos n.c.d.
05			ASUNTOS ECONÓMICOS
06			PROTECCIÓN AMBIENTAL
07			URBANIZACIÓN Y SERVICIOS COMUNITARIOS
08			SALUD
09			ACTIVIDADES DEPORTIVAS, RECREATIVAS, CULTURA Y RELIGIÓN
10			EDUCACIÓN
11			PROTECCIÓN SOCIAL
12			TRANSACCIONES DE LA DEUDA PÚBLICA

Source: Guatemala Case Study

## Mexico

There is no experience in the Mexican case with the elaboration of an indicator for DRR expenditure. Nonetheless, the World Bank is currently supporting an exercise of the kind.

## Panama

Resembling the case of Peru, the implementation of DRR initiatives in Panama is highly influenced by the development of a system for public investment planning (called SINIP in this case) and a financial management system (SIAFPA), which give wider mandate and resources to the Ministry of Economy and Finance (MEF) and the Directorate of Investment Planning (DPI, *Dirección de Programación de Inversiones*) within in. DPI is carrying out the “Comprehensive System of Planning, Monitoring and Evaluation of Projects” (SIPMEP), a computational tool, which should support much of the DRR-related initiatives taking place.

A DRR tracking and accounting exercise took place in 2010. The estimation took place in the context of negotiating with the World Bank a fund for expenditure contingent to disasters (CAT-DDO). The credit was conditioned to the production of the figure. The DPI was given the task to carry out the estimation of how much the government had spent in the prevention, mitigation, response and reconstruction over the last decade. The categories are the same that Guatemala used for its contemporary exercise of the *clasificador presupuestario*, so that some process of diffusion between experiences took place. The investment allocated amounted about US\$ 200 million in 2000-2010 (see Table X).

From the two experiences on DRR accounting, the Panama technocrats have done the most open evaluation and reflection. In their view, the exercise suffered of serious shortcomings. First, it was highly difficult to track DRR expenditure since the budgetary system provides little information to identify and classify DRR expenditure. Secondly, the difficulty was higher for tracking proper DRR investment, i.e. in prevention and mitigation, while not so for identifying expenditure in emergency response and reconstruction. Thirdly, the general lack of information meant that in practice MEF functionaries had to sit together with sectoral functionaries to discriminate and construct DRR expenditure information. That functionaries frequently leave the state apparatus meant a double challenge for the data reconstruction, making the exercise fruitless. Finally, it turned out that the best documented information corresponded to unplanned response and reconstruction expenses, when a disaster demanded an addendum of the budget. In sum, the indicator produced by Panama is not reliable as it corresponds more to response and rehabilitation expenditure more than to proper DRR expenditure, and the direct and indirect information collected is not deemed reliable by MEF experts.

**Table 3.**

**MINISTERIO DE ECONOMÍA Y FINANZAS**  
**DIRECCIÓN DE PROGRAMACIÓN DE INVERSIONES**  
**INFORMACIÓN DE PRESUPUESTO ASIGNADO POR DESASTRES NATURALES**  
*por entidad, año y monto asignado*

Nº	INSTITUCIÓN	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	30 de sept. 2010	TOTAL FUNCIONAMIENTO	TOTAL INVERSIÓN
1	Sistema Nacional de Protección Civil	1,318,000	1,621,000	1,638,249	2,121,000	2,121,000	2,121,000	2,411,000	2,647,650	2,814,711	5,012,987	4,479,316		
	INVERSIONES													0
	GASTOS DE FUNCIONAMIENTO	1,318,000	1,621,000	1,638,249	2,121,000	2,121,000	2,121,000	2,411,000	2,647,650	2,814,711	5,012,987	4,479,316	28,305,913	
2	Ministerio de la Presidencia (PAN)	0	0	0	0	0	570,702	1,714,587	2,594,381	7,099,947	4,590,331	2,655,174		
	INVERSIONES						570,702	1,714,587	2,594,381	7,099,947	4,590,331	2,655,174		19,225,122
	GASTOS DE FUNCIONAMIENTO												0	
3	Ministerio de Educación	0	0	0	0	0	0	0	0	1,290,000	0	0		
	INVERSIONES									1,290,000				1,290,000
	GASTOS DE FUNCIONAMIENTO												0	
4	Ministerio de Desarrollo Agropecuario	0	15,400,000	18,699,000	955,073	1,262,500	2,500,000	2,125,000	2,125,000	2,500,000	2,500,000	2,500,000		
	INVERSIONES		15,400,000	18,699,000	955,073	1,262,500	2,500,000	2,125,000	2,125,000	2,500,000	2,500,000	2,500,000		50,566,573
	GASTOS DE FUNCIONAMIENTO												0	
5	Ministerio de Obras Públicas	2,862,148	1,904,871	817,777	420,121	1,529,887	2,511,574	685,591	4,731,928	5,406,316	12,347,291	97,192,849		
	INVERSIONES	2,862,148	1,904,871	817,777	420,121	1,529,887	2,507,786	685,591	4,731,928	4,763,244	12,166,184	96,962,199		129,351,736
	GASTOS DE FUNCIONAMIENTO	0	0	0	0	0	3,788	0	0	643,072	181,107	230,650	1,058,617	
7	Ministerio de Salud	0	0	0	0	0	0	0	2,000,000	0	7,000,000	0		
	INVERSIONES													0
	GASTOS DE FUNCIONAMIENTO								2,000,000		7,000,000		9,000,000	
8	Instituto de Acueductos y Alcantarillados Nacionales	0	0	0	0	0	0	0	0	0	0	0		
	INVERSIONES													0
	GASTOS DE FUNCIONAMIENTO												0	
9	Ministerio de Vivienda	3,505,120	2,900,000	2,900,000	852,265	1,000,800	5,348,436	1,552,800	4,687,200	2,200,000	3,619,673	3,000,000		
	INVERSIONES	3,505,120	2,900,000	2,900,000	852,265	1,000,800	5,348,436	1,552,800	4,687,200	2,200,000	3,619,673	3,000,000		31,566,294
	GASTOS DE FUNCIONAMIENTO												0	
	<b>TOTAL ANUAL</b>	<b>7,685,268</b>	<b>21,825,871</b>	<b>24,055,026</b>	<b>4,348,459</b>	<b>5,914,187</b>	<b>13,051,712</b>	<b>8,488,978</b>	<b>18,786,159</b>	<b>21,310,974</b>	<b>35,070,282</b>	<b>109,827,339</b>	<b>38,364,530</b>	<b>231,999,725</b>

Source: Panama Case Study

## Peru

The Peruvian experience on DRR accounting is limited. The Directorate of Investment Policy (*Dirección Nacional de Política de Inversiones, DNIP*) carries out a process parallel to those of Costa Rica, Guatemala and Panama in the implementation and progressive upgrade of the national system of public investment (SNIP). As in the other national cases, the incorporation of risk analysis in the public investment system can facilitate the tracking of DRR investment in a near future. The ongoing initiatives on DRR tracking are implemented by another branch of the Ministry of Economy and Finance (MEF), the Directorate of the Budget (*Dirección Nacional de Presupuesto Público, DNPP*).

DNPP created a new “budget category” for disaster prevention (Budget Category 68: Reduction of the Vulnerability and Disaster Emergency Attention)<sup>1</sup> for the 2012 budget. In the updated formal structure of the national budget, a “budget category” contains a set of “projects”, or investment expenditure, and “activities”, or current expenditure. In the 2012 Modified Budget, the Budget Category 68 added up to about US\$ 70 million (Nuevos Soles 179.8 million, see Table 4). Interviewed DNPP experts pointed out that these numbers had to be taken with caution because there was much work to do in training officials of spending units to classify properly their budgets. In particular, MEF officials believed that 2012 investment had not been reported properly.

**Table 4. Budget Category 68: Reduction of the Vulnerability and Disaster Emergency Attention, Year 2012**  
(Nuevos Soles)

Product	Initial Budget	Modified Budget	Executed by July 2012
2005564: Construcción de Defensas Ribereñas	39,141,241	32,541,753	4,007,716
3000178: Preparación y Monitoreo ante Emergencias por Desastres	17,011,794	18,105,158	3,814,126
3000179: Población Recibe Bienes de Ayuda Humanitaria en Casos de Emergencias	17,598,726	17,699,894	682,065
3000167: Establecimientos de Salud	3,856,105	16,303,325	1,158,201
3000172: Recursos Agropecuarios Resilientes Frente a Heladas	9,139,336	9,139,336	5,903,869
Other Projects	52,174,390	86,029,876	29,397,470
Budget Category 68, Total	138,921,592	179,819,342	44,963,447

<sup>1</sup> Categoría Presupuestal 68: Reducción de Vulnerabilidad y Atención de Emergencias por Desastres.

2012 Public Budget, Total	95,534,635,146	115,676,870,226	48,528,591,387
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Source: MEF, Portal de Transparencia, accessed on 20 August 2012.

Same as in the cases of Guatemala and Panama, the estimation includes both disaster risk prevention and disaster emergency attention. Thus, at a least a third of the 2012 disaster prevention budget shown in Table 4 was actually assigned to emergency response. Without neglecting its limitations, the available statistics offer quite useful information. For instance, the budget allows identifying that reinforcement of river basins is the most salient line of public expenditure. It also shows that regional governments and municipalities either do not spend on disaster reduction or do not report it.

As explained, the information above includes both projects (“investment expenditure”) and activities (“current expenditure”), as defined for budgetary purposes. The translation of such definitions into economic ones is not straightforward. A “project” is a new state action that has a starting point and an ending point. In budgetary language, public investment does not include expenditure on “activities”. On public works, maintenance is accounted as an activity, not as project. Only new infrastructure qualifies as a project. While the budgetary distinction works to have an approximation for investment in physical infrastructure, it does not do so as well for human capital. Education and training provided by government staff is commonly accounted as activities, not as projects. It could be argued that a number of activities create new capital and should be conceptualized as investment— but not all of them or not most of them.

If one is to include under the definition of public investment only the expenditure on projects, leaving activities aside, the figures shrunk significantly. In the more conservative definition, “public investment” is some US\$ 6 million (2012 Modified Budget), only about 0.05% of total public investment budgeted for 2012. Virtually the entire investment budget goes to river basin defense expenditure, through a number of relatively small projects. Table 5 shows that the distribution of the investment is skewed: Huánuco, Lima, Ancash and La Libertad concentrate 75% of the registered project expenditure for DRR and emergency response. Finally, the figures on executed budget show once more a significant gap between scheduling and spending, particularly for the expenditure taking place in Lima.

**Table 5. Project Expenditure under Budget Category 68, by Region, Year 2012**  
(Nuevos Soles)

Region	Initial Budget	Modified Budget	Executed Budget
Huanuco	2,436,338	3,539,290	1,291,930
Lima	1,401,107	3,334,480	51,200
Ancash	0	1,526,191	30,000
La Libertad	648,523	1,411,691	27,596
Huancavelica	0	845,301	845,301
Cusco	0	836,800	818,400
Piura	0	824,081	13,400
San Martín	0	818,334	0
Lambayeque	648,523	710,237	0
Junín	0	676,715	421,642
Arequipa	0	614,787	0
Ica	290,524	579,706	14,776
Ayacucho	0	77,597	64,000
Puno	0	32,845	2,000
Categoría Presupuestal 0068: REDUCCION DE VULNERABILIDAD Y ATENCION DE EMERGENCIAS POR DESASTRES, Total	5,425,015	15,828,055	3,580,245
Public Investment Projects 2012, Total	21,149,699,995	33,104,622,729	9,943,212,504

Source: MEF, Portal de Transparencia, accessed on 20 August 2012.

A previous effort for accounting public expenditure on risk reduction existed in 2011, a program (set of projects and activities) on risk and emergency management. There is no direct correspondence between this budgetary definition and the followed the year later. Yet, the figures indicate that the magnitude of readily identifiable annual disaster prevention expenditure is in the vicinity of US\$ 70 million (modified budget for Budget Category 68 in 2012 and executed budget for Sub-Program 35 in 2011, see Tables 4 and 6).

**Table 6. Program 16: Risk and Emergency Management, Year 2011**  
(Figures in Current Nuevos Soles)

Sub-Program	Initial Budget	Modified Budget	Executed Budget
0008: ASESORAMIENTO Y APOYO	624,545	1,021,471	981,311
0035: PREVENCION DE DESASTRES	103,604,681	320,976,730	195,334,632
0036: ATENCION INMEDIATA DE DESASTRES	42,553,862	214,658,439	90,848,640

0037: DEFENSA CONTRA INCENDIOS Y EMERGENCIAS MENORES	31,928,267	37,170,451	27,324,451
Programa 016: GESTION DE RIESGOS Y EMERGENCIAS, Total	178,711,355	573,827,091	314,489,033
2011 Public Budget, Total	88,460,619,913	114,635,168,136	93,470,337,484

Source: MEF, Portal de Transparencia, accessed on 20 August 2012.

In addition to the shortcomings exposed on this accounting exercises resulting from DNPP initiatives, a more general problem is the little coordination observed between this line of work and that of DNIP. The budgetary system and the planning system are not as interlinked as could be assumed by the observation that the two leading regulatory agencies are central MEF entities.

## 2.2. Stand-Alone and Mainstreamed Investments

To distinguish between stand-alone and mainstreamed DRR investment is a very difficult task. The case of Panama, that has done the most systematic attempt to track DRR expenditure, exemplifies well this assertion. The horizon of the analysis was 2000-2010 and the exercise involved the participation of both planning and budget officials working at MEF. The Panama team has openly reflected about the results of this exercise in the case study made available for the San Cristobal Consultation Forum. In carrying out the exercise, MEF experts found a higher difficulty in tracking proper DRR investment (see Section 2.1). To track emergency response and reconstruction proved to be much easier.

In light of the quality of available information produced by the three public finance systems (Guatemala, Panama and Peru) and the collected expert opinion of all cases, to differentiate between stand-alone and implicit types of DRR spending in short-term study as the one behind this report is unfeasible. An estimation of such characteristics demands expertise and in-depth analysis. Therefore, a way to improve in this future this knowledge gap could be to invest in sector-specific estimations for identifiable most relevant sectors from a disaster risk management view.



### **2.3. Good Practices, Lessons Learned and Knowledge Gaps**

The case studies show that the exercises of DRR tracking are part of wider governmental initiatives promoting the integration of disaster risk analysis to the regular public finance action. Both planning and budgetary agencies incur new practices aligned with the Hyogo framework. This report classifies good practices, lessons learned and knowledge gaps by thematic areas: enabling conditions, disaster management systems, investment planning, budgeting, and risk finance mechanisms.

#### *Enabling Conditions*

According to how expositors narrated their national experiences during fieldwork interviews and the San Cristobal Consultation Foun, enabling conditions could be classified in five: (i) disaster events, (ii) institutional continuity, (iii) macroeconomic stability, (iv) the partnership developed between politicians and technicians, and (v) the global climate change debate. The contribution of each factor to the expansion of DRR practice varies with the case.

First, expositors mentioned how critical disaster events enhanced the opportunity for DRR policy reform. National experiences included the acute raining season that produced the closing of the Panama Canal, an earthquake in Mexico and hurricanes in Guatemala. Expositors characterized early government impulses as political responses to disaster emergency. As can be expected, nonetheless, the impact of disaster events on public investment planning and budget has its limits. For instance, in the case of Guatemala, the disaster created the political momentum that led MEF to quantify DRR investment across government branches. However, despite all the progress made by MEF and partnering pro-DRR state agencies, the effort has not been continued since then.

This observation takes us to the second enabling condition, which is institutional continuity. For all of the cases, the little or big progress achieved has institutional continuity behind it. Major DRR improvements correspond to major cases of continuity of actors and goals in the public finance system. For instance, Mexico's financial instruments and Peru's National System of Public Investment manuals for risk analysis have behind them the continuity of staff and policy goals at the Ministry of Finance's Directorate of.. and the Ministry of Economy and Finance's.... Changes of

government administration are repeatedly mentioned as a key cause for delays and challenges faced by pro-DRR actors. For instance, some interviewed Mexican officials wondered about the changes that the presidential election could bring to the disaster risk management system. In the case of Peru, MEF officials claimed that the high rotation of non-MEF government officials damaged the implementation of planning and budgetary policies in general.

A third enabling condition, macroeconomic stability, was implicit in many of the expositions heard during the first day and was more explicitly presented by the Philippines case study. According to Philippines expert Susan Rachel Jose, having solved basic economic stability problems enabled economic authorities to carry out more sophisticated planning policies. Same could be said for each of the Latin American cases.

A least evident enabling condition was the strength and quality of partnerships developed by government politicians and government technicians. In fact, some expositors manifested their contempt for the role commonly played by politicians in the distortion of what should be the technical planning of public investment. The Peruvian delegation was particularly strong in this line of argumentation. However, the experiences of Mexico and Guatemala show that a high commitment of political authorities favors the high awareness of the public and a high development of DRR policy. Even for Peru the political has played a positive role. That MEF technicians have been able to carry out progress on implementing a range of policies aligned with the Hyogo Framework has behind a political role played by state authorities. MEF has stronger capacities and mandate because the political system supports it. In the other direction, a political authority of El Salvador manifested that technocrats many times were not good at communicating technicalities and the possible shortcomings that they entailed. Thus, the political can become either an obstacle or an enabling factor, or both. Same can be said of the technical. It is not only on politicians but also on technicians to contribute in producing a synergetic relationship between *políticos* and *técnicos*.

Finally, in more general terms, the climate change debate and the diffusion of adaptation policies have enabled the opportunity for DRR policy progress. This perception came out in the expositions of Costa Rica and Peru, but could be generalized to the other national experiences.

### *Disaster Management Systems*

Two good practices to highlight from the national experiences are the development of emergency risk inventories and the development of financial instruments for emergency risk management. Mexico and Costa Rica show the most advanced developments of risk mapping. In the case of Mexico, the emergency risk inventory uses information systematized in decades of research done by the Universidad Nacional Autónoma de México and other institutions. The inventory was put together by 2009. In turn, this inventory is the basis for the R-FONDEN system, a computational model of probabilistic evaluation of disaster risk of main public assets covered by FONDEN (see below) and assets held by the most vulnerable sectors of the population. Because of the existence of the disaster risk inventory, the government of Mexico is able to estimate expected losses at the local, regional and national levels. This is also a key input for the financial instruments for risk transfer developed by the federal government (see below).

In the case of Costa Rica, MIDEPLAN initiated the systematization of the geography of disasters since 2010. The effort built a data base with the historical record of disasters in the last 25 years. As in Mexico, this information enhances analysis and further initiatives. A study was done to estimate the economic impact of disasters in 2005-2009, which reached 1% of GDP and 20% of public infrastructure for the period according to the study.

### *Public Investment Planning*

The national systems of investment planning of all countries but Mexico are in the process of incorporating risk analysis as an integrative element of their regulatory systems. National practice commonly has two features, (i) the development of methodological manuals and training workshops to diffuse the practice of pre-investment risk analysis and (ii) the passing of new regulation that mandates disaster risk assessment for new public investment projects.

Peru and Costa Rica are the most advanced on this regard; Panama and Guatemala come next. Peru has become sort of a regional model because of its open-access policy. MEF has put together all the produced material (case studies, methodological guidelines, power-point presentations)

available through its SNIP website, a popular resource according to colleagues from other governments.<sup>2</sup> In Costa Rica, MIDEPLAN has also carried out a series of manuals to foster the use of disaster risk analysis in pre-investment evaluation. MIDEPLAN currently sells its materials, which makes no sense from a public good perspective, but it plans to move to open-access. MIDEPLAN seems to organize more and better than MEF is the training of bureaucrats from spending units.

In Guatemala, the SEGEPLAN is incorporation disaster risk management criteria to its SNIP. Thus, risk analysis is now mandated for all infrastructure investment and a first methodological manual came out in 2012 to facilitate it. In Panama, the Directorate of Investment Programming is also moving in the direction of producing regulations and methodological guidelines, as mandated by the National Plan for Disaster Risk Management 2011-2015.

### *Budgeting*

Table 7 summarizes the available approximations to DRR expenditure. As the previous discussion made clear, none of the estimations corresponds exclusively to disaster risk reduction expenditure. Governments wanted to measure or to classify disaster risk management expenditure, which involves four dimensions, in the language used by Panama, prevention, mitigation, response and reconstruction. The first two dimensions are proper DRR expenditure. Emergency response is clearly not DRR investment. Reconstruction is the less clear-cut categories of the four. It involves both the restitution of lost infrastructure as well as the upgrade of the safety-quality of economic assets.

**Table 7. Tracking DRR Expenditure \***

	Guatemala	Panamá	Perú
Estimation	US\$ 800 million	US\$ 100 million	US\$ 70 million
Year	2010	2010	2012
Primary source	Ad-hoc exercise, the “etiquetador”	Ad-hoc exercise requested by the World Bank	New Budget Category 68

\*: None of the estimation exercises was conceptualized as DRR tracking. Figures correspond to both DRR and post-emergency response types of expenditure.

Source: Elaborated by the consultant with information from the case studies.

<sup>2</sup> See [http://www.mef.gob.pe/index.php?option=com\\_content&view=article&id=945&Itemid=100900&lang=es](http://www.mef.gob.pe/index.php?option=com_content&view=article&id=945&Itemid=100900&lang=es).

That Guatemala shows the highest figure of the three can be explained by the origin of the figure. It corresponds to an exercise mandated by the President of the Republic. Carried out with the leadership of MINFIN, the high political visibility of the request to classify disaster management expenditure set an incentive to spending units to classified their activities as DRR oriented in order to continue receiving or receive more funds from government at a politically sensitive time, given the occurrence of a critical disaster event. The Peruvian equivalent, the “budget category”, might have not produce the same effect because of the low political visibility of the DNPP initiative. The fact that the Guatemalan exercise was not continued impedes a more detailed analysis of this “perverse incentives hypothesis”. MINFIN experts manifested that it was very difficult for them to assess the validity of the received information. Further explanation was commonly requested but MINFIN, but at the end of the day spending units had much more complete information than MINFIN.

The doubts and criticisms of Panama and Peru experts, manifested in the case study in the first case and in conducted interviews in the second case, are consonant with those of Guatemala. In short, budgetary officials know about budget but know little about expenditure. Any form of expenditure. DRR expenditure is a quite complex form of expenditure and its understanding demands the development of expertise. Commonly, budget bureaucrats have much less sector-specific knowledge than planning bureaucrats. That budget and planning systems are not all the integrated that they could be, as some cases make more evident than others, further limits the national ability to track and analyze DRR investment.

The lessons learned from the practice of budgeting and tracking DRR expenditure (see Sub-Sections 2.1 and 2.2) are that (i) expenditure on disaster risk management is hard to identify; (ii) public finance bureaucrats know little about expenditure coded as such by spending units—and even less about “embedded DRR expenditure””; and (iii) pre-disaster investment—a better proxy for DRR expenditure—is much more difficult to track than post-disaster investment.

The knowledge gap is significant and to invest in reducing it is in order. How to do so? From the experiences of Guatemala and Panama, this report draws the lesson that the effort needs to be systematic and sustained. A DRR estimation produced by a single exercise might produce suggestive figures, but it also raises equivalent doubts. The effort needs to be maintained to

produce a learning-by-doing process and should be used to inform both budgeting and public investment planning practice.

To better track DRR investment, budget systems would need to differentiate prevention and adaptation from response and reparation. A regulation impeding all these forms of disaster management expenditure from coming together under the same budgetary category should be of much help. Moreover, it could be experimented a budgetary classification that distinguishes each form of disaster management expenditure.

### *Risk Finance Mechanisms*

Two key lessons can be learned from the remarkable Mexican experience on risk finance mechanisms. The first one is the importance of baseline data on disasters in order to build on a financial strategy for risk management. Without a good mapping of disaster risk, there is no possible quantification of disaster risk, and then there is no basis for risk transfer. The second one is the importance of policy leadership. Let alone, the existence of both disaster research and political interest on disaster management did not produce the policy innovations listed in the case study. The technocrats of the Unit of Insurance, Pensions and Social Security put the pieces together, constructed a vision, and pulled other government agencies into a synergetic dynamic.

Mexico follows a dual financial strategy for disaster risk management: (i) the establishment of contingent accounts for disaster response and reparation, with the Natural Disasters Fund (FONDEN) and (ii) the transfer of risk of potential disaster losses to the financial market, with insurance policies and the issue of catastrophic bonds. These are two innovative practices that implement the principle of setting financial assets aside for the better response to disaster emergency.

## **3. Perspectives and Recommendations**

### **3.1. Breakthrough Practices**

The general finding is a regional trend towards operationalizing disaster risk management criteria and national variation with regard to the policies actually implemented. Breakthrough practices of the depicted macro process are risk analysis in the public investment systems, DRR investment labeling and budgetary analysis, the consolidation and utilization of disaster inventories, financial instruments for disaster risk management, and cost-benefit analysis to guide DRR expenditure. The following table summarizes good practices by country.

**Table 8. Summary of Good Practices by Country**

	Costa Rica	Guatemala	México	Panama	Peru
Good practices	<ul style="list-style-type: none"> <li>• disaster inventory</li> <li>• Investment risk analysis</li> <li>• Manuals and training</li> </ul>	<ul style="list-style-type: none"> <li>• Investment risk analysis</li> <li>• Budget category</li> </ul>	<ul style="list-style-type: none"> <li>• disaster inventory</li> <li>• Risk finance instruments: FONDEN and catastrophic bonds</li> <li>• Cost-benefit analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Investment risk analysis</li> <li>• In due course manuals, risk finance instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Investment risk analysis</li> <li>• Manuals and training</li> <li>• Budget category</li> </ul>

**Risk analysis in the public investment systems**

Breakthrough practices in the area of public investment planning are the elaboration of methodological manuals and new regulation that mandates disaster risk assessment for public investment projects. Peru and Costa Rica are the most advanced on this regard; Panama and Guatemala come next. Peru has become sort of a regional model because of its open-access policy. MEF has put together all the produced material (case studies, methodological guidelines, power-point presentations) available through its SNIP website, a popular resource according to colleagues from other governments. In Costa Rica, MIDEPLAN has also carried out a series of manuals to foster the use of disaster risk analysis in pre-investment evaluation.

**DRR investment labeling and budgetary analysis**

The best budgetary practices found is the establishment of budget categories that enable the systematic tracking of forms of disaster risk management expenditure. The directorates of the

budget in Guatemala and Peru have an instrument to start a process of investment labeling and analysis. It is to be understood that the effectiveness of the instrument depends on its methodical use, evaluation and upgrade. The “*etiquetador*” in Guatemala and the “budget category” in Peru will help to improve the quality of DRR expenditure if and only if the respective national public investment system uses it continuously and periodically assesses such use.

Comparing the national practice with the interest of the international development community to privilege prevention (DRR expenditure) over response (other forms of disaster risk management expenditure), future budget labeling should consider the use of categories “prevention”, “adaptation”, “response”, and “reconstruction”. The practice of using these suggested budget categories would teach national public finance systems and the international community the possibilities and limitations of using these broad categories.

#### **Disaster inventories and financial instruments for disaster risk management**

Mexico and Costa Rica show the most advanced developments of disaster risk mapping. The consolidation of a disaster inventory enables further policy developments. In the case of Mexico, risk mapping facilitates the insurance coverage of public assets and economic assets of the vulnerable and the development of financial instruments for risk transfer and management. In the case of Costa Rica, risk mapping allows government officials to run evaluation of the economic consequences of disasters. This line of policy progress has called the attention of technocrats from the other surveyed countries.

Mexico follows a dual financial strategy for disaster risk management: (i) the establishment of contingent accounts for disaster response and reparation, with the Natural Disasters Fund (FONDEN) and (ii) the transfer of risk of potential disaster losses to the financial market, with insurance policies and the issue of catastrophic bonds.

#### **Cost-benefit analysis and DRR expenditure**

The evidence provided by FONDEN experts validates the contention that, in pure cost-benefit terms, it makes more sense to expend in prevention than in reparation. In the case of Tabasco, in



particular, after the 2007 floods, reconstruction followed a DRR approach, not only using upgraded construction codes, but also building on studies designed to better understand the complexities of the river basin system as well as the human ecology of Tabasco. This is exemplary of how research can contribute to policy.

### **3.2. Prioritizing DRR**

The depicted best practices suggest policy paths to pursue. However, to put them all together does not produce a strategy to prioritize DRR expenditure. Cost-benefit analysis at the pre-investment stage that incorporates disaster risk analysis, as national SNIPs now mandate, produce useful analytical tools to assess and rethink public investment on disaster risk management. Same can be said with respect to future budgetary evaluation. Directorates of the Budget that are carrying out DRR budget labeling will be enabled to do forms of ex-post evaluation, from simple assessment of budget execution to more sophisticated program evaluation studies. Still, what can be done with the current and future information entering to the public finance systems, since budgetary resources are always scarce in relation to development challenges?

From the observed experience, two recommendations to formulate are the establishment of consultation mechanisms with the wider public sphere and the valuation of disaster risk. Consultation mechanisms are important to guide state action on DRR. An organized participation of experts, scientists and civil society leaders can help to assess and to rethink state priorities on a systematic basis. Such a policy framework should contribute to both the learning-by-doing and the political sustainability aspects of DRR practice.

In turn, the continuous valuation of disaster risk on economic and social variables should contribute to develop a better allocation of DRR expenditure. On economic variables, governments should invest in producing indicators of economic competitiveness. Disasters can put under risk economic assets with differentiated impact from a dynamic economic standpoint. The accounting value of DRR (or response and reconstruction) is not the same than the economic value of DRR (or response and reconstruction). On social variables, governments should invest in

producing disaster risk indicators on the most vulnerable sectors of society. The Mexican practice around FONDEN constitutes a commended experience.

### **3.3. DRR accounting and tracking**

Budgetary coding is an important step forward taken by a subset of studied countries. However, the favored organizations of the budget include disaster emergency management and disaster reconstruction, which are not proper DRR categories. Thus, public finance authorities could be advised to establish budgetary codes for (i) prevention, (ii) adaptation, (iii) response, and (iv) reconstruction. These four categories are commonly used terms in the national practice and international development advice. It is possible that this ideal categorization is not easy to implement in practice. But the policy recommendation is given within a general approach that favors experimentation within policy continuity.

A complementary recommendation is to foster the further integration of planning and budgetary offices. The disconnection of planning and budgetary functions divides program evaluation. While planning offices regularly conduct ex-ante evaluation, budgetary offices eventually conduct ex-post evaluation. This has no rationality and should be reformed to favor the evaluation of expenditure, DRR investment within it. Moreover, the investment planning offices have a sectorial expertise that the budgetary officials do not have. Thus, planning bureaucrats can support the continuous improvement of budgetary coding.

Finally, to improve the tracking of explicit vis-à-vis implicit DRR investments, countries could be advised to carry out in-depth case studies by prioritized sectors. Domestic experts participating in the case studies shared the view that to disentangle implicit DRR expenditure was not possible with the information available in the public finance system (both the planning and the budgetary dimensions of it).

### **3.4. Challenges to investment planning**

Although this concluding section focusses on lessons learned from positive experiences, there are also lessons that can be drawn from negative ones. One key point is the importance of the political. It will be a mistake to read the practice of public finance systems only by what planning and budgetary offices norm. The development of regulation is indeed an important process, but it does not guarantee the actual implementation of what regulation mandates. Without political commitment, technical success is limited. And political commitment is not necessarily continuous. Political imperatives calls for more and faster public investment thus jeopardizing accurate project analysis or the application of methodologies being fostered by the technical units of ministries of Finance. If the political system wants to by-pass the SNIP in general, DRR regulation is no exception. In some of the cases, there was an observation that approved projects over the last year do not have the mandated SNIP regulation. Thus, public investment projects get the green light despite not having mandated risk analysis.

A second challenge comes from the actual scope that SNIP systems have. This varies. In Panama, SNIP regulation only applies to large scale projects (over US\$10 million). In Costa Rica, municipalities are not regulated by the SNIP. Thus, DRR policy improvement taking place at planning systems is hardly reaching small-scale infrastructure and the local level.

Finally, participants at the San Cristobal Consultation Forum questioned what to do with old public investment. The focus of planning and budgetary offices has been to rethink future infrastructure expenditure, but no practice exists on old one. Old public investment is depreciated at that should be accounted by the public finance system. In addition, expenditure targeted to repair old infrastructure constitutes a reposition of depreciated capital more than the addition of new one. From a risk management perspective, moreover, it does not fit into a DRR form of expenditure (see recommendations on DRR accounting).

### **3.5. Provision of public goods**

This report documents a policy process of regional trend and national variation in the implementation of policies inspired in the paradigm of the Hyogo Framework. The international cooperation can continue contributing to this process with the provision of public goods: (i) the

establishment and promotion of a network of practitioners and researchers; (ii) the diffusion via open-access platforms of guidelines, methodologies, case studies and comparative studies; and (iii) the supply of financial, technical and organizational resources for public awareness and debate.

## ANNEX 1

### AYUDA MEMORIA

#### METODOLOGIAS EXISTENTES PARA LA ASIGNACION Y SEGUIMIENTO DE LA INVERSION PÚBLICA EN REDUCCION DEL RIESGO DE DESASTRES

1. La Oficina de las Naciones Unidas para la Reducción del Riesgo de Desastres (UNISDR), animadora de la Estrategia Internacional para la Reducción de Desastres, realizará el 27-28 de Septiembre un Foro de Consulta en Tuxtla, Chiapas para presentar y discutir qué vienen haciendo y que pueden hacer los países latinoamericanos sobre el tema.
2. En Tuxtla, funcionarios de Colombia, Costa Rica, Guatemala, México, Perú y Panamá y consultores presentarán experiencias nacionales en formato de borradores de estudio de caso y presentaciones powerpoint. El objetivo final es producir un estudio de caso por país.
3. Cada estudio de caso busca ofrecer un diagnóstico del avance del país respectivo en su contabilidad de la inversión en reducción de riesgos de desastres. En particular:
  - a. ¿Qué esfuerzos se han realizado en el último quinquenio desde Hacienda o Planeamiento para cuantificar este tipo de inversiones?
    - i. ¿Existe una clasificación/tipología oficial de inversiones en riesgos de desastres?
    - ii. ¿Podemos identificar inversiones directas e implícitas?
  - b. ¿Qué metodologías se utilizan/se han utilizado/se piensan utilizar para esta contabilidad?
  - c. ¿Existen programas de inversión en reducción de riesgos? ¿Organismos del Estado, comités interministeriales? ¿Fideicomisos, mecanismos financieros?
  - d. ¿Qué avances existen a nivel regional o local? ¿Cuánto/cómo ayuda el nivel central?
  - e. ¿Qué se ha aprendido sobre brechas de inversión (áreas críticas donde gastar), brechas de conocimiento (qué no sabemos pero deseamos conocer sobre reducción de desastres) y buenas prácticas (qué observamos/creemos que funciona)?
4. Insumos clave para la realización de un estudio de caso son:
  - a. Identificar estudios previos (p.e. documentos de discusión, reportes para organismos internacionales, ejercicios de cuantificación) elaborados por dependencias del Estado, organismos de cooperación internacional y centros de investigación nacionales.
  - b. Identificar y entrevistar expertos del sector público (Hacienda y/o Planeamiento, en particular, así como de los sectores).
  - c. Identificar y entrevistar expertos nacionales que no laboren en el sector público.
  - d. Agotada la revisión de cifras, antecedentes y diálogo con expertos, proceder a un ejercicio de estimación, de ser posible.

ANNEX 2. "Entendiendo la Inversión Pública para la Gestión del Riesgo de Desastres", San Cristóbal, México, 27-28 de septiembre del 2012

Día 1		Día 2	
9.00-9.20	<b>Apertura</b>	9.00-10.00	<b>Sesión 3: Generalidades sobre las metodologías de contabilidad, las definiciones presupuestarias e indicadores para la inversión en RRD</b>
9.30-10.00	Presentación del propósito y objetivos: Entendiendo la Inversión Pública para la Gestión del Riesgo de Desastres en las Américas Preguntas y respuestas		1) Generalidades comparativas de los estudios de caso de los países y resumen del Día 1 2) Metodologías de contabilidad en RRD, las definiciones presupuestarias e indicadores actuales 3) Preguntas y respuestas
10.00-11.30	<b>Sesión 1: Prácticas de Inversiones Nacionales RRD</b> <i>30 minutos x presentación / 15 min. de discusión por país</i>		
	1) País 1 (Perú SNIP) 2) País 2 (México)		
11.30-11.45	<b>Refrigerio</b>	10.00-10.15	<b>Refrigerio</b>
11.45-13.15	<b>Sesión 1: Prácticas de Inversiones Nacionales RRD</b> <i>30 minutos x presentación / 15 min. de discusión por país</i>	10.15-13.00	<b>Sesión 4: La elaboración de metodologías de contabilidad, las definiciones presupuestarias e indicadores para la inversión en RRD</b>
	3) País 3 (Panamá) 4) País 4 (Costa Rica)		<i>Trabajo en grupos:</i> Grupo 1 Metodologías de contabilidad de inversión pública en RRD. Grupo 2 Definiciones presupuestarias Grupo 3 Indicadores para la inversión en RRD  Entregable: Conclusiones y recomendaciones para el desarrollo de una metodología genérica para la contabilidad de las inversiones RRD
13.15-14.30	<b>Comida</b>	13.00-14.30	<b>Comida</b>
14.30-16.45	<b>Sesión 1: Prácticas de Inversiones Nacionales RRD</b> <i>30 min. x presentación / 15 min. discusión x país</i>	14.30-16.00	<b>Sesión 5: Discusión en plenaria y guía para el trabajo futuro</b>
	5) País 5 (Colombia) 6) País 6 (Guatemala) 7) País 7 (Asia-Pacífico)		1) Presentación en plenaria de los trabajos en grupo 2) Definición de la guía para apoyar inversiones públicas mejoradas para la RRD en América Latina y el Caribe y apoyar un mayor entendimiento
16.45-18.00	<b>Sesión 2: Análisis Costo-Beneficio e Inversiones RRD por Sectores</b>		
	1) Análisis costo-beneficio y prácticas para la inversión ACC (Perú / GIZ) 2) Análisis costo-beneficio en el sector de infraestructura del transporte (El Salvador) 3) Estudio de caso: Mitigación del riesgo de inundaciones en Tabasco, México 4) Presentación de los avances del Proyecto "Evaluación y monitoreo de la inversión pública en la Reducción del Riesgo de Desastres" -Oscar Ishizawa, BM		
		16.00-16.30	<b>Clausura</b>

ANNEX 3. The Road Map

