

CASE
STUDY



GOBIERNO DE
EL SALVADOR

CONTRIBUTIONS OF THE PDNA and DRF to post-disaster recovery:

EL SALVADOR 2022



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Contents

Abbreviations	6
Introduction	7
Limitations of the Case Study Analysis	9
PDNA/CRNA and DRF Contributions to Post-Disaster Recovery: El Salvador Case Study	10
El Salvador: Country Context	10
Risk and History of Disasters in El Salvador	11
Tropical Storms Amanda and Cristobal in the Context of Covid-19 (2020): Combined Effects and Recovery Needs	16
Tropical Storms Amanda and Cristobal (2020)	16
The Covid-19 Pandemic in El Salvador	18
Assessment of Disaster Effects and Impacts and Recovery Needs	19
Recovery Preparedness	24
Sectoral Adaptation of PDNA Guidelines	25
Adaptation of the Disaster Recovery Framework (DRF)	26
Other Relevant Instruments	31
Lessons Learned from the Recovery Planning and Assessment Process	34
Success Factors and Best Practices	34
Limitations and Challenges for the Development of the Assessment	35
Limitations and Challenges to Move from Assessment to Recovery	37
Recommendations	38
Recommendations for Methodologies and their Implementation	38
Recommendation to Facilitate Comprehensive Recovery Processes: Recovery Preparedness	41
References	44

Tables	
Table 1. Estimates of damage and losses caused by severe events, period (1990-2020)	13
Table 2. Damage and losses from tropical storms Amanda and Cristobal and Covid-19 (up to July 2020)	20
Table 3. Human impact resulting from tropical storms Amanda and Cristobal and Covid-19 (up to July 2020)	21
Figures	
Figure 1. Post-disaster assessment and recovery preparedness in El Salvador.	8
Figure 2. Development of the case study	9
Figure 3. Geographical location of El Salvador	10
Figure 4. History of disasters in El Salvador	11
Figure 5. Effects of disasters in El Salvador (1960-2020)	12
Figure 6. Damage and losses from natural events, period (1980-2020)	13
Figure 7. Disaster damage and losses in El Salvador (1982-2020)	14
Figure 8. Risk to assets and well-being losses in Central America	15
Figure 9. Tropical Storm Amanda	16
Figure 10. Accumulated rainfall during tropical storms Amanda and Cristobal in El Salvador	17
Figure 11. Damage caused by tropical storms Amanda and Cristobal	18
Figure 12. White flags asking for help	19
Figure 13. Economic impact and monetary poverty	21
Figure 14. Recovery needs by sector (left) and strategic line (right)	23
Figure 15. Steps for the development of the PDNA and Recovery Framework	25
Figure 16. Elements for the Definition of a Recovery Framework	27
Figure 17. General institutional framework for recovery	29
Figure 18. Institutional arrangements for recovery in El Salvador	30
Figure 19. Building blocks for post-disaster recovery	31
Figure 20. Prioritization criteria established in the Sectoral Investment Plan for Economic Revitalization and Disaster Resilience	32
Figure 21. Timing of disaster response and recovery	38
Figure 22. Complex crises and domino effect	40

Abbreviations

AMSS	Metropolitan Area of San Salvador [<i>Área Metropolitana de San Salvador</i>]
ANDA	National Administration of Aqueducts and Sewers [<i>Administración Nacional de Acueductos y Alcantarillados</i>]
BBB	Build Back Better
CCA	Climate Change Adaptation
CDRM	Comprehensive Disaster Risk Management
CRNA	Covid-19 Recovery Needs Assessment
DGPC	General Directorate of Civil Protection [<i>Dirección General de Protección Civil</i>]
DOM	National Directorate of Municipal Works [<i>Dirección Nacional de Obras Municipales</i>]
DRF	Disaster Recovery Framework
DRFM	Disaster Risk Financial Management
DRG	Disaster Risk Management
DRR	Disaster Risk Reduction
EGFRD	Disaster Risk Financial Management Strategy
ESCO	El Salvador Agency for International Cooperation [<i>Agencia de El Salvador para la Cooperación Internacional</i>]
EU	European Union
Fovial	Road Conservation Fund of El Salvador [<i>Fondo de Conservación Vial</i>]
GDP	Gross domestic product
GFDRR	The Global Facility for Disaster Reduction and Recovery
GoES	Government of El Salvador
LP	Low pressure
M&E	Monitoring and Evaluation
MARN	Ministry of Environment and Natural Resources [<i>Ministerio de Medio Ambiente y Recursos Naturales</i>]
MH	Ministry of Finance [<i>Ministerio de Hacienda</i>]
MIGOB	Ministry of the Interior and Territorial Development [<i>Ministerio de Gobernación y Desarrollo Territorial</i>]
MINDEL	Ministry of Local Development [<i>Ministerio de Desarrollo Local</i>]
MINEC	Ministry of Economy [<i>Ministerio de Economía</i>]
MINED	Ministry of Education [<i>Ministerio de Educación</i>]
MINSAL	Ministry of Health [<i>Ministerio de Salud</i>]
MITUR	Ministry of Tourism [<i>Ministerio de Turismo</i>]
MIVI	Ministry of Housing and Urban Development [<i>Ministerio de Vivienda y Desarrollo Urbano</i>]
MOP	Ministry of Public Works and Transports [<i>Ministerio de Obras Públicas y de Transporte</i>]
MRREE	Ministry of Foreign Affairs [<i>Ministerio de Relaciones Exteriores</i>]
PDNA	Post-Disaster Recovery Needs Assessment
PDRP	Pre-Disaster Recovery Planning
PNCC	National Climate Change Plan [<i>Plan Nacional de Cambio Climático</i>]
PNPC	National Plan for Civil Protection, Disaster Prevention and Mitigation [<i>Plan Nacional de Protección Civil, Prevención y Mitigación de Desastres</i>]
PPP	Public-Private Partnership
RPBA	Recovery and Peace Building Assessment
SIREDA	World Bank System for Damage Data Collection and Assessment [<i>Sistema de Recopilación y Evaluación de Daños</i>]
SNPC	National System for Civil Protection, Disaster Prevention and Mitigation [<i>Sistema Nacional de Protección Civil, Prevención y Mitigación de Desastres</i>]
TD	Tropical depression
TS	Tropical storm
UN	United Nations
UNDP	United Nations Development Programme
WB	World Bank

Introduction

Since 2014, a process for streamlining the Post-Disaster Needs Assessment (PDNA) methodology has been undertaken with the support of the European Union (EU) and additional funding from the United Nations Development Programme (UNDP) within the framework of the general cooperation agreement signed in 2008 by the European Union, the World Bank and the United Nations.

The declaration allowed for the establishment of a common platform for partnership and coordinated action for an effective and sustainable international response based on the PDNA methodology to address the impact of natural disasters and the Recovery and Peacebuilding Assessment (RPBA) for conflict-related crises. The agreement seeks to harmonize and integrate the capacities and resources of the three institutions to support processes led by national governments, including capacity building and the consolidation of a roster of PDNA experts.

Following the onset of the Covid-19 pandemic in 2020, efforts were also made to adapt this methodology to the epidemic context, and a Guidance Note on Post-Covid-19 Recovery Needs Assessment (CRNA) was prepared. As part of this process, UNDP is currently executing the project “Strengthening capacities for crisis assessment and recovery planning” financed by the European Union.

Although the PDNA/CRNA methodologies and Recovery Frameworks (DRF) have been widely used and disseminated, few evaluations or

lessons learned documents have been produced to assess their actual impact and contributions to recovery in the countries where they have been implemented.

El Salvador, a country with high levels of disaster risk to multiple hazards, faced a complex disaster situation in 2020 due to the combined effects of the Covid-19 pandemic and tropical storms Amanda and Cristobal, which together generated damage and losses estimated at \$2.9 billion (March-July 2020), an economic impact estimated at 7.5 per cent of GDP and a significant human impact (UNDP and GoES, 2020). The country then decided to strengthen its preparedness for recovery, a process that included a review of its needs assessment and post-disaster recovery policies and operations.

To this end, the country was supported by UNDP, as well as other agencies of the United Nations, the European Union and the World Bank, among other cooperation partners, at different stages of the process. During an initial stage, the international PDNA methodology was used to evaluate the combined effects of tropical storms Amanda and Cristobal in the context of the response to Covid-19 in 2020.

Subsequently, the Government of El Salvador (GoES) requested UNDP support for the adaptation of the methodology to specific sectors in order to standardize and institutionalize the evaluation process in the event of a disaster. At the moment, eight adapted sector guidelines have been developed, covering productive

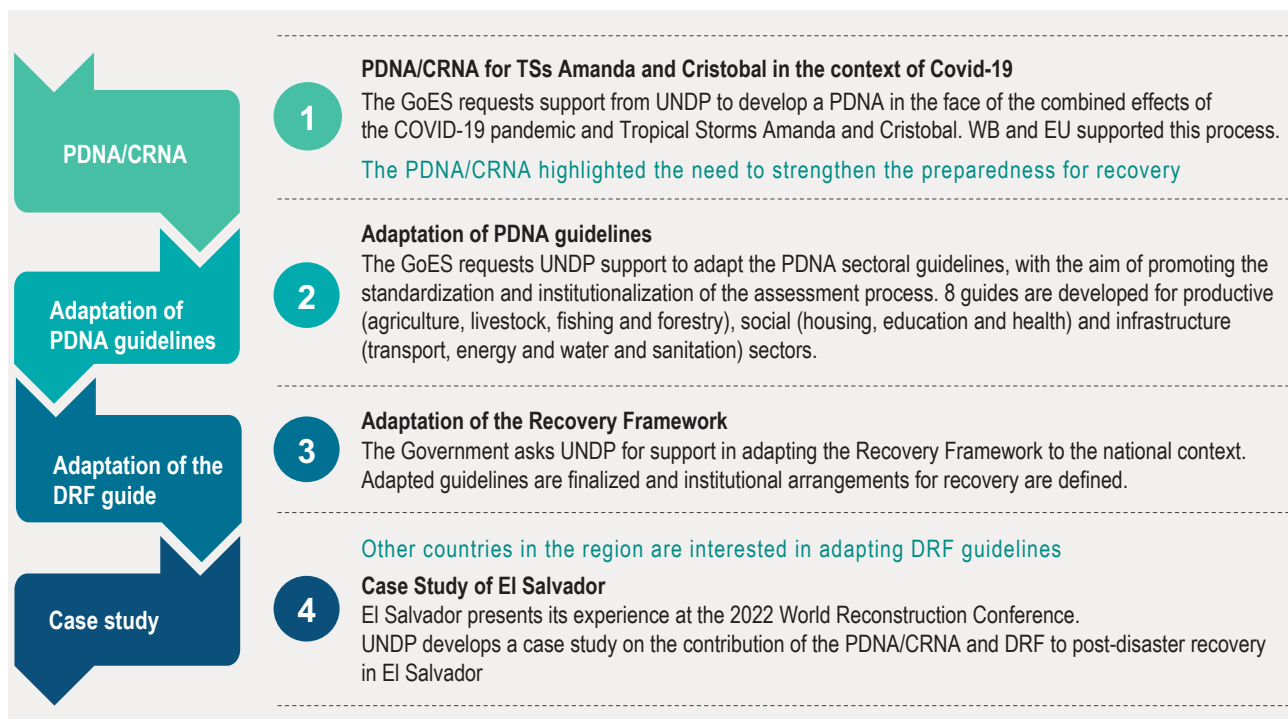
(agriculture, livestock, fishing and forestry), social (housing, education and health) and infrastructure (transportation, energy and water and sanitation) sectors. In 2022, the Post-Disaster Recovery Framework (DRF) was adapted based on national and international expertise, the national context and institutional framework, and priorities established by the GoES. The aim is to promote this model in the region using the example of El

Salvador (Figure 1).

This case study seeks to analyse and document the contributions of the PDNA and DRF to post-disaster recovery in El Salvador, including its ability to be adapted through the CRNA and other tools to a context marked by multiple hazards, a weak health system and fragility.

FIGURE 1

Post-disaster assessment and recovery preparedness in El Salvador



The case study was based on a consultative process led by UNDP and supported by the GoES. It included interviews and focus groups with representatives of the GoES, consultants and senior officers from international agencies that have led, participated in or supported the preparation of the PDNA and sectoral guidelines.

The case study was developed in four stages (see Figure 2).

- 1) Documents review and analysis, including analysis of the PDNA, RBPA, CRNA and DRF methodologies, national and international case studies, best practices and lessons learned in the implementation of recovery

methodologies and processes; tropical storms Amanda and Cristobal PDNA/CRNA in the context of Covid-19, adapted PDNA and DRF guidelines.

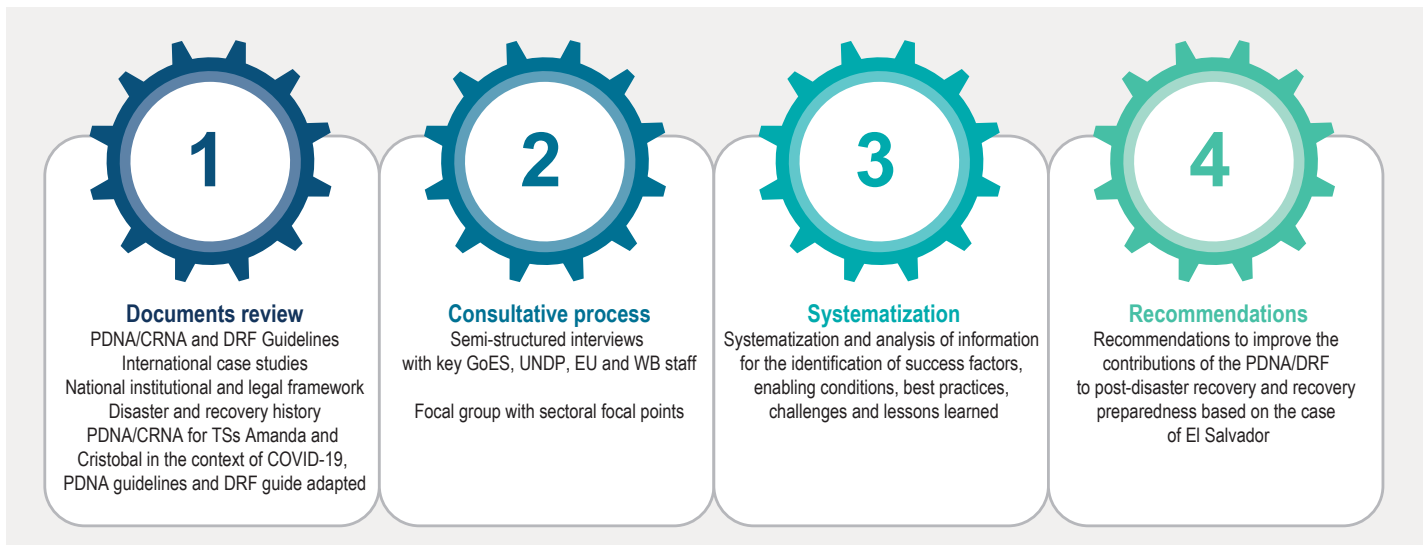
- 2) Consultative process to assess the development of the PDNA/CRNA, adapted PDNA and DRF guidelines and their contribution to recovery, including the identification of success factors and enabling conditions, best practices, limitations, challenges and lessons learned.
- 3) Systematization and analysis of information to identify success factors

and enabling conditions, best practices, challenges and lessons learned to improve the contributions of PDNA/DRF to post-disaster recovery, including an analysis of the strengths and weaknesses of the instruments and opportunities for improvement to facilitate comprehensive recovery processes.

- 4) Formulation of recommendations to improve the contributions of the PDNA/DRF to post-disaster recovery and recovery preparedness based on the case of El Salvador.

FIGURE 2

Development of the case study



Limitations of the Case Study Analysis

Both the adaptation of the PDNA sectoral guidelines and the adaptation of the DRF guide were recently completed and have not yet been applied to a specific case. This effort has been part of a recovery planning process that seeks, among other things, to facilitate the identification of capacity strengthening needs and the definition

of a strategy and action plan to ensure successful recovery processes. The impact of the adapted guidelines may be evaluated on issues such as empowerment and ownership by the government, contribution to the planning process and integrated vision of disaster risk management, and development of mechanisms, instruments and capacities for the successful implementation of a recovery process.

El Salvador: Country Context

The Republic of El Salvador is the smallest and most densely populated country in Central America, with an approximate average density of 300 inhabitants/km² and a land area of 21,041

km². Located on the coast of the Pacific Ocean, it borders Guatemala to the west and Honduras to the north and east (see Figure 3).

FIGURE 3

Geographical location of El Salvador



According to the 2016 population projections of the 2007 National Population and Housing Census, El Salvador has a population of 6.5 million inhabitants. A total of 4.6 million inhabitants live in urban areas and 1.9 million in rural areas, representing 70.4 per cent and 29.6 per cent of the total population, respectively. Almost 30 per cent of the total population of the country is concentrated in the metropolitan area of San Salvador (Kattan et al., 2017)

Due to its geographical location and natural and

territorial characteristics, El Salvador is subject to multiple natural and socio-natural hazards such as earthquakes, tsunamis, volcanic activity, tropical cyclones and torrential rains, floods, mass movements or landslides, droughts and extreme coastal waves. These hazards, combined with disorderly growth, environmental degradation and changes in land use, modification of natural river courses, disorganized territorial dynamics and other social processes, result in high levels of disaster risk.

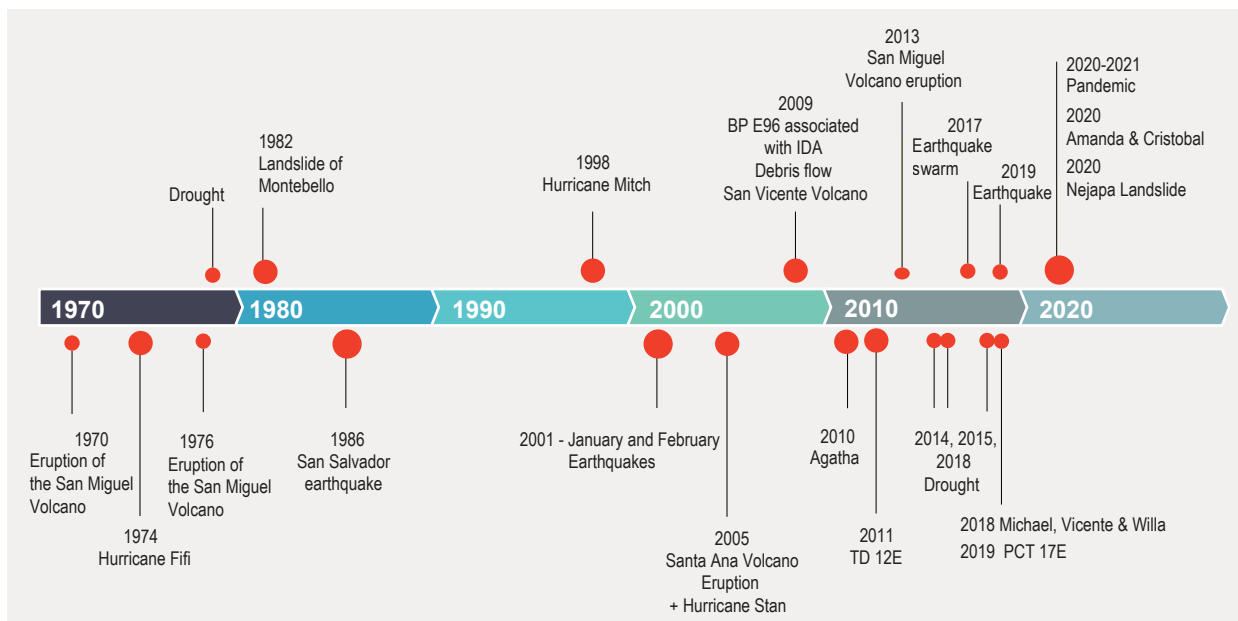
Risk and History of Disasters in El Salvador

With 88.7 per cent of its territory and 95.4 per cent of its population exposed to natural hazards, El Salvador is considered one of the most vulnerable countries in the world (Kattan et al., 2017). It is among the most exposed to multiple hazards and has a long history of being heavily affected

by disasters (Dilley et al. 2005). It is considered the second country with the highest economic multi-hazard risk worldwide relative to its Gross Domestic Product (GDP), with an estimated 95.4 per cent of its GDP exposed to two or more hazards (Maxx Dilley, Robert S. Chen, Uwe Deichmann, et al., 2005). Figure 4 shows the main events that affected the country between 1970 and 2021.

FIGURE 4

History of disasters in El Salvador



Source: Guide for the formulation of a post-disaster recovery framework in El Salvador (GoES, 2022)

Earthquakes have been responsible for the largest proportion of economic losses and deaths in the last 60 years, followed by storms and their secondary hazards, such as floods and landslides (Figure 5). Earthquakes are also responsible for the greatest economic impact from disasters, while tropical storms have been the most frequent events.

The 1986 earthquake generated damage and losses equivalent to almost 24 per cent of GDP, and the earthquakes of January and February

2001 caused effects equivalent to 12 per cent of GDP (Kattan et al., 2017). Hydrometeorological events Tropical Storm 12-E (2011) and Hurricane Mitch are responsible for the greatest damage and losses.

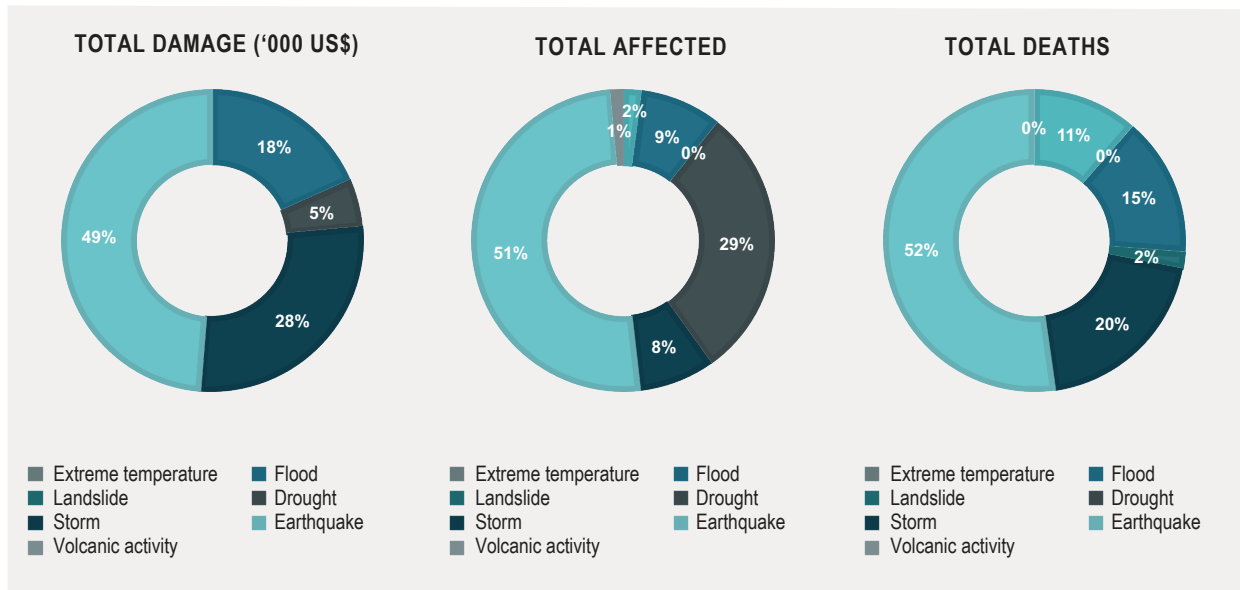
As a result of the impacts of the low-pressure system E96 associated with Hurricane Ida, El Salvador was placed at the top of the Germanwatch Global Climate Risk Index ranking. The event generated intense rains (350 mm in six hours) that triggered a debris flow in San Vicente and floods

in the “Paracentral Zone” of the country, causing 196 deaths and \$314 million in damage (Kattan et al., 2017). Two years later, Tropical Depression 12E

(2011) also broke rainfall records in El Salvador, causing 32 deaths and approximate economic losses of 4.2 per cent of GDP (Kattan et al., 2017).

FIGURE 5

Effects of disasters in El Salvador (1960-2020)



Source: Prepared by the authors based on EM-DAT data (EM-DAT, n.d.)

In 2020, tropical storms Amanda and Cristobal caused extreme rains, floods and landslides. The damage and losses resulting from the storms and the Covid-19 emergency were estimated at \$2.9 billion (March-July 2020) (UNDP and GoES, 2020). Figure 6 and Table 1 summarize the estimated damage and losses and economic impacts of severe events in recent years. It is important to note that effects and impact assessments (damage, loss and needs) have been developed only for the events with the greatest impact, mostly with the support of the international community.

An important distinction is made between damage (partial or total destruction of infrastructure, assets or patrimony) and loss (flows affected by the disaster in terms of income, lost production and additional costs incurred) and recovery needs, which refer to investments necessary to ensure physical reconstruction under better conditions (using regulations, standards), and consideration of the economic and social impact on the most affected populations and individuals in terms of living conditions, livelihoods, social protection and gender equality, among others.

TABLE 1

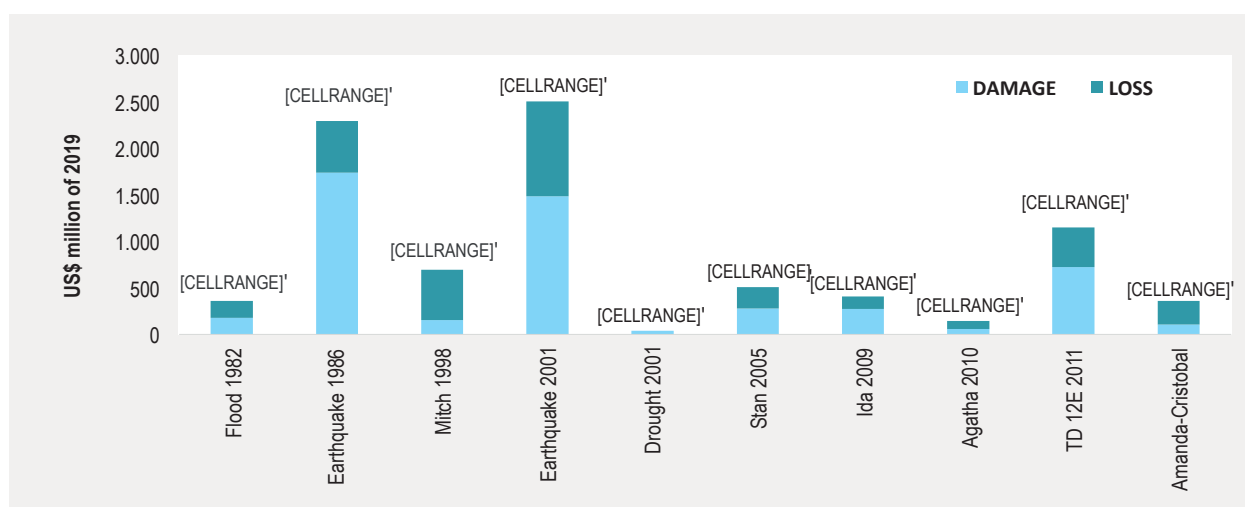
Estimates of damage and losses caused by severe events, period (1990-2020)

Economic impact (in US\$ millions)								
Sector/Events	1998 Hurricane Mitch	2001 drought	2001 earthquakes (January and February)	2005 Hurricane Stan and Santa Ana Volcano Eruption	2009 LP associated with Ida	2010 TS Agatha	2011 TD 12E	TS Amanda and Cristobal (+Covid-19 up to July 2020)
GDP impact	6.40%	0.24%	12.10%	2.20%	1.10%	0.50%	4.25%	1.3% (10.8%)
Social Sectors	37.6		616.7	149.5	39.66	43.9	207.1	116.4 (788.5)
Productive Sectors	269.2	27.1	339.3	60.1	82.36	20.6	339.1	215.7 (1,983.2)
Infrastructure	74.3	3.7	472.3	113.5	132.75	35.5	279.6	29.3 (143.6)
Environment	7	0.6	102.5	21.8	60.07	12.1	76.5	-
Others			73	10.6				-
Total	388.1	31.40	1,603.80	355.5	314.84	112.1	902.3	361.4 (2,915)

Source: Guide for the formulation of a post-disaster recovery framework in El Salvador (GoES, 2022)

FIGURE 6

Damage and losses from natural events, period (1980-2020)
(In US\$ millions in 2019 and % of the GDP in the year before the disaster)



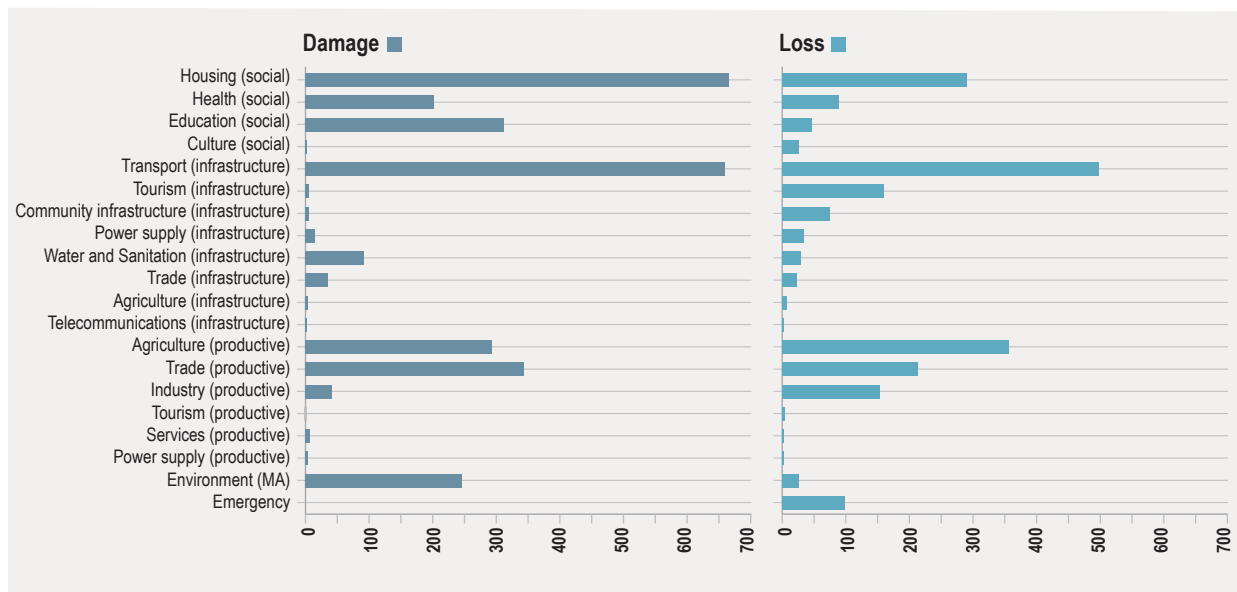
Source: Disaster Risk Financial Management Strategy of El Salvador (GoES, 2021a)

While the disasters in El Salvador (1982-2020) caused the greatest damage to the social sector (particularly the housing subsector), the infrastructure (particularly transportation) and productive (agriculture, commerce and industry) sectors have experienced the greatest losses.

Combined, the subsectors of transportation (infrastructure), 23 per cent; housing (social), 19 per cent; agriculture (productive), 13 per cent and commerce (productive) 11 per cent have concentrated most damage and losses (see Figure 7).

FIGURE 7

Disaster damage and losses in El Salvador (1982-2020)



Source: Guide for the formulation of a post-disaster recovery framework in El Salvador (GoES, 2022)

However, it should be noted that although certain sectors may register fewer effects (e.g., social and environmental sectors), this may be due to insufficient data and limitations in the evaluation process rather than to a reduced impact of these events on these sectors.

Post-disaster assessments and recent research have shown the disproportionate effects of disasters on the poor (ECLAC, 2012; GoES, 2009; Hallegatte et al., 2017; Oscar A. Ishizawa Juan Jose Miranda, 2016; UNDP, 2008; WFP, 1999). The PDNA carried out in El Salvador after the low-pressure system associated with Tropical Storm Ida (2009) revealed an inverse relationship between the higher damage and losses per capita (and their relationship with GDP) and the Human

Development Index (HDI). This implies that damage and losses to livelihoods are concentrated on segments of the population with high levels of economic and social vulnerability (GoES, 2009).

Following tropical storms Amanda and Cristobal (2020), the World Food Program (WFP) estimated that 336,300 people located in the areas most affected by the storm suffered severe food insecurity and that at least 22,000 farmers were directly affected, with 12,000 hectares of basic grains (corn, rice and beans) destroyed by floods (WFP, 2020).

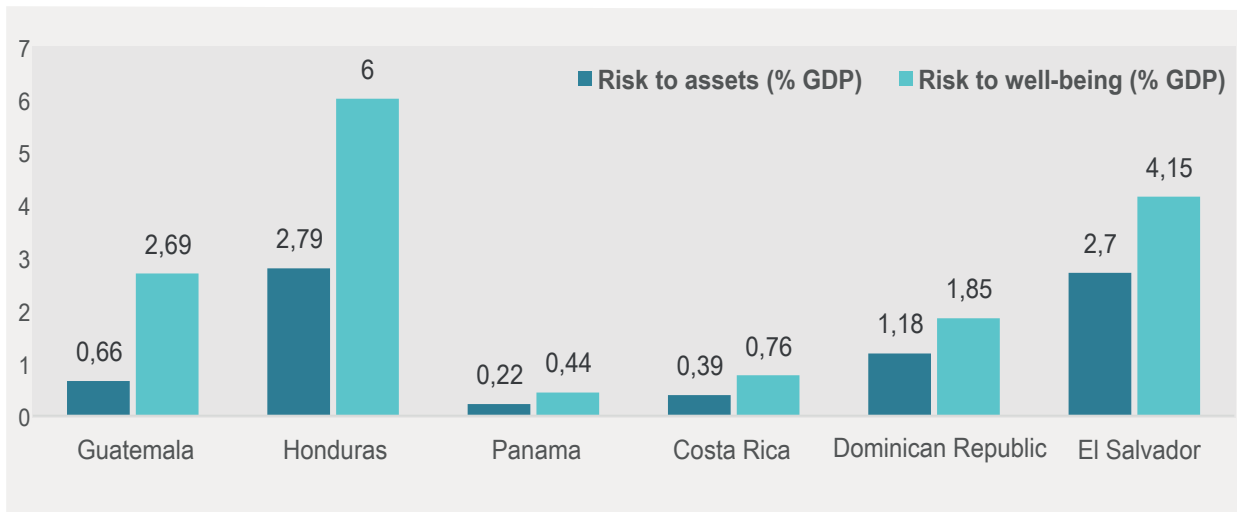
The risk to well-being losses in El Salvador is estimated to be 50 per cent higher than the risk to assets (Hallegatte et al., 2017). Low-income

households tend to live in more hazardous environments, such as lowlying areas prone to flooding or landslides (WFP, 1999), and tend to pay a higher cost for mitigating and coping with risk due to their limited assets base and to lose a

higher percentage of their overall and productive wealth, resulting in a diminished ability to cope with and recover from disasters (Hallegatte et al., 2017; UNDP, 2008).

FIGURE 8

Risk to assets and well-being losses in Central America



Source: Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters (Hallegatte et al., 2017)

Tropical Storms Amanda and Cristobal in the Context of Covid-19 (2020): Combined Effects and Recovery Needs

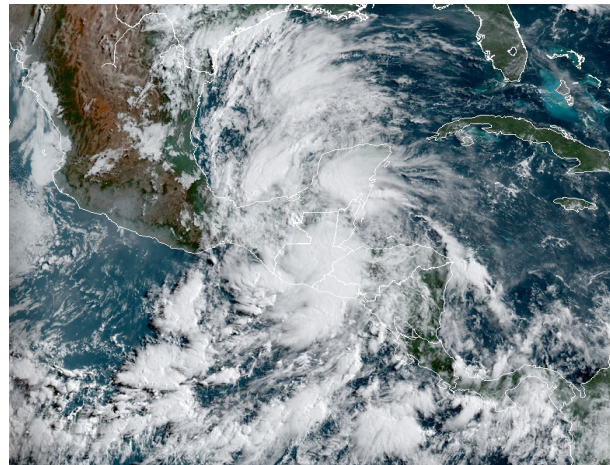
During 2020, El Salvador faced a complex disaster situation due to the combined effects of the Covid-19 pandemic and tropical storms Amanda and Cristobal, which marked the beginning of what later became the most active hurricane season recorded to date. Covid-19 and the containment measures had a significant social and economic impact. At the same time, the country faced the effects of tropical storms Amanda and Cristobal, which together generated damage and losses estimated at \$2.9 billion dollars (March-July 2020) and an economic impact estimated at 7.5 per cent of the GDP (UNDP and GoES, 2020).

Tropical Storms Amanda and Cristobal (2020)

Tropical Storm Amanda was the first named storm of the 2020 Pacific hurricane season. Amanda formed at 09:00 UTC on 31 May 2020 from a low pressure system embedded in a broad cyclonic circulation associated with the Central American Gyre (CAG), which stretched across the eastern Pacific and northern Central America. Tropical Storm Amanda developed just a few kilometres off the coast of Guatemala and made landfall three hours later in south-eastern Guatemala. In El Salvador, Amanda generated estimated sustained winds of 65 km/hr and gusts that in some places exceeded 90 km/hr, as well as heavy rains, flash floods and flooding. (Campbell & Kattan, 2020)

FIGURE 9

Figure 9. Tropical Storm Amanda 13:40 UTC on 31 May 2020 embedded within the Central American Gyre



Source: NOAA/GOES-16, RAMMB/CIR

The system continued to move over Guatemala in a north-northeast direction until it dissipated at 21:00 UTC on 31 May 2020. Amanda's remnants continued to drift northwestward, emerging south of the Bay of Campeche. The system reorganized and began to intensify, forming Tropical Storm Cristobal on 2 June, which subsequently moved over the Gulf of Mexico toward the US East Coast. The system continued to generate rain over El Salvador until 7 June.

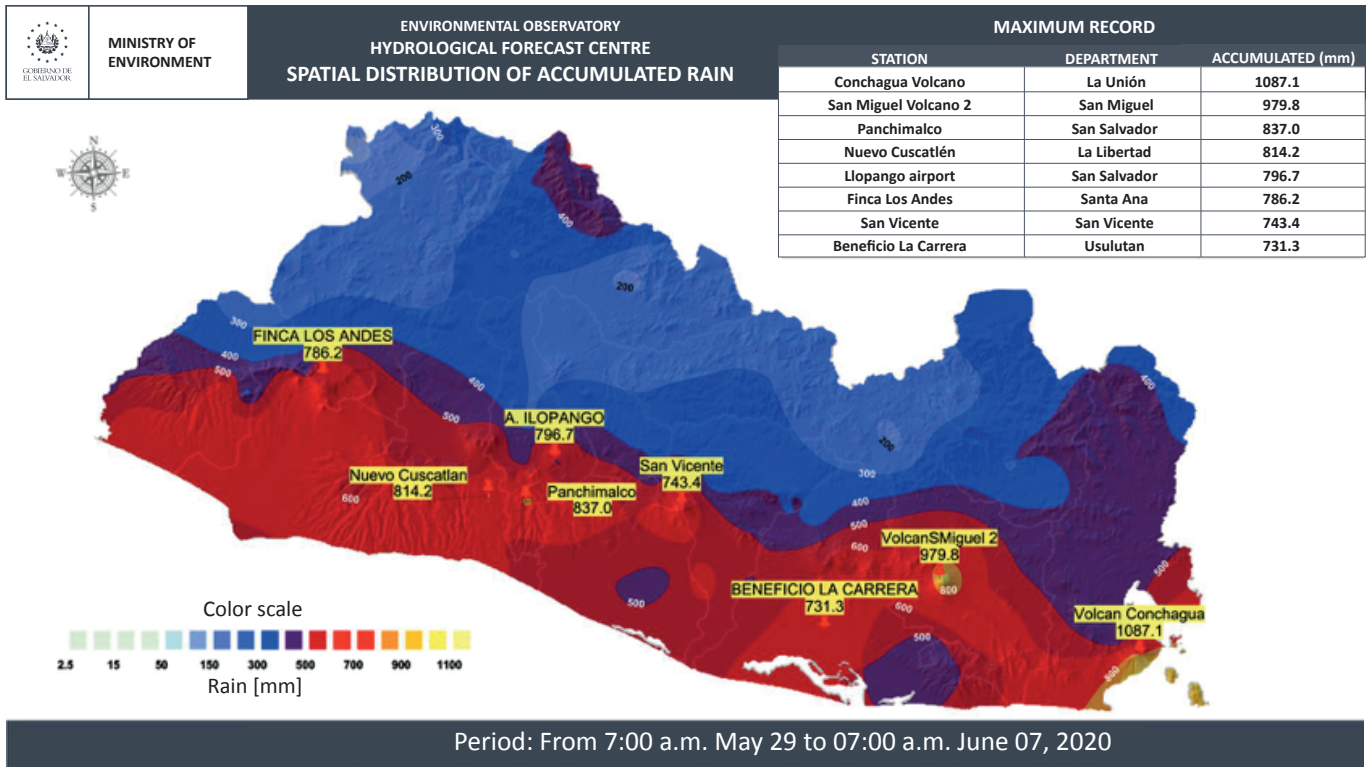
According to data from the Observatory of Hazards and Natural Resources of El Salvador, the maximum accumulated precipitation recorded during the Amanda-Cristobal event reached 1087.1 mm, the second highest on record – less than the 1513 mm during Tropical Depression 12E (2011) and more than the 861 mm during Hurricane Mitch (1988) in El Salvador. The Metropolitan Area of San Salvador (AMSS) recorded rainfall intensities greater than 3.5 mm/min, causing flash floods and

heavy damage to urban infrastructure (Campbell & Kattan, 2020).

Figure 10 displays a map of the accumulated precipitation during the Amanda-Cristobal event, and Figure 11 shows images of the impact of the extreme hydrometeorological phenomenon, which caused an estimated 30 fatalities and affected close to 150,000 people (GoES, 2020).

FIGURE 10

Accumulated rainfall during tropical storms Amanda and Cristobal in El Salvador



Source: Observatory of Hazards and Natural Resources, Ministry of Environment and Natural Resources, El Salvador

FIGURE 11

Damage caused by tropical storms Amanda and Cristobal

Photo: WFP / Mauricio Martínez



Photo: WFP / David Fernández

Tropical storms Amanda and Cristobal affected El Salvador as the country continued to deal with the Covid-19 crisis. The Covid-19 pandemic complicated response measures, limiting system capacity and expected protective actions, while exacerbating underlying vulnerability and risk factors. (Campbell & Kattan, 2020)

The Covid-19 Pandemic in El Salvador

Covid-19 and the containment measures had a strong social and economic impact on the country. In a context of complex crisis and uncertainty, with a precarious health system and without the capacity to respond to an unprecedented emergency, the GoES established one of the most restrictive and prolonged lockdowns in the region.

The country managed to contain the worst effects of the Covid-19 crisis, but it did so at a high macroeconomic and fiscal cost due to pre-existing fiscal vulnerabilities and the largely debt-financed government response (World Bank, 2021). The Central Reserve Bank of El Salvador estimated

a drop in GDP of 7.9 per cent in 2020 (Central Reserve Bank of El Salvador, 2020). However, the economic cost, valued as the difference between the GDP growth forecast for 2020 at the beginning of the year and the latest GDP growth estimate for 2020, could have exceeded 10 per cent of GDP (World Bank, 2021).

Although social transfers and other measures implemented by governments helped cushion the social impact of the crisis, poverty rates increased significantly in the region (World Bank, 2021). In El Salvador, this situation resulted in the loss of more than 70,000 formal jobs, a reduction in the average salary and more than 600,000 new poor (UNDP and GoES, 2020). Informal workers under the poverty line were especially affected, as they lacked safety net mechanisms and in many cases were made invisible by the system. White flags could be seen throughout the country with messages requesting help due to the lack of access to food and income as a consequence of the mandatory quarantine (see Figure 12).

FIGURE 12

White flags asking for help

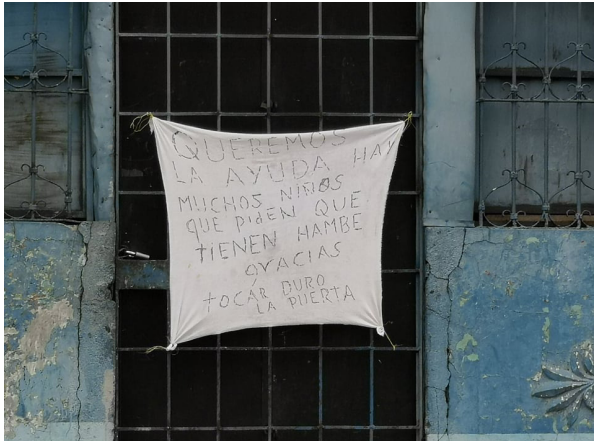


Photo: Francisco Campos



Photo: El Diario de Hoy newspaper

Assessment of Disaster Effects and Impacts and Recovery Needs

Given the obvious impacts of the Covid-19 emergency on the economy, public finances and the well-being of the Salvadoran population, coupled with the impacts of tropical storms Amanda and Cristobal, the Ministry of Economy and the Secretariat of Trade and Investments of the Presidency of El Salvador, identified the need to quantify the effects and impacts of the combined events and define a recovery strategy.

To this end, they requested support from the United Nations Development Programme (UNDP). To quantify the damage and losses from the combined events, their economic and social impacts and estimate recovery costs, the globally established Post-Disaster Needs Assessment (PDNA) methodology was used and the Covid-19 Recovery Needs Assessment (CRNA) adapted. The methodology—developed by the UNDP, the World Bank and the European Union—had been used previously in the country and technical personnel trained.

On behalf of the GoES, the evaluation was led by the Secretariat of Trade and Investment and

the Ministry of Economy, with the technical support of a team made up of focal points from 23 government institutions from the various sectors to be evaluated. The assessment process was conducted by a team from the United Nations system, led by UNDP as technical coordinator of the exercise, as well as a group of experts from the European Union and the World Bank. Due to the context of the Covid-19 pandemic, all team-training sessions, meetings and the discussions of the Evaluation Coordination Team were held virtually, requiring a large organizational effort.

The analysis covers the period between the onset of the Covid-19 emergency in mid-March 2020 and the aftermath of storms Amanda and Cristobal in May-June 2020. The estimated needs are derived from the effects of confinement and containment measures imposed by the pandemic: loss of income, increase in costs to ensure the provision of sectoral services and unexpected costs incurred in the response to the pandemic. These needs increased with the arrival of tropical storms, which added a scenario of destruction of infrastructure and physical assets and increased economic losses in various sectors.

The greatest damage was concentrated in the housing and transportation sectors due to the storms, while the greatest losses occurred in the productive sectors of industry, commerce, tourism and service, as the pandemic did not produce any partial or total destruction of physical assets (Table 2). Together, tropical storms Amanda and Cristobal and the Covid-19 emergency generated damage and losses estimated at \$2.9 billion (March-July 2020) and significant economic and human impacts (see Table 3 and Figure 13) (UNDP and GoES, 2020).

Lost tax revenue was estimated at \$960 million at the end of the fiscal year relative to the budget. There was also an estimated contraction in total income from \$6.3 billion to \$5.4 million, largely due to the disruption of productive activity as a result of Covid-19, which aggravated the economic

slowdown. The fall in GDP was considered to be the main cause for the drop in fiscal revenues, which increased the fiscal deficit by approximately 4 per cent with respect to GDP, reducing the already limited fiscal margin and increasing the level of indebtedness as a fiscal policy measure to address the emergency and reactivation of the economy (UNDP and GoES, 2020).

Recovery needs, estimated at \$1.2 billion, corresponded mostly to the social sector (particularly education). Five strategic lines for recovery were established: (i) governance; (ii) economic recovery; (iii) risk reduction, resilient infrastructure and decent housing; (iv) technology and innovation and 5) welfare, protection and social inclusion. Figure 12 shows the recovery needs by sector and strategic line.

TABLE 2

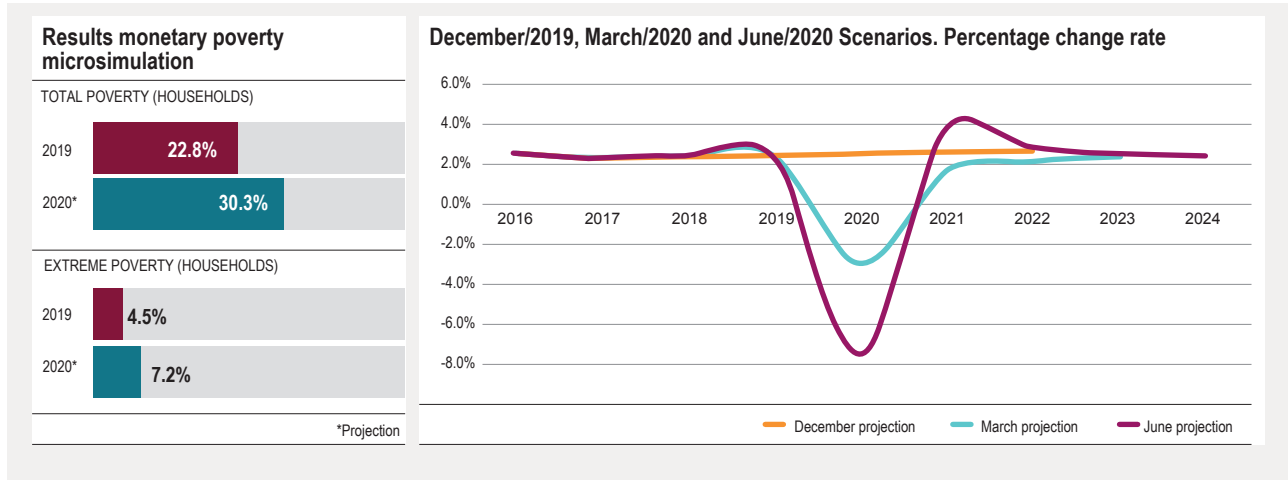
Damage and losses from tropical storms Amanda and Cristobal and Covid-19 (up to July 2020)
All sectors. Figures in \$US millions.

Sector	Damage	Public	Private	Losses	Public	Private
Social	72.17	13.56	58.6	44.26	21.34	22.92
Health	5.97	5.97	-	12.52	12.52	-
Education	5.63	5.63	-	3.1	3.05	0.05
Housing	58.6	-	58.6	4.49	4.05	0.44
Culture	1.96	1.96	-	24.15	1.72	22.43
Productive	13.01	2.52	10.48	202.66	-	202.66
Agricultural and livestock	8.43	0.16	8.27	44.5	-	44.5
Tourism	4.57	2.36	2.21	158.17	158.17	
Infrastructure	21.53	21.15	0.39	7.74	1.69	6.05
Transport	19.27	19.27	3.94	1.25	2.69	
Energy	0.39	-	0.39	3.8	0.44	3.36
Water and sanitation	1.87	1.87	-			
Total	106.71	37.23	69.47	254.66	23.03	231.63

Source: Tropical storms Amanda and Cristobal PDNA in the context of the response to Covid-19 (UNDP and GoES, 2020)

FIGURE 13

Economic impact and monetary poverty



Source: Tropical storms Amanda and Cristobal PDNA in the context of the response to Covid-19 (UNDP and GoES, 2020)

TABLE 3

Human impact resulting from tropical storms Amanda and Cristobal and Covid-19 (up to July 2020)

human impact
<p>Living conditions</p> <ul style="list-style-type: none"> • 23,855 homes suffered some level of damage (18 per cent severe, 28 per cent moderate, 54 per cent slight) from the storms. • 71,000 families were affected by the storms. • 11,000 people were sheltered in the second week of June. • Increase of 6,000 cases of Covid-19 and 164 deaths at the end of June 2020. • 5.4 million outpatient consultations not attended up to July 2020, compared to the same period in 2019. • 555 schools damaged by the storm up to 30 May 2020. • 16,131 students dropped out of higher education institutions up to May 2020.

human impact

Employment and livelihoods

- The average wages of Salvadoran Social Security Institute (ISSS) contributing workers decreased by 6.4 per cent between January and June 2020.
- 70,427 formal jobs lost in the private sector between February and June 2020.
- 628,000 new people living in poverty (30.3 per cent households).
- 276,000 new people in extreme monetary poverty (7.2 per cent households).

Food safety

- 182,000 new people in severe food insecurity between December 2019 and May 2020.
- 336,000 people with severe food insecurity in municipalities affected by the storms.
- The price of the basic urban food basket increased by \$9 and the rural food basket by \$7.4 compared to June 2019.
- 20,000 households with low food consumption up to May 2020.

Gender equality

- Overloaded gender roles, which combine the burdens of work, home, care and school support in an adverse context, which ignored care needs during the reopening.
- Impact on economic activities mostly fulfilled by women: trade and services in the informal sector.
- Impact on already scarce resources, such as time, access to employment and services and income that enhance the autonomy of women, among others.
- 2,427 cases of violence against women.
- 11,485 unplanned pregnancies due to lack of contraceptive medication (UNFPA, June 2020).
- In the field of health, disruption of services provided to women, such as sexual and reproductive services, which have resulted in unwanted pregnancies.

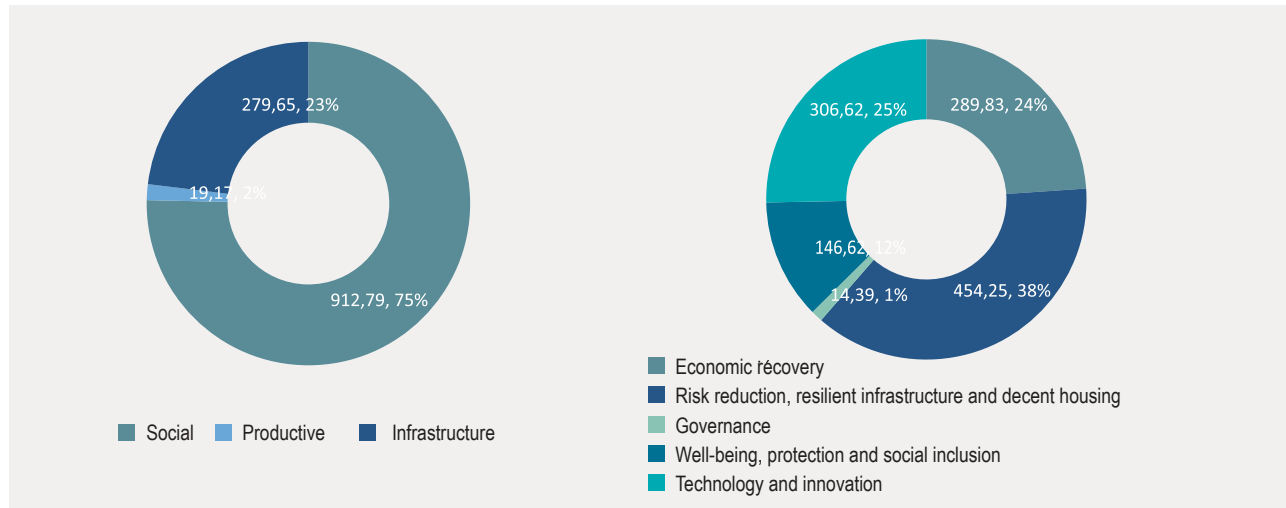
Social inclusion

- 18,000 women are part of the health care personnel.
- From January to June, 258 pregnant girls (ages 10-14 years) and 6,581 teenage pregnancies have been registered.
- Increase in youth unemployment.
- Hospital saturation made it difficult to access outpatient consultations.
- People with disabilities or older people are more vulnerable to chronic diseases and Covid-19 infection and face greater job insecurity and informality.

Source: Tropical storms Amanda and Cristobal PDNA in the context of the response to Covid-19 (UNDP & GoES, 2020)

FIGURE 14

Recovery needs by sector (left) and strategic line (right)
 Figures in US\$ millions



Source: Tropical storms Amanda and Cristobal PDNA in the context of the response to Covid-19 (UNDP and GoES, 2020)

Recovery Preparedness

The Sendai Framework for Disaster Risk Reduction 2015-2030 (UNDRR, 2015), adopted by the member countries of the United Nations, strongly emphasizes the need to reduce exposure and vulnerability in order to reduce disaster risk, including underlying and compounding factors such as poverty and inequality, unplanned urbanization, weak institutional arrangements, non-risk-informed policies, unsustainable uses of natural resources, among others. It highlights the importance of strengthening governance in risk reduction and preparedness strategies, improving coordination for response and recovery. It also points out that recovery is an opportunity to “build back better”, reduce future risk and integrate risk management as a development measure.

Although the Sendai Framework (UNDRR, 2015) emphasizes the importance of increasing preparedness for both response and recovery among its priorities (priority 4), countries usually focus on strengthening preparedness for response and not necessarily for recovery. The National Plan for Civil Protection, Disaster Prevention and Mitigation of El Salvador (2018) adopts the priorities of the Sendai Framework, however, the chapter that involves defining the guidelines for post-disaster recovery is “in process”.

After the PDNA for tropical cyclones Amanda and Cristobal in the context of the Covid-19 emergency, the GoES recognized the importance of better preparedness, not only for disaster response but also for an effective recovery, which would make it possible to minimize losses and cascading socioeconomic effects resulting from a disaster. For this reason, the GoES requested

UNDP support for the adaptation of the PDNA methodology to specific sectors and the Disaster Recovery Framework (DRF) guide.

Recovery preparedness has been led by the President of the Republic through the Ministry of Trade and Investment and the Ministries of Economy and Finance, with the support of the various infrastructure, productive and social sectors, the Ministry of the Interior and the National Civil Defence System for Disaster Prevention and Mitigation as the lead institution for disaster risk management, the Observatory of Hazards and Natural Resources and the El Salvador Agency for International Cooperation, with the support of the UNDP, the World Bank and the European Union, at different times.

High-level leadership was key to effective management, inter-agency coordination and decision-making, as well as alignment with strategic priorities and development programmes, especially considering the challenges imposed by the complex crisis in non-traditional sectors and the need to strengthen economic and social recovery and fiscal resilience beyond the reconstruction of the physical infrastructure. The articulation of strategic and development entities (e.g., planning, finance) and DRM agencies, facilitated synergies between emergency preparedness and response and recovery, integrating principles and policies of Comprehensive Disaster Risk Management to development-based recovery processes.

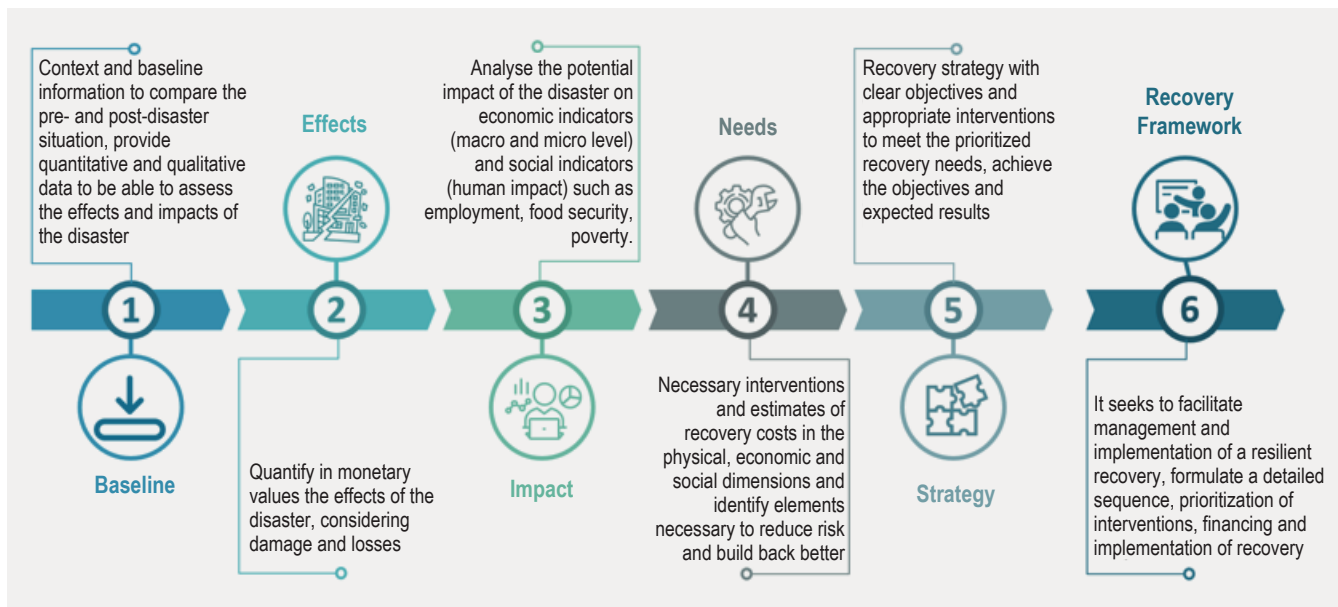
The GoES cautioned that a comprehensive recovery required the simultaneous implementation of the PDNA and the Recovery

Framework. To this end, they identified the need to strengthen sectoral capacities to ensure sound and reliable evaluations, which would allow them to initiate strategic planning, as well as the definition of a Recovery Framework that would provide a detailed sequence for the prioritization of interventions, financing and implementation of the recovery, defining flexible but robust

institutional arrangements – based on national and international expertise, context and national institutions – that would allow the GoES to lead a comprehensive recovery consistent with its development priorities. Figure 15 shows the steps for the development of the PDNA and Recovery Framework.

FIGURE 15

Steps for the development of the PDNA and Recovery Framework



Sectoral Adaptation of PDNA Guidelines

Given the importance of reliable and timely data and information on the effects and impacts of disasters, defining and quantifying needs for the definition of a comprehensive recovery strategy, the GoES requested UNDP support for the adaptation of the PDNA methodology to specific sectors.

The challenges observed in the assessment of the effects and impacts of the disaster and the identification of needs at the sectoral level

represented an opportunity for institutional strengthening. The GoES recognized the existing limitations in data management and evaluation processes and the differentiated capacities at the sectoral level, which contribute to the underassessment of the effects and impacts in certain sectors and rendering their needs invisible. The PDNA sectoral guides seek to facilitate the standardization and institutionalization of evaluation processes in the event of a disaster, as well as the development of comprehensive recovery strategies.

The PDNA is a common assessment approach developed by UNDP, the World Bank and the European Union to support governments in assessing damage and recovery needs. It is an inclusive process based on the capacity and experience of national and international actors. The primary goal of the PDNA is to assist governments in fully assessing the impact of a disaster on the country and determine the needs for a resilient recovery.

Eight sectoral guides were created, covering productive (agriculture, livestock, fishing and forestry), social (housing, education and health) and infrastructure (transportation, energy and water and sanitation) sectors.

For each priority sector identified, the guides addressed the main steps of the PDNA process:

- Analysis of the context and baseline: baseline information available to compare the pre- and post-disaster situation, provide quantitative and qualitative data to assess the effects of the disaster, and provide a solid basis for estimating the impact of the disaster on the sector.
- Assessment of disaster effects: quantify monetary values of the effects of the disaster in the sector considering damage (partial or total destruction of infrastructure, assets or patrimony) and losses (flows affected by the disaster in terms of income, lost production and additional costs incurred)
- Assessment of the disaster impact: estimate the likely impact of the disaster on the sector and its impact on economic indicators at the national level (macro and micro level) such as GDP and the balance of payments, among others, and social indicators (human impact) such as employment, food security, poverty, etc.

- Definition of sector recovery needs: Interventions needed and cost estimates for physical, economic and social recovery, and elements needed to reduce risk and build back better
- Definition of a recovery strategy with clear objectives and appropriate interventions to meet prioritized recovery needs, achieve objectives and expected results

A proper quantification of the damage, losses, economic and human impact is crucial to establish recovery needs and ensure a comprehensive recovery.

Adaptation of the Disaster Recovery Framework (DRF)

National and international experience has demonstrated the need to move from assessments to the formulation of concrete recovery plans, which specify the elements and steps needed to finalize their implementation. The disaster and complex crisis scenario experienced by the country in 2020 also highlighted the need to establish the mechanisms, instruments and institutional arrangements to ensure a comprehensive recovery – beyond the obvious need to rebuild the physical infrastructure – that is capable of minimizing cascading effects of disasters and is consistent with and complements existing economic and social development policies. The Recovery Framework seeks to facilitate the management and implementation of resilient recovery that builds on the needs identified in the PDNA or other similar assessments.

The adaptation of the DRF was carried out with the objective of establishing clear elements and guidelines and an adequate institutional framework to guarantee comprehensive, effective recovery processes aligned with national priorities.

The adaptation of the DRF to El Salvador was developed through a consultative process led by the coordinating team made up of the UNDP, the Secretariat of Trade and Investment and the Ministry of Economy, and actively supported by the Ministry of Finance of El Salvador. Leading institutions or those involved in Disaster Risk Management (DRM) in the country and post-disaster recovery processes participated in the process.

The framework seeks to help articulate the key elements of recovery, such as the recovery policy and vision, the strategy to follow, the prioritization

and sequencing of actions, the institutional arrangements defining the roles, responsibilities and mandates, the establishment of financial mechanisms and instruments and funding management, implementation and recovery management (see Figure 16).

The DRF has the general vision of implementing a resilient recovery in El Salvador through the recovery and improvement of infrastructure, services, livelihoods and living conditions of the population affected by the disaster, reducing risk factors, promoting sustainable development and building a more equitable society.

FIGURE 16

Elements for the Definition of a Recovery Framework



Source: Guide for the formulation of a post-disaster recovery framework in El Salvador (GoES, 2022)

The institutional structure provides a clear and defined framework for future events – with the institutional and operational flexibility that future disasters require – for a resilient economic, social and infrastructure recovery. The proposal responds to international best practices and national priorities of (i) economic reactivation,

(ii) citizen security and (iii) social welfare. Figure 17 and Figure 18 show the general institutional framework for recovery established for El Salvador and the participating institutions.

Its structure considers strategic leadership at the highest level (president or presidential appointee),

a board of directors with a strategic decision-making role to guarantee an effective recovery in its economic, social and infrastructure dimensions; intersectoral, interinstitutional and interterritorial articulation; and proper management of recovery funding. It seeks to promote, through high-level leadership, coordination and articulation between the different organizations involved in the recovery, including donors, international and national NGOs, the national government and local governments.

Commissions are formed for the development of the strategy and implementation of the key components of recovery including physical recovery (infrastructure), social recovery and economic recovery, led by and made up of national institutions working on the issue. This ensures a comprehensive and harmonized recovery between sectors linked to the reconstruction of the physical infrastructure (for example, the Ministry of Public Works), institutions linked to social recovery (for example, the Social Cabinet and the Office of the First Lady, the Ministry of Local Development); and institutions linked to economic recovery (for example, the Ministry of Economy, the Secretariat of Trade and Investments and the private sector).

Enabling commissions are established to support essential elements of recovery, such as funding management (led by the Ministry of Finance), coordination with development partners (led

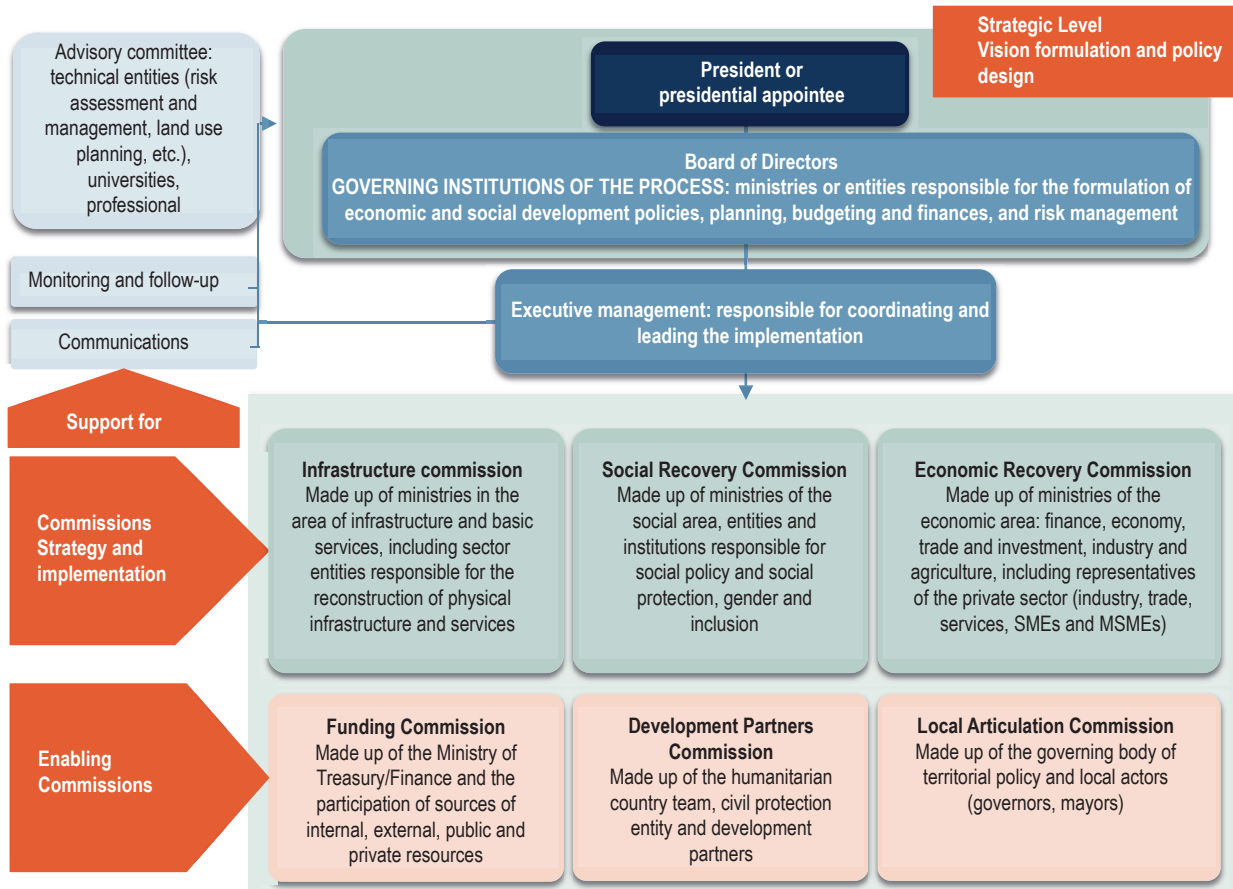
by the El Salvador Agency for International Cooperation) and inter-territorial coordination (led by the Ministry of the Interior). To coordinate and direct the implementation, it is proposed that an executive directorate be established to coordinate the commissions and monitor and follow up the recovery strategy. Depending on the funding sources for recovery in the face of a specific event, the establishment of Project or Programme Management Units may also be required at a given time.

An advisory committee of technical entities is also established, which will support the board of directors and the executive management, providing technical inputs for the recovery policy and strategy to avoid the reconstruction of risk and ensure a sustainable recovery articulated with the development strategy. Participating entities include the General Directorate of Civil Protection and the Observatory of Hazards and Natural Resources, among others.

The national and international experience in disaster management and recovery processes in El Salvador made it possible to identify strategic elements necessary to ensure a successful Recovery Framework, mainly considering elements of governance, strategy and planning, financial risk management and implementation capacities (see Figure 19).

FIGURE 17

Figure 17. General institutional framework for recovery



Source: Guide for the formulation of a post-disaster recovery framework in El Salvador (GoES, 2022)

FIGURE 18

Institutional arrangements for recovery in El Salvador

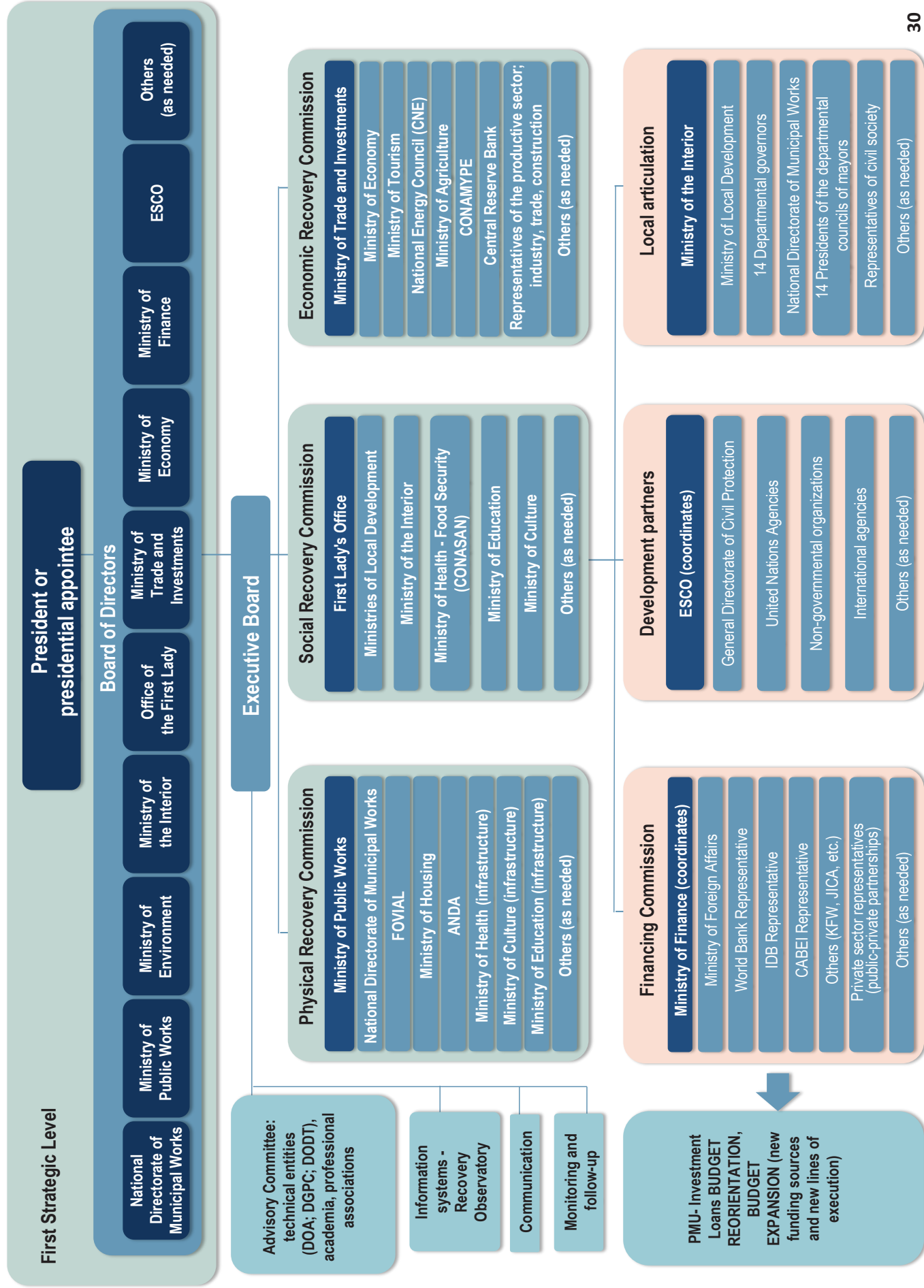


FIGURE 19

Building blocks for post-disaster recovery



Source: Guide for the formulation of a post-disaster recovery framework in El Salvador (GoES, 2022)

Other Relevant Instruments

The combined effects of the Covid-19 pandemic and tropical storms Amanda and Cristobal, and the resulting complex crisis, also highlighted the need to strengthen financial management in the face of disaster risk and promote public investments for economic recovery and disaster resilience building.

Sectoral Investment Plan for Economic Revitalization and Resilience to Disasters

In 2021, due to the urgent need to facilitate economic recovery in response to the impacts of Covid-19 and tropical storms Amanda and Cristobal, and considering the results of the PDNA, the GoES developed a "Sectoral Investment Plan for Economic Revitalization and Disaster Resilience", with a request for support from the World Bank.

The Investment Plan was framed within the strategic line "risk reduction, resilient

infrastructure and decent housing" defined in the PDNA, which was established to avoid the reconstruction of pre-existing vulnerabilities and ensure that investments are secure and contribute to risk reduction.

The Investment Plan sought to expand the findings of immediate recovery needs in the sectors affected by the storms to the promotion of resilient investments that could boost economic development, and the reduction of underlying risk factors and the potential damage and losses in the event of a disaster. (GoES, 2021b). To this end, a set of projects were identified by strategic sectors, led by the Ministry of Economy, the Secretariat of Trade and Investments and the Ministry of Finance.

To meet the objectives of economic revitalization and disaster resilience, the following sectors were prioritized: (i) tourism, (ii) transportation, (iii) agroindustry and (iv) water and sanitation. Together, the activity of these four sectors represents 25 per cent of the country's GDP

and employs more than 590,000 workers (GoES, 2021b). The first three were chosen by the government due to their significant contribution to economic activity and the generation of jobs for the population. The water and sanitation sector was considered given its importance in ensuring the basic and fundamental conditions for the development of economic activity and decent and healthy living conditions of the population (GoES, 2021b).

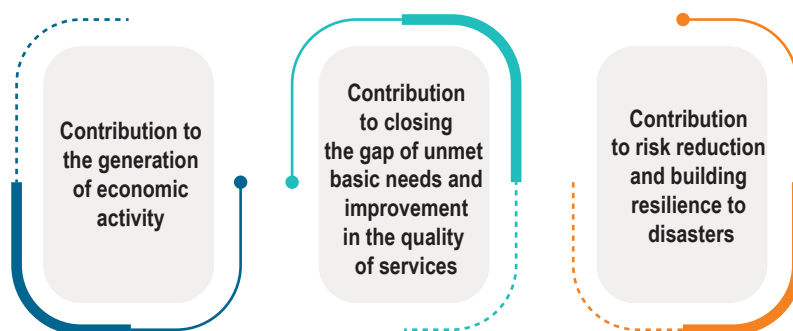
The projects were chosen through a consultative process with the prioritized sectors, according to

pre-established criteria for the prioritization of projects according to their contribution to (i) the generation of local economic activity; (ii) meeting unsatisfied basic needs and improving the quality of services to promote the economic participation of vulnerable populations and reduce underlying risk factors and (iii) risk reduction and building resilience to disasters (see Figure 20).

The projects identified are being prioritized within the framework of the Medium-Term Public Investment Programme (PRIPME) managed by the Ministry of Finance.

FIGURE 20

Prioritization criteria established in the Sectoral Investment Plan for Economic Revitalization and Disaster Resilience



Contribution to local economic development and vulnerability reduction

Expected contribution to GDP
Job generation
Creation of enabling conditions for attracting and maintaining investment
Increased productivity
Recovery and/or expansion of the supply chain
Contribution to revitalization of other key sectors (e.g. tourism, agriculture)

Closing the gap of unmet basic needs

Families benefited by the reduction of gaps in access to services to cover unmet basic needs
Families benefited by the improvement in the quality of services

Contribution to risk reduction and building resilience to disasters

Disaster damage and losses avoided
Families with a change in risk status (No. of benefited families)
Contribution to resilience and business continuity (No. of benefited families)
Continuity of critical services for the population ensured (No. of benefited families)

Source: Adapted from the Sectoral Investment Plan for Economic Revitalization and Disaster Resilience (GoES, 2021b).

Disaster Risk Financial Management Strategy

The Covid-19 pandemic and the containment measures combined with the effects of tropical storms Amanda and Cristobal also had strong implications for public finances. The situation triggered significant increases in public spending that required the reallocation of government budgets and the search for additional revenue. At the same time, the change in economic activity, reduced productivity, reduced purchasing power and trade resulted in a substantial reduction in tax revenues. The PDNA estimated a loss of tax revenue of \$960 million at the end of the fiscal year relative to the budget (UNDP and GoES, 2020)

Although the efforts to develop the Disaster Risk Financial Management Strategy with the support of the World Bank preceded the crisis, the efforts did not materialized until after public finances were clearly and severely impacted by the disaster. The Ministry of Finance prioritized proper financial management in the face of disaster, including adequate financial mechanisms and instruments, rapid quantification of costs, recovery budgets, identification of financing sources and the establishment of mechanisms for the administration and monitoring of funds. The joint work for the elaboration of the PDNA facilitated the rapprochement between the government and the World Bank to resume the work and finalize the elaboration of the strategy.

In 2021, the Disaster Risk Financial Management Strategy (EGFRD) was prepared and approved (Agreement No. 564 of 21 May 2021), led by the Ministry of Finance with the support of the Ministry of Trade and Investment. The EGFRD's mission is to ensure fiscal stability and sustainability through comprehensive management of fiscal risks associated with disasters. The strategy allows, on the one hand, to establish agile and contingent mechanisms and instruments to provide financial coverage in the face of new emergencies without risking fiscal stability. On the other hand, it allows for the strengthening of the public investment system to move towards a more resilient standard, managing risk in a comprehensive manner and, therefore, minimizing the impact that future disasters may have on social and productive infrastructure.

The Disaster Risk Financial Management Strategy establishes four strategic lines, consolidated through an Implementation Plan: (i) generation of risk knowledge about the potential fiscal impact of disasters; (ii) combination of financial instruments and mechanisms to mobilize resources in a timely manner in post-disaster response and recovery processes; (iii) disaster risk reduction through resilient public investment and (iv) Increased efficiency, effectiveness and transparency of public spending on DRM.

Lessons Learned from the Recovery Planning and Assessment Process

Success Factors and Best Practices

High level political will and leadership

Both the PDNA/CRNA preparation process and the adaptation of the PDNA sectoral guides and the Recovery Framework were led by the Presidency of the Republic through the Secretariat of Trade and Investment, with strong convening power. This, in addition to demonstrating the high level of priority that the central government conferred on the process, facilitated the participation of sectoral actors and promoted the commitment of the sectors, as well as effective management.

Commitment of the technical teams

Leadership at the presidential level was complemented by the strong commitment and conviction of the technical teams in charge of intersectoral and sectoral coordination. Although technical commitment has its limitations in the absence of political will, political will also requires technical commitment and capacity, essential to ensure technically viable products that facilitate decision-making. This was also a determining element in identifying gaps and promoting the recovery preparation process.

Preparation of recovery teams: methodologies, processes and high-level technical teams

As a leader and technical facilitator of recovery, UNDP has extensive experience in needs

assessment processes and recovery strategies. Having well-established operational mechanisms and processes, clear and widely applied methodologies, as well as high-level technical teams, allowed UNDP to respond quickly and effectively to the government's request.

Recognition of the PDNA methodology and installed capacities

The implementation of the PDNA methodology benefited from recognition at the government level due to past efforts to establish technical teams, the support for the elaboration of PDNAs during previous disasters and the broad global recognition and implementation of the methodology.

Appropriate selection of sectoral leadership

The government's coordination team defined the profiles of the sectoral focal points, which were submitted to the heads of the different line ministries. These teams, with sound technical expertise, as well as convening power and coordination capacity within their institutions, were decisive in the development of the PDNA. Among other elements, the profiles considered (i) direct communication with the head of the institution and decision-making capacity; (ii) ability to coordinate within the institution and integrate the teams to obtain the required information; (iii) knowledge of risk management, knowledge or experience in similar evaluations

and (iv) commitment and availability to carry out the evaluation given the time limitations.

Adaptability of the methodology

The PDNA and the CRNA were adapted to assess a complex, multidimensional and interconnected crisis. This made it possible to identify the effects and impact of combined events of a different nature and to establish recovery needs. Although the cascading effects are difficult to predict, the evaluation made it possible to identify critical economic and social elements, in addition to the obvious damage to infrastructure.

Complementarity of efforts and coherence of UNDP-WB-EU actions

The PDNA facilitated the coordinated work of the partners in response to the government's need, as well as the definition of new actions necessary for institutional preparedness and strengthening. This made it possible to combine complementary efforts for the benefit of the country. UNDP, with the support of the European Union, supported the government in the adaptation of the PDNA sectoral guidelines and the Recovery Framework, while the World Bank supported the Ministry of Finance in the elaboration of the Disaster Risk Financial Management Strategy and its implementation plan, as well as the Ministry of Economy in the preparation of the Sectoral Investment Plan for Economic Revitalization and Disaster Resilience.

Alignment of priorities

High-level leadership and coordination between the different governmental institutions facilitated the identification of support needs and priorities, aligning the efforts of development partners. This made it easier to articulate the work and develop complementary efforts led by different government institutions, with the support of different cooperation partners, to achieve a common goal.

Ownership of the process

Although the UNDP provided support as technical facilitator, the GoES assumed leadership of the process, which facilitated the ownership of the methodology by the country and the delivery of results while highlighting the need to advance recovery preparedness and the institutionalization of instruments.

Limitations and Challenges for the Development of the Assessment

Time frame

The time frame for conducting the evaluations is limited, as is the time allocated to the adaptation of the sectoral guidelines. Time constraints posed special challenges due to the virtual and work dynamics imposed by the Covid-19 pandemic. The greatest challenges arose in the least prepared sectors, in terms of installed capacities and handling of data on effects and impacts. Many sectors had to start the evaluation and verification process in the field at the beginning of the development of the PDNA, while sectors with greater installed capacities were able to consolidate and analyse existing information.

Limited staff trained in the methodology

Despite the efforts made by the GoES and UNDP in previous years to train personnel from the different government institutions, they were overwhelmed by the status and turnover of the staff. Many of the staff trained in previous years had left the institutions or changed functions, which made it difficult to build a team with sound knowledge of the methodology and required that additional training be carried out in parallel to the preparation of the PDNA.

Access to sectoral data and information

Although some sectors have established statistical departments and/or processes for collecting

and managing information on the effects of a disaster at the sectoral level, these capacities vary across sectors. Many sectors or subsectors lack established data collection processes for data and have been forced to carry out rapid and often incomplete surveys.

The assessment is constrained or altered by limitations in the evaluation process or inadequate data management in certain sectors (or certain events), which prevents capturing the real effects and impacts in these sectors and diverts the focus of the recovery strategy towards sectors with greater capacity to capture and analyse data and information.

Operational Challenges of the Pandemic for Evaluation

At the time of the evaluations, the country was still heavily affected by the Covid-19 pandemic, resulting in a series of technical and operational complexities.

Due to the pandemic, teams could not meet face-to-face, and at the time, there were still many technical and technological limitations to working fully in a virtual environment. Also, many institutions worked under rotating schedules to minimize exposure, and there were mobility limitations for field evaluations. Many sectors were also simultaneously developing actions in response to the emergency, generating a work overload and conflicting priorities.

Engagement of civil society and private sector

The measures taken by the government in response to the Covid-19 emergency, which resulted in one of the strictest and longest lockdowns in the region with strong social impacts and implications for the productive sectors, led to a deterioration in relations – and even conflicts – between the central government, the private sector and civil society. This hindered the engagement of private companies and civil society in the efforts to assess

damage and losses and estimate recovery needs, forcing the Government to look for secondary sources of information to complete the estimates.

The Governance of Recovery: Towards a Development-based Recovery

Often, the phases of emergency response, humanitarian assistance and recovery are not clearly delineated, complicating the identification of the actors that should lead or be involved in the recovery processes, both at the government level and from international agencies and organizations. This lack of distinction of roles and clarity of approaches can result in deficient, assistance-oriented recovery strategies that do not contribute to development and resilience building. Disaster recovery must be viewed as part of the development strategy and articulated with national policies and plans.

Disasters and fragility

To ensure resilient development and peacebuilding, it is necessary to address the underlying effects of conflicts and crises and the links between disasters, fragility and conflict, as well as other hazards such as climate change and forced displacement. Between 2005 and 2009, more than half of the people affected by disasters lived in fragile and conflict-affected states. Within a few years, this figure had reached 80 per cent. (GFDRR, 2015). Disasters and climatic shocks directly or indirectly affect people's well-being, livelihoods and economic development and can increase existing vulnerabilities, such as poverty and inequality.

In El Salvador, there is evidence of the relationship between disasters, conflict and human insecurity. During the armed conflict (1980-1992), internal emigration and demobilization altered demographic dynamics. After the Montebello landslide in 1982, many displaced people from the interior of the country settled in the affected areas, thus repopulating high-risk areas. In 1986,

during the armed conflict, an earthquake with its epicentre in the city of San Salvador killed more than 1,500 people. The central area of San Salvador and several precarious urban settlements were strongly affected.

The dynamics of internal and external migration due to conflict and disasters –mainly in conditions of marginalization, inequality, limited access to services and coverage of basic needs– aggravated the growing human insecurity and the gang phenomenon in the following years. The country faced the highest rates of violent deaths, and its capital, San Salvador, led the world ranking.

However, despite the clear link between disasters, human fragility and insecurity, these elements have not been explicitly assessed in El Salvador. This was due, in part, to methodological limitations, limited access to information and lack of clarity from the sectors about possible variables linked to fragility.

Limitations and Challenges to Move from Assessment to Recovery

Lack of clarity of the full process

At the beginning of the PDNA/CRNA, most participating institutions were not clear about

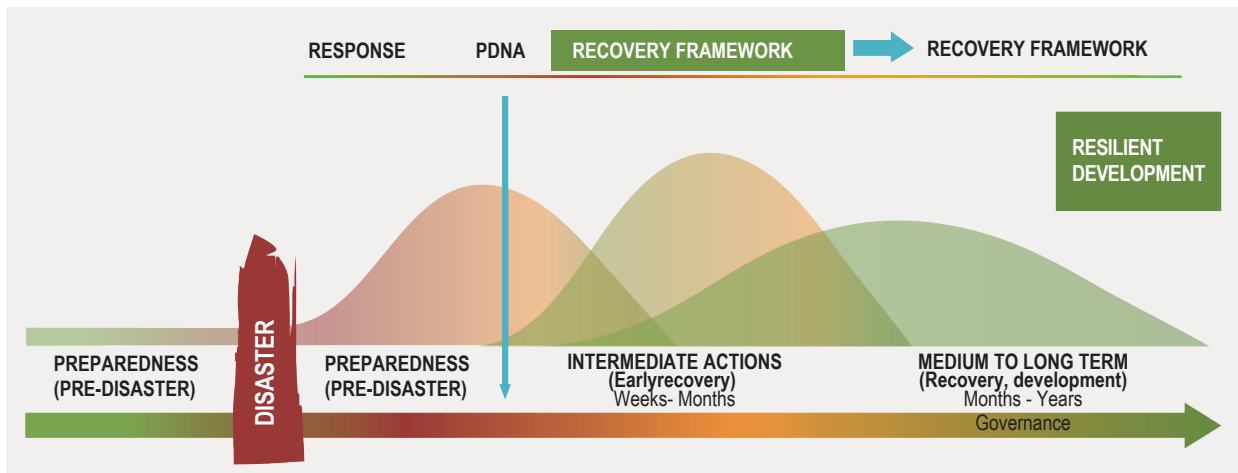
the final objective of the PDNA and how it would be integrated in a long-term recovery process. At the operational level, institutional leaders were convened to carry out an evaluation of the effects and impacts of tropical storms Amanda and Cristobal or to fill out the effects matrix in a timely manner. Completing the report was viewed as an objective in itself, thus resulting in the loss of momentum for the implementation of a comprehensive recovery strategy.

Slow-Onset Phenomena: Prolonged Response Activities vs. Recovery

Slow-onset phenomena are particularly complex because the phases of emergency care, rehabilitation and recovery are difficult to differentiate and often overlap. In a sudden event, it is possible to distinguish the phases of (i) response and emergency aid – which focus predominantly on meeting short-term needs with the purpose of saving lives, reducing health impacts, ensuring safety and meeting the basic subsistence needs of the affected population and (ii) recovery – the restoration and improvement of infrastructure, livelihoods and living conditions of the affected communities after a disaster, making efforts to reduce disaster risk factors (see Figure 21).

FIGURE 21

Timing of disaster response and recovery



Source: Adapted from National Recovery Framework/FEMA 2011

In the face of a slow-onset phenomenon such as the Covid-19 emergency, emergency response and humanitarian assistance actions can be prolonged over time and be confused or mixed with recovery activities, as was the case in El Salvador. Measures such as the delivery of social packages, improvement and construction of health infrastructure for emergency care, establishment of trusts to relieve micro and small businesses, or helping students to close the digital gap, were considered recovery measures.

Challenges to identify needs and define recovery strategy

Despite data challenges and limitations, the methodology made it possible to quantify the

effects of the disaster and provide information for decision-making. The identification of impacts, especially human, was far more complex due to the lack of understanding of the potential consequences of the disaster on the impact indicators. Translating human and economic impact indicators into needs was challenging, especially from a sectoral perspective. Therefore, the recovery needs identified primarily addressed the damage identified at the sectoral level. There was no strategic and intersectoral identification of needs, which would facilitate complementarity to address not only damage and loss but also the economic and social impacts for a comprehensive recovery. The strategic lines responded more to already defined programmes and were limited to grouping the sectoral needs previously identified.

Recommendations

Recommendations for Methodologies and their Implementation

Data and information management

Strengthening data capture and management capacity, mechanisms and tools at the sectoral level would allow for more realistic evaluations and better recovery strategies. For this, it is necessary to strengthen the institutional capacities for a systematic and continuous evaluation of the effects of disasters and recurring events, which would make it possible to improve needs assessments, recovery strategies and sectoral strategies and policies.

Ensure feedback to sectors

One international best practice in successful evaluation and recovery processes is the feedback and validation of the assessments in coordination with the sectors and territorial actors. According to the technical teams involved in the PDNA process in El Salvador, this feedback and validation process did not take place, which limited their ability to assume ownership of the results and integrate them into activity and investment planning.

Capitalize on PDNA information

PDNAs contain a large amount of information that can be very valuable, not only for recovery planning but for other strategic processes. Systematizing, integrating and establishing information access mechanisms, including geostatistical analysis, could contribute to long-term planning and corrective and prospective risk management.

Clarity of the process: recovery as objective

The objective defined at the beginning of the process will determine its (real and perceived) success. Setting the implementation of the recovery as objective and the PDNA as an input from the start can shift the focus of the process and even redefine the strategy. Establishing key elements of the recovery framework or having a generic Recovery Framework prior to the start of the evaluation can help to better identify how the PDNA contributes to the process and facilitate the implementation of the recovery strategy.

Complex crises and the domino effect

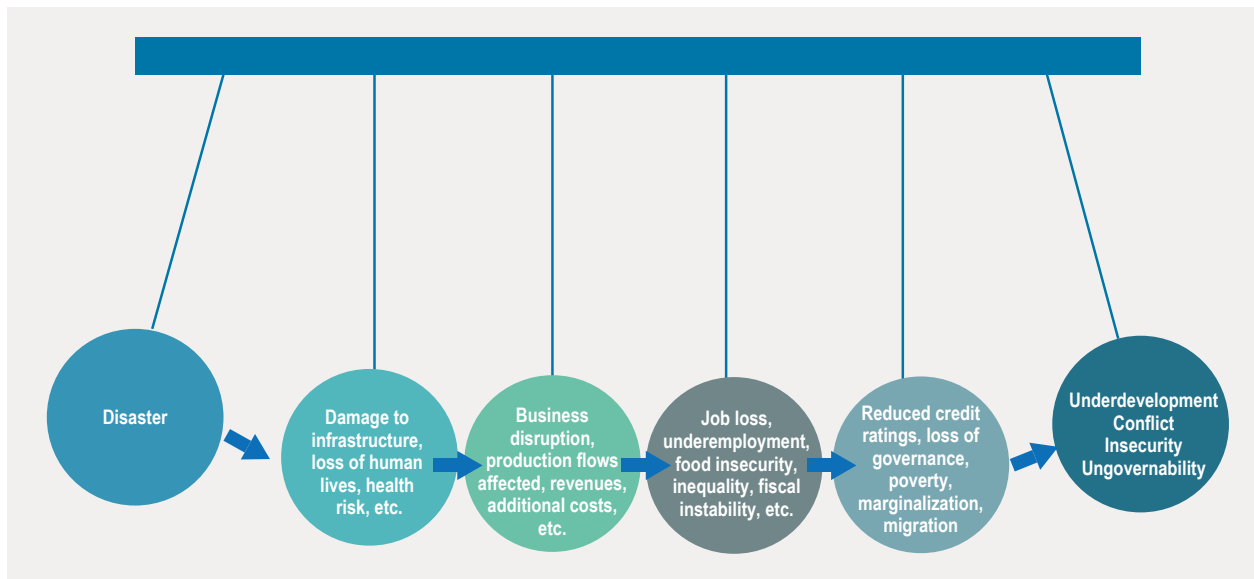
To address complex crises, it is necessary to identify, anticipate and minimize the long-term effects and cascading consequences of disasters –including fragility and conflict– by identifying related recovery needs and associating specific milestones (Figure 22).

The identification of cascading consequences can then be associated with more comprehensive, strategic and complementary recovery needs, focused on minimizing the cascading impacts and consequences of disasters and building on dynamics that can generate positive impacts.

For example, major crises can trigger large-scale economic restructuring, with the contraction of some sectors and the expansion of others. If expanding sectors are more productive than contracting ones, aggregate productivity should increase as the economy returns to full employment (World Bank, 2021).

FIGURE 22

Complex crises and domino effect



Source: Prepared by the author.

Comprehensiveness in needs assessments and recovery process, considering the physical, economic and social dimensions

To facilitate a comprehensive and strategic recovery process in the physical, social and economic dimensions, it is necessary to transform the evaluation process beyond the technical and sectoral evaluation. Traditionally, assessments have focused more on physical reconstruction than on medium- and long-term impact on people and communities. For this reason, many recovery needs in the social sectors receive less attention and resources than infrastructure reconstruction.

Using the steps for the preparation of the PDNA described above – context and baseline assessment, quantification of effects and impacts, identification of needs and recovery strategies – it is possible to identify different moments and approaches in the assessment. When the entire process is carried out by sectoral technical teams, the scope and strategic vision of the recovery can

be limited and recovery needs focused on physical reconstruction, ignoring the economic and social dimensions.

The experience of El Salvador suggests that the assessment and recovery planning could benefit by adding different work teams at different times to promote a comprehensive evaluation and recovery:

1. Assessment of disaster effects and impacts in the sector. This assessment can be carried out with the participation of the technical teams responsible for monitoring and evaluating damage and impacts.
2. Identification of recovery needs and definition of strategic lines to capture a complete picture of effects and impacts of the disaster from the different sectors and their integration at the national level, considering the complementarity of the sectoral efforts for recovery in the different dimensions. The definition of recovery needs and strategic lines

should be harmonized and integrated into existing development policies. In addition to the technical teams that carried out the assessment, sectoral planning teams, central and local governments, the ministries of treasury or finance at the highest level should participate in the assessment.

3. Definition of the recovery framework for recovery management and implementation. International examples have shown that successful models include high-level leadership, with the engagement of strategic sectors and risk management agencies.

Fragility analysis as an integral part of the assessment

Conflict fragility or sensitivity and human insecurity must be incorporated into sector analyses and decision-making on recovery strategies, respecting guiding principles. Disasters generate differentiated impacts on various population groups, disproportionately affecting the poor and marginalized (see Section 3.2). The effects of disasters, particularly the disruption of essential services and livelihoods in marginalized populations, can increase tensions, violence and conflict. Disaster impacts can also create increased opportunities for corruption and impunity and weaken accountability measures.

To facilitate the mainstreaming of fragility in the analysis, it is necessary to strengthen the technical capacities of facilitators and national teams, develop instruments and identify sources of information that facilitate the analysis. The “Guide for Mainstreaming Conflict Sensitivity in the CRNA Process” developed by the European Union may be used as a starting point.

Recommendation to Facilitate Comprehensive Recovery Processes: Recovery Preparedness

Developing Recovery (national and sectoral) Frameworks

Recovery Frameworks facilitate recovery management and implementation based on the needs that may be identified in a PDNA or other similar assessments. It provides a clear and defined framework for a comprehensive recovery in the physical, social and economic dimensions. Establishing ex-ante institutional arrangements, mechanisms and instruments for the prioritization of interventions, financing and implementation of recovery can facilitate decision-making and actions for recovery. It also facilitates the institutionalization of processes and management of financial instruments in advance to ensure the minimum resources and technical capacities required to implement recovery processes, framed within national development policies.

Just as there are particularities for the construction of the PDNA at the sectoral level, there are particularities and specific competencies required for the management and implementation of the recovery by the different sectors. Sectoral adaptations of the recovery framework would help to define the responsibilities of the different sectors (or commissions) to achieve a successful recovery and help sectors better prepare by ensuring the necessary mechanisms and instruments to achieve these responsibilities.

Development-based institutional arrangements and governance for recovery

The institutional arrangements proposed in the recovery framework present an opportunity for

the country to establish an entity that effectively monitors and fulfils the recovery objectives and strengthens the institutions engaged in this framework. It sets out the elements that must be considered to ensure proper management and implementation of recovery and identifies the key institutions involved. Internalizing the institutional arrangements will allow the Government to clearly identify the roles and responsibilities of the different agencies and initiate a process of identifying gaps and needs to ensure an effective recovery.

Moving towards a comprehensive recovery in the physical, economic and social dimensions implies the recognition of new leadership and actors in the recovery process. The case of El Salvador shows how the Covid-19 crisis and its economic, social and fiscal impacts required the leadership of new actors from the Presidency of the Republic through the Secretariat of Trade and Investments, the Ministries of Economy and Finance, the Social Cabinet (led by the Office of the First Lady of the Republic) and sectoral ministries (infrastructure, production, social, environmental), with strong support from the National Directorate of Civil Protection as the governing body for GRD. The GoES recognizes that all disasters, to a greater or lesser extent, will require recovery action in the physical, social and economic dimensions in order to achieve development objectives and promote social well-being, therefore the representation and participation of key actors linked to these key areas is essential.

The El Salvador case study has shown that high-level leadership and committed technical teams are crucial to successful processes. Similarly, the articulation of strategic entities and DRM agencies facilitates development-based recovery management under DRM principles.

Recovery programmes represent a valuable opportunity to develop and implement measures to reduce disaster risk and “build back better”

in all dimensions. The adoption of a regulatory framework for recovery as a preparedness step makes it possible to avoid improvisation, discretion and duplication or conflict between the actors in the process.

Institutionalization and internalization of processes

The recovery preparedness process led by El Salvador has provided the country with a series of tools and mechanisms that must then be institutionalized and internalized. The Government has yet to define the mechanism for adopting the methodology and the adapted guidelines and the approval of the institutional arrangements defined as part of the adaptation of the Recovery Framework. Institutionalizing and internalizing the processes must also include establishing the operating procedures, roles and responsibilities of the different units within the institutions and establishing strategies for ongoing training and capacity development.

Recovery Needs Prioritization: Identifying benefits of action and costs of inaction as part of the prioritization process

Intersectoral prioritization is essential to increase the efficiency and relevance of investments aimed at achieving the strategic recovery objectives (GoES, 2021b). Prioritization criteria may vary depending on the characteristics and magnitude of the disaster and the particular national context, considering those sectors and projects that can facilitate recovery and generate greater co-benefits.

A common rule of thumb for prioritization is to first determine the sectors and sectoral priorities that help mitigate direct humanitarian impact in the most timely manner. Intersectoral prioritization begins with the identification of target sectors and prioritization of recovery needs among all the competing intersectoral priorities. Previous case studies show that, in general, housing and

livelihoods often take precedence over other sectors. Interventions in these two sectors are carried out in parallel to the restoration of essential public infrastructure and the provision of services (GFDRR, World Bank et al., 2015).

Recovery needs generally exceed the available resources, therefore financial management is a crucial factor for recovery. It is important to recognize that public finances, beyond managing a budget, must consider the impacts of the disaster – and the services not provided – on fiscal expenses and income, which will also ultimately condition

the sustainability of the recovery. Working with the treasury and finance authorities is essential to strengthen the implementation of the recovery.

To strengthen prioritization mechanisms, it could be very useful to estimate the benefits of investing in certain needs versus the costs of not taking any action, projecting losses over time. The benefits of action versus the costs of inaction can be measured in economic and/or social terms. The social, environmental and economic co-benefits of certain actions, as well as their dynamic or multiplying effect, may also be considered.

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CASE STUDY

**CONTRIBUTIONS
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**DRF to post-disaster
recovery:**

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