



DISASTER RECOVERY IN SPAIN

A Legal and Policy Survey

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Disaster Law

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Acknowledgements

This report was authored by Candela Navarro Casquete (IFRC Disaster Law Consultant) as part of a project on law and disaster recovery and reconstruction, with support from Rachel Macleod, IFRC Senior Disaster Law Officer.

The author wishes to thank the key informants listed below in alphabetical order, who agreed to contribute to the present research with a notable and sincere interest in its purposes, sharing their views based on their first-person experiences:

- **Angélica María Carvajal Lerma** – Spanish Red Cross Local Technical Director, Callosa de Segura;
- **Carolina Espadas Ruiz** – Spanish Red Cross Provincial Coordinator, Alicante;
- **María Gómez García** – Mayor of the Municipality of Almoradí;
- **Santiago Folgueral Moreno** – Director of Arvum Consultoría & Proyectos S.L.;
- **Pedro José Escudero Campillo** – Spanish Red Cross Technician of the Relief and Emergencies Department, Orihuela; and
- **Pilar Ibáñez Aniorte** – Spanish Red Cross Local Technical Director, Orihuela.

This report was produced with the financial assistance of the German Federal Ministry for Economic Cooperation and Development. The views expressed herein can in no way be taken to reflect the official opinion of the German Federal Ministry for Economic Cooperation and Development.

The IFRC wishes to thank and acknowledge the support of the German Federal Ministry for Economic Cooperation and Development, which enabled the development of this report.



Federal Ministry
for Economic Cooperation
and Development

Methodological note

The lack of official translations of most Spanish-language legislative sources cited in this report required their translation by the author. Although this was done as faithfully and attentively as possible, discrepancies may exist. IFRC Disaster Law would appreciate feedback on any discrepancies discovered.



Executive summary

Spain is a country with a moderate level of disaster risk, although some regions, such as the Valencian Community, have a higher level of risk than other regions. Overall, floods are the type of disaster that cause the most damage in Spain. The intensive occupation of flood prone areas due to historically permissive urban planning codes creates a high level of exposure to floods. To this we must add the increase in the frequency and intensity of extreme rainfall caused by climate change.

The legal framework applicable to disaster recovery in Spain, and to disaster risk management more generally, is governed by the civil protection frameworks at the national, regional and local level. Civil protection is one of the areas of exclusive competence of the regional governments (Autonomous Communities) under Spain's decentralized model of governance. Accordingly, the national civil protection system is only activated when a national emergency is declared. In cases where a national emergency is not declared, the regional or local civil protection plans are activated instead, although the national government may still offer technical, material and financial support to the regional and local administrations under the principles of solidarity, complementarity and subsidiarity.

This report maps both the national framework for disaster recovery and the framework applicable in one autonomous community: the Valencian Community. The report uses, as a case study, the 2019 'Cold Drop', which resulted in extensive flooding in the Vega Baja area of the Valencian Community (the 2019 Cold Drop). The recovery phase, or 'return to normality phase' (fase de vuelta a la normalidad) as it is commonly referred to in Spain, is addressed through the National Civil Protection Law and the Valencian Civil Protection Law, as well as through the national and regional plans, which include brief sections on recovery. Nonetheless, it should be noted that most recovery actions outlined in these documents focus on early recovery activities, such as the restoration of essential services, or the inspection and clean-up of damaged infrastructure. Medium- and long-term recovery appear to be achieved through the adoption of ad-hoc emergency decrees, as well as post-disaster planning documents such as the Vega Baja Regeneration Plan.

Regulation of disaster recovery could be strengthened in Spain by legally mandating the development of regional and local disaster recovery plans in order to ensure effective recovery operations. There are two main types of recovery planning that need to occur: (i) pre-event recovery planning, which outlines the general planned arrangements for recovery; and (ii) post-event recovery planning, which outlines the specific planning or legal measures that will be taken to recover from a specific disaster based on the assessed impacts and needs. With regard to pre-event recovery planning, it is recommended that the law should not only mandate this type of planning but also set out clear standards for the content of such plans, requiring that the plans:

- define the recovery interventions that will be implemented to address the most common types of disaster affecting the relevant geographical area;
- elaborate a general methodology for conducting multisectoral post-disaster needs assessments for an effective recovery;
- outline the specific roles and responsibilities of all different actors and stakeholders involved in disaster recovery including government agencies in various sectors and at all levels, the Spanish Red Cross, NGOs, CSOs, communities, individuals, and the private sector;
- identify and establish communication channels for multi-sectoral coordination, serving as a centralized platform for information sharing among actors;

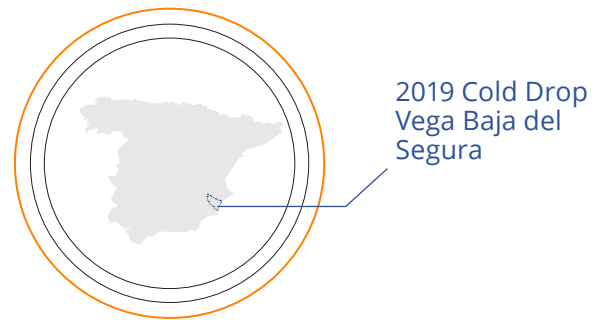
- set out a strategy for ensuring the continuity of essential services in post-disaster settings (including health and education) and supporting the livelihoods and mental health of the affected population in the short, medium and long term;
- set out a strategy for the expeditious repair and reconstruction of housing and infrastructure to be resilient to future climate and disaster risks;
- set out clear measures to address cross cutting issues in disaster recovery such as the protection of vulnerable groups and environmental protection;
- establish recovery-specific financing mechanisms to ensure the availability of sufficient funding in disaster recovery (for short-, medium- and long-term interventions);
- promote policy coherence and strengthen linkages between disaster recovery, disaster risk reduction, climate change adaptation and sustainable development; and
- set out arrangements for monitoring the implementation of recovery plans and operations, and mandating regular progress reports.

It may be appropriate for pre-event recovery planning to be integrated into general emergency management planning, rather than constituting a separate process and a separate instrument. In some cases, it may be appropriate for recovery plans to be prepared at the supra-municipal level (e.g., where a group of municipalities are likely to be affected by the same disaster). Therefore, the legal framework should be flexible enough to permit the preparation of supra-municipal recovery plans in lieu of or in addition to municipal recovery plans.

In the specific case of the 2019 Cold Drop, the Vega Baja Regeneration Plan provides a model of good practice in recovery planning. It is a comprehensive and holistic recovery plan, developed through a consultative process with broad participation. The Regeneration Plan is consistent with the internationally recognised 'build back better' principle, promoting a multisectoral approach to using the recovery phase as an opportunity to enhance infrastructure, strengthen the resilience of communities and pursue a more sustainable development model while also adapting to the effects of climate change. Importantly, the Plan includes key flood risk reduction measures including reconstructing, improving and maintaining hydraulic infrastructure, retrofitting existing housing in high-risk areas, and maintaining the Segura riverbed.

The experience of the 2019 Cold Drop has underlined the critical importance of these risk reduction measures, as the degree of flooding and the damage it caused was aggravated by: insufficient maintenance of public infrastructure (especially hydraulic infrastructure such as dams, retaining walls, channels and drainage); insufficient maintenance of the Segura River itself; and the intensive occupation of the territory in flood-prone areas. As discussed in this report, the construction and maintenance of public infrastructure in the Vega Baja area has, historically, been hampered by insufficient funding. Moreover, a complicating factor is that responsibility for transport and hydraulic infrastructure is split between different levels of government. In order for the recovery from the 2019 Cold Drop to build resilience to future floods, it will be critical to overcome these challenges to fully implement the risk reduction measures identified in the Vega Baja Regeneration Plan.

Seeking to reflect all of this, and in line with the objectives of IFRC Disaster Law's global research project on 'Law and Disaster Recovery and Reconstruction', this report explores a broad range of topics relating to disaster recovery, from the legal and institutional arrangements in recovery, to the financial mechanisms for recovery, assessment and planning, reconstruction of housing and infrastructure, protection of vulnerable groups and prevention of fraud and corruption.



1. Introduction

1.1 Background



This report is part of a global research project on 'Law and Disaster Recovery and Reconstruction' conducted by IFRC Disaster Law. Following the publication in 2020 of a [Literature Review on Law and Disaster Recovery and Reconstruction](#), IFRC Disaster Law is conducting country-level mappings on law and disaster recovery across the globe. Spain was selected as one of the mapping countries with a focus on the floods of September 2019, which affected several regions in Spain, especially the area of Vega Baja del Segura (henceforth, Vega Baja), located in the Province of Alicante in the Valencian Community (one of Spain's 17 Autonomous Communities). In line with the mission of IFRC Disaster Law of providing technical support to governments and National Red Cross and Red Crescent Societies on the development and enhancement of laws, policies, strategies and plans for disaster risk management (DRM), as well as ensuring integrated policy coherence, the purpose of this report is to provide a set of recommendations for the improvement of domestic legislation with respect to disaster recovery. Thus, this legal and policy survey aims to inform future legislative efforts that favour sustainable recovery processes which lead to the rapid restoration of livelihoods, infrastructure, housing, services and the country's development activities. In addition, this research will support the development of a Checklist on Law and Comprehensive Disaster Risk Management, which will consolidate the existing guidance documents developed by IFRC Disaster Law.

This report is based on desktop research of the national and regional legislative framework in Spain, focusing on the provisions of relevance to disaster recovery and reconstruction, and a series of interviews with staff from the Spanish Red Cross, known in Spain as the Cruz Roja Española (CRE), as well as representatives from local government and an engineering consulting firm specialized in flood studies. These interviews have been key to identifying the practical challenges in disaster recovery as they are experienced in disaster risk management and actively participated in the response to and recovery from the floods of 2019. Although the inclusion of relevant provisions has been done as comprehensively and attentively as possible, gaps or discrepancies may exist. Therefore, the interviews undertaken have provided added value to the study, capturing perspectives on disaster recovery in practice and contributing to the development of a set of recommendations based on previous achievements and obstacles experienced in Spain, included at the end of this report.

1.2 Spain's disaster risk profile



The vulnerability of people in Spain in the face of the multiple and complex threats of natural and technological disasters has significantly decreased over the past thirty years. This is especially due to public policies that have improved early warning systems, enhanced public awareness, and strengthened response planning processes and intervention capacities.¹ However, despite the decrease in disaster casualties, material and economic damage due to disasters has significantly increased as a result of factors that heighten risks, especially those caused by climate change and human activity.²

In terms of disaster risk, Spain is classified as a country with a moderate level of risk.³ The most common types of disasters causing significant damage include forest fires, floods, and other extreme weather events, affecting people and their property, as well as the environment.⁴ Floods are the type of natural disaster that cause the most human and material damage in Spain, therefore requiring strong organization of means and resources to provide assistance in affected areas.⁵ The reason for Spain's vulnerability to flooding is that it has three types of climates, one influenced by the Atlantic, another by the Mediterranean, and a third of a continental nature.⁶ This climatological diversity contributes to a great variability in the intensity and spatial and temporal distribution of rainfall. Together with the country's geomorphological diversity, this variability gives rise to extreme emergency situations caused by floods.⁷

The occurrence of extremely heavy and localized rainfall in short periods causes rivers to overflow and flood adjacent land and urban areas. The great variability between the ordinary and extraordinary flow of some rivers, as well as the extensive use of adjacent land for housing and industry, makes floods an especially serious problem in Spain.⁸ More specifically, floods in Spain have caused the loss of approximately 300 human lives in the last 30 years, and the material damage per year is an estimated € 500 million.⁹

1.3 The 2019 'Cold Drop' in the Province of Alicante



On September 9th, 2019, Spain was struck by an Isolated Depression at High Levels, better known by the acronym DANA (Depresión Aislada a Niveles Altos), which reached its peak between September 12th and 14th affecting five of Spain's 17 Autonomous Communities: the Valencian Community, the Region of Murcia, Castilla la Mancha, Andalusia and the Community of Madrid.¹⁰ A DANA is a meteorological phenomenon where the atmosphere undergoes a dramatic change in pressure and temperature, forming torrential rains which generally cause extensive damage. The heavy rains caused by a DANA are commonly referred to as a 'cold drop' (gota fría).¹¹ The extent to which this phenomenon is impacted by the effects of climate change remains difficult to measure. Scientific studies show that, while the DANA phenomenon is not directly caused by climate change, increased evaporation due to higher temperatures results in an increase in the frequency and intensity of heavy precipitation and risk of flooding in storm-affected areas.¹²

The cold drop caused by the DANA in September 2019 (henceforth, the 2019 Cold Drop) exceeded the figures of the last 140 years (since the Santa Teresa floods of 1879, hitherto known as the most catastrophic floods in contemporary Spanish history, followed by the floods of 1987)¹³ reaching up to 486 litres of rainfall per square meter in some areas. In the course of only a few hours, the equivalent of a year's rainfall accumulated, causing the Segura River to overflow and resulting in serious flooding in adjacent populated areas.¹⁴ In order to delimit the most affected areas, and to face the disastrous consequences of the 2019 Cold Drop, the Council of Ministers, the main collective decision-making

body of the Spanish Government, declared the affected Autonomous Communities and Provinces as 'areas seriously affected by a civil protection emergency', and proceeded to adopt several emergency measures to mitigate the damage caused by the cold drop.¹⁵ The Spanish Government deployed a series of human and material resources which, in some cases, were on an unprecedented scale. These included the Military Emergency Unit of the Armed Forces, the State Security Forces, as well as technical personnel from other ministerial departments involved in disaster management.¹⁶

In total, seven people lost their lives and thousands had to be evacuated and hosted in emergency shelters during the initial response phase, where civil protection and emergency rescue teams, as well as the Spanish Red Cross, worked tirelessly to assist the affected population. In terms of infrastructure, the torrential rains led to: roads and railway lines being cut off; shortages of water and electricity; interruption of education due to numerous educational centres being damaged by the rains; suspension of airport activity; suspension of other public services which had been compromised; and material damage to the agricultural and livestock sectors, as well as the industrial and commercial sectors.¹⁷ Unfortunately, it has not been possible to locate information on specific economic costs and recovery needs following the 2019 Cold Drop, however the damage has been reported to have been extensive and millions of euros have been allocated for the recovery and reconstruction.

The floods had the most serious impact in the area of Vega Baja, which is located in the Province of Alicante in the Valencian Community and is adjacent to the Region of Murcia. The area of Vega Baja encompasses diverse landscapes including coastline, mountains, fields and orchards, characterized by the presence of the Segura River, which is a source of wealth in the region but sometimes also disasters.¹⁸ It should be noted that the course of the Segura River in Vega Baja has a particular characteristic, which is that the river is inverted. This means the river has been artificially redirected to run along a higher point in the valley (normally a river runs along the lowest point of a valley). The history of the Segura River is replete with extreme hydrological events, especially floods, to which the inhabitants have had to adapt. And to this we must add earthquakes as a common natural hazard in the area as it is located where the tectonic plates of Europe and Africa meet.¹⁹

2. The Spanish legal, policy and institutional framework for disaster recovery

2.1 Political and territorial organization



Under the 1978 Constitution, Spain is a parliamentary monarchy with a decentralized form of government,²⁰ where the Government is led by a Prime Minister, and the Head of State is the Monarch.²¹ Spain's territorial organization comprises three levels of governance where each level enjoys self-government in a number of areas.²² The three levels of government are: national, regional, and local. The local government level is further divided into provincial and municipal administrations. Spain's regions are called Autonomous Communities and, under the 1978 Constitution, enjoy legislative autonomy. Local governments (i.e., provinces and municipalities) do not have legislative competence and operate under the mandate of the Autonomous Communities. There are 17 Autonomous Communities in total.²³ The organization and distribution of powers in each Autonomous Community is defined by each region's Statutes of Autonomy.²⁴ Despite this decentralized system of government, it should be noted that the Spanish Senate is able to seize power from the Autonomous Communities if they do not abide by the 1978 Constitution.²⁵

Understanding this model of governance is key to examining the structure of the civil protection system in Spain. Whereas there is a National Civil Protection System established by law, Autonomous Communities hold exclusive competence in the area of civil protection for disasters that have not been declared a national emergency. They have, therefore, developed regional systems adapted to their own needs and capacities. This has been done, for instance, by developing regional normative frameworks for civil protection, establishing regional and local civil protection services, as well as emergency coordination bodies.²⁶ As a result, the civil protection system can vary significantly from one Autonomous Community to another.

Autonomous Communities are generally responsible for emergency management within their territory, except when a national emergency is declared. According to Spanish law, a national emergency is one that affects several Autonomous Communities and, therefore, requires coordination of various administrations.²⁷ In such cases, all public administrations, national and subnational, act under the principles of solidarity, complementarity and subsidiarity.²⁸ It should be noted that a national emergency does not appear to have been declared following the 2019 Cold Drop, despite the fact that the floods affected five Autonomous Communities. Instead, as will be discussed in the following sections, the national government adopted a number of emergency provisions to support recovery from the floods.

For the purpose of this report, both the national and sub-national normative frameworks will be examined. The area of Vega Baja is located in the Province of Alicante, which is part of the Autonomous Community of Valencia (also known as the Valencian Community). Consequently, this report analyses the normative frameworks adopted by both the national government and the Valencian Community.

2.2 National legal and policy framework



In Spain, disaster risk management (DRM) is governed by the civil protection normative framework, which comprises several laws, plans and strategies promulgated at national and regional levels over the past two decades. Currently, there are three main national civil protection instruments in force and one national instrument specifically relating to floods.

Law 17/2015 (the National Civil Protection Law) establishes the National Civil Protection System and revokes the previous civil protection law, Law 2/1985, which defined the basic norms of civil protection. This is the main legislative instrument in force, providing the guidelines for the development of subnational civil protection frameworks.

The **National Civil Protection Strategy (the National Strategy)** was approved by the Council of Ministers and published in 2019 through Order PCI/488/2019. This document provides an analysis of the main threats and risks of natural, human and technological origin that can give rise to emergencies and/or catastrophes in Spain, as well as the strategic lines of action to integrate, prioritize and coordinate all efforts to optimize the resources available for their management.²⁹

The **National Plan for Civil Protection Emergencies (the National Plan)**, the current version of which was published in 2021, outlines the organizational framework, resource mobilization mechanisms and the coordination scheme of the public administrations involved in national civil protection emergencies, and establishes the direction and coordination of the National Civil Protection System.³⁰

The **National Civil Protection Plan Against Flood Risk (the National Flood Risk Plan)**, adopted in 2011 and currently under revision, defines the organization and action procedures to ensure an effective response in emergency situations caused by floods.³¹

The National Civil Protection Law aims to strengthen and consolidate the National Civil Protection System to better manage emergencies of any type in order to promote public security.³² It sets out the guidelines for the development of territorial emergency plans at regional, provincial and municipal levels. Although this law places special emphasis on prevention, it covers all phases of disaster risk management, including recovery.³³ Article 3 of the law provides that the National Civil Protection System integrates actions to ensure the coordinated and efficient response of public administrations, including the adoption of recovery measures to restore essential infrastructure and services, and to mitigate the damage caused by emergencies.³⁴

In terms of definitions, most documents comprising the national and regional frameworks for civil protection in Spain refer to the recovery phase as the 'return to normality phase' (fase de vuelta a la normalidad). The National Civil Protection Law defines the recovery phase as the set of actions and measures of public and private entities aimed at restoring normality in affected areas, once the immediate response to the emergency has ended.³⁵ The recovery measures are implemented to contribute to the reestablishment of normality in the affected areas, with the caveat that they do not have a compensatory nature.³⁶

The National Civil Protection Law recognizes immediate response operations as an opportunity to implement actions and evaluations necessary to initiate the recovery process.³⁷ Chapter V of the Law is specifically dedicated to disaster recovery, establishing procedures for conducting damage assessments, monitoring and evaluations, and providing a number of measures to be implemented to assist affected populations, including legal facilities and tax exemptions.³⁸ The provisions on recovery provided in the

Law are as equally detailed as those on disaster risk reduction, preparedness and response. However, the recovery provisions mainly focus on the legal and fiscal measures to be applied in the recovery phase. Some specific actions intended to facilitate recovery include, among other things:

- a.** financial aid to individuals for damage to their habitual residence and essential items;
- b.** compensation to local companies and businesses for expenses derived from immediate response and recovery actions that cannot be postponed;
- c.** aid for industrial, commercial and service establishments;
- d.** subsidies for damage to municipal infrastructure;
- e.** aid for damage to agricultural, livestock, forestry and marine production; and
- f.** provision of lines of credit subsidized by the Official Credit Institute.³⁹

The National Strategy of 2019 is based on a comprehensive vision of civil protection, understood as a public service that protects people and property, guaranteeing an adequate response to the different types of emergencies and catastrophes caused by natural causes or derived from human action, be it accidental or intentional.⁴⁰ Chapter 4 of the National Strategy outlines several strategic lines of action. Of relevance to disaster recovery is a line of action that proposes updating post-emergency recovery instruments in order to strengthen and build resilience of communities to face future emergencies.⁴¹ However, details of the specific recovery instruments and actions to implement this strategic line are not clearly outlined in the National Strategy.

The National Plan of 2021 appears to be the main general operational document, setting out clear intervention mechanisms for all phases of DRM, including disaster recovery. The National Plan was designed to: define the coordination dynamics between public administrations at all levels involved in the management of civil protection emergencies; to organize the support of the National Civil Protection System to other intervention structures; and to integrate the National Civil Protection System into the National Security System.⁴² The National Plan is designed to be activated in national emergencies.⁴³ In addition, the National Plan may exceptionally be activated: in situations that pose a danger to national security and require civil protection measures; in situations that seriously affect the operation of essential services for the community; or in emergencies that take place outside the national territory, in which case the National Civil Protection System may be mobilized based on bilateral or multilateral agreements of mutual assistance.⁴⁴ It should be noted that the 2021 version of the National Plan was not in force during the 2019 Cold Drop, however it has not been possible to locate older versions of this plan.

In terms of recovery, the National Plan provides that the recovery phase begins once protection mechanisms have been put in place and essential services have been guaranteed. The National Plan also refers to the recovery phase as the 'return to normality' phase, temporally consecutive to the national emergency and lasting until essential services and the minimum conditions for the return to normality of the people affected by the crisis are restored.⁴⁵ The recovery phase may overlap with the final emergency response activities, and it is finalized when the Director in charge of the implementation of the National Plan so declares, at which point the National Plan is deactivated.⁴⁶ The direction of the National Plan is placed under the Ministry of the Interior and, therefore, the Director in charge of the National Plan is the head of the Ministry of the Interior.⁴⁷

In addition to the three instruments described above, Spain has developed many special plans which are activated to face specific risks such as floods. Of relevance to this report is the National Flood Risk Plan. This document was approved by the Council of Ministers in August 2011, and it has not been updated since, although it appears to currently be under revision. The Plan establishes the organization and action procedures of the national services necessary to ensure the effective response of all public administrations in national emergency situations caused by floods.⁴⁸ It also defines the support

mechanisms for Autonomous Communities in situations where they require it or do not have sufficient response capacity.⁴⁹ More specifically, the Plan aims to define and establish:

- a. support mechanisms for Autonomous Community plans in the event that they so require;
- b. the organizational structure for the management and coordination of all public administrations in national emergencies caused by floods, as well as foreseeing, in these cases, the procedures for mobilizing the resources and services that are necessary;
- c. flood information systems and procedures, to be used for civil protection purposes, in coordination with the flood risk management plans;
- d. a national data bank on state means and resources available in flood emergencies; and
- e. mechanisms for requesting and receiving, where appropriate, international aid for floods.⁵⁰

The National Flood Risk Plan provides, among other things, a set of actions to be carried out under each phase of DRM in order to manage flood risks and floods. The recovery phase and the rehabilitation of essential services begin once the triggering of other risks is no longer foreseen. Under the Plan, the 'return to normality' phase follows the emergency phase and lasts until the reestablishment of the minimum conditions essential for a return to normality in the areas affected by floods.⁵¹ During this phase, the first rehabilitation and recovery tasks are carried out in affected areas, consisting of: the inspection of the state of buildings and infrastructures to restore their use; the adaptation of land transport routes, both urban and interurban; the repair of the most urgent damage; the commissioning of essential services such as drinking water supply, electricity, water sanitation, transport, communication systems and education; drying and clean-up of homes;⁵² and the establishment of provisional camps or, where appropriate, assignment of shelters to displaced or evacuated persons.⁵³

Based on the research conducted, the principle of 'build back better' is not explicitly mentioned in any of the instruments comprising the national DRM framework. There are, however, a few references in national civil protection instruments to resilience building. For example, the National Civil Protection Strategy aims, among other things, to update post-emergency recovery instruments, with an approach based on creating a society that is increasingly resilient in the face of emergencies and disasters.⁵⁴ The absence of explicit references to the principle of 'build back better' could potentially be due to the fact that the sections on disaster recovery – or 'return to normality' – found in the reviewed instruments, and especially the plans, are not particularly extensive in terms of defining the principles and aims of the recovery phase.

It has not been possible to locate laws, policies, plans or strategies specifically dedicated to disaster recovery in Spain. Instead, recovery actions are carried out through the activation of the different civil protection plans. The National Plan for Civil Protection Emergencies is activated when a national emergency is declared, while regional and local emergency plans are activated when the emergency is to be managed at the autonomous community level or at the municipal level, respectively.⁵⁵ In addition, Special Plans are prepared to address specific risks and they may be national, regional or municipal, depending on their territorial scope of application.⁵⁶ Accordingly, the plan activated in respect of the flooding in Vega Baja was the Special Plan Against Flood Risk of the Valencian Community, which is discussed further below.

As noted previously, following the 2019 Cold Drop the Council of Ministers approved Decree 11/2019 by which an 'area seriously affected by a civil protection emergency' was declared and emergency measures were adopted. Importantly, the declared area included not only the areas affected by the 2019 Cold Drop, but also other areas affected by catastrophic events during the period from April 1st to September 20th, 2019.⁵⁷ This emergency decree appears to be the main national instrument adopted

to face the disastrous consequences of the 2019 Cold Drop.⁵⁸ Among the measures established by this decree are the following:

- aid aimed at mitigating personal injury and material damage to housing and property, as well as to industrial, commercial, agricultural, maritime, fishing, tourist and other service establishments;
- aid for damage caused to agricultural and livestock production;
- labour and social security measures;
- special tax reductions for agricultural activities;
- an aid scheme for local government entities;
- forest and environmental restoration actions;
- actions to repair the hydraulic public infrastructure;
- aid for damage caused to other public infrastructure; and
- insurance compensation.⁵⁹

The above-mentioned measures of relevance to this report are explored in further detail in the relevant sections below.

2.3 Legal and policy framework of the Valencian Community



At the regional level, the structure of the normative frameworks for civil protection is similar to the national framework, being generally composed of a civil protection law, territorial emergency plans at the regional and local levels, as well as special plans for the management of specific risks, also at the regional and local levels. However, the frameworks may vary from one Autonomous Community to another. In the case of the Valencian Community, Law 13/2010 was approved to establish the Civil Protection and Emergency Management system at the regional level.

Law 13/2010 (the Valencian Civil Protection Law) provides the regional normative framework for civil protection and emergency management in the Valencian Community, which encompasses the Province of Alicante and the area of Vega Baja. It should be noted that the Statutes of Autonomy of the Valencian Community establish, in article 49, exclusive competence in the area of civil protection and public security,⁶⁰ without prejudice to the provisions of article 149 of the Spanish Constitution, which establish the exclusive competence of the national government in certain situations.⁶¹ Thus, the purpose of Law 13/2010 is to regulate civil protection and emergency management actions in the Valencian Community, with the exception of declared national emergencies, where the national legislation prevails.⁶² As per article 2 of the Valencian Civil Protection Law, the civil protection actions of public administrations in the Valencian Community include, among other things, the coordination of emergency intervention services, as well as the rehabilitation of areas affected by emergencies and management of the return to normality.⁶³ Under this law, the 'return to normality' phase is understood as the set of actions that, after a regionally declared emergency situation, are aimed at ensuring the restoration of the daily activity of people in the areas affected by an emergency or catastrophe.⁶⁴

Civil protection planning in the Valencian Community occurs at the regional, provincial and municipal levels.⁶⁵ At the regional level, the following types of plans may exist: territorial emergency plan, special plans against specific risks, action procedures, operational protocols and sectoral plans.⁶⁶ At the local level, the plans can be municipal and supra-municipal (i.e., covering two or more municipal areas),

and the following types of plans may exist: territorial emergency plan, or special plans against specific risks.⁶⁷ In addition to these plans, every institution and establishment in the Valencian Community must develop a Self-Protection Plan.⁶⁸

The Valencian Civil Protection Law establishes the framework guiding the development of civil protection plans at municipal level, and legally requires municipalities to adopt a municipal emergency plan within three years of the entry into force of the law (i.e., by 2016), as well as municipal special plans against specific risks within five years (i.e., by 2018).⁶⁹ It should be clarified that the municipalities are only legally required to develop such plans under the Valencian Civil Protection Law and not under the National Civil Protection Law, given that Autonomous Communities hold exclusive competence in this area, and that such obligations do not appear to apply to provincial governments.

The Territorial Emergency Plan of the Valencian Community was established as the general civil protection plan, originally approved through Decree 243/1993, and most recently revised on April 24th, 2019.⁷⁰ The Territorial Emergency Plan is an organizational tool for responding to situations of serious collective risk, catastrophe or public calamity and establishes the mechanisms for mobilizing and organizing the human and material resources necessary for the protection of people, property and the environment.⁷¹ In short, the fundamental objective of this plan is to minimize the consequences and impact of emergencies on people, property and the environment.⁷²

The operational procedures and mechanisms provided in the Territorial Emergency Plan include those actions to be implemented during the 'return to normality' phase. These are built around the restoration of basic services – such as drinking water, electricity and gas supply, sanitation services, telephone service and information transmission systems⁷³ – and infrastructure to meet the basic needs of citizens.⁷⁴ This section of the Territorial Emergency Plan also identifies long-term recovery actions, referring to them as those measures aimed at the rehabilitation of buildings, infrastructure and contaminated areas, whose condition after the emergency does not guarantee safety, minimum living conditions, or the recovery of economic activity.⁷⁵ Likewise, the Territorial Emergency Plan identifies that the relocation or permanent transfer of the population from the affected area may be necessary when the actions to be carried out do not allow, in the short or medium term, the return of the population to safe or habitable conditions.⁷⁶

Territorial Emergency Plans are only activated during types of emergencies for which there are no special plans for specific risks. Thus, this report focuses on the Special Plan Against Flood Risk of the Valencian Community, which was adopted through Decree 156/1999, and last revised in July 2021. At the time of the 2019 Cold Drop, the version of this plan that was in force was the 2018 edition. This plan was developed as the operational framework to guarantee rapid, effective and coordinated action by public and private resources in emergency situations caused by flooding in the Valencian Community, and to minimize their consequences.⁷⁷ The 'return to normality' phase under this plan groups all the tasks aimed at re-establishing the minimum conditions essential for recovery in the areas affected by the flood, such as conducting damage assessments, inspection and clean-up of damaged infrastructure, and restoration of basic or essential services.⁷⁸

Municipal emergency plans and special plans must be consistent with the operational structure described in the Territorial Emergency Plan of the relevant Autonomous Community. When the resources contemplated in municipal plans are insufficient to face the emergency, a higher-level plan (i.e., the Territorial Emergency Plan) is activated.⁷⁹ In this situation, local resources are integrated into the response structure provided for in the higher-level plan.⁸⁰ At the time of the 2019 Cold Drop, most municipalities in the area of Vega Baja did not have territorial emergency plans or special plans for flood risk. This was the case notwithstanding the fact that the Valencian Civil Protection Law legally required the municipalities to develop these plans by 2018. However, in light of the situation experienced after the 2019 Cold Drop, a total of 39 municipal emergency plans and/or special plans against flood risk have been developed and adopted recently, in 2022, by various municipalities located in the area of Vega Baja,⁸¹ the content and structure of which is similar to the equivalent regional plans.

Further, due to the catastrophic consequences of the floods, the Valencian Government developed, in 2020, the Vega Baja Regeneration Plan seeking to repair the damage caused, to prepare the region for extreme events that may affect it in the future, to restore economic activity in Vega Baja, and to pursue a more sustainable model of development by promoting resilience.⁸² The Vega Baja Regeneration Plan provides an extensive recovery framework for the short, medium, and long term. In order to ensure participation and consensus, the process of developing the Vega Baja Regeneration Plan involved active engagement with citizens to identify issues and design solutions.

The Vega Baja Regeneration Plan is based on the fundamental pillars of coordination, consensus, evidence and resilience.⁸³ It appears to be the first document of its kind prepared in the Valencian Community, with the fundamental objective to turn the catastrophe into an opportunity to promote a resilient environment that favours the economic and social regeneration of Vega Baja, while promoting territorial development that is respectful of the environment, to prepare for future disasters and to improve land use in the Vega Baja territory.⁸⁴ Thus, while the Vega Baja Regeneration Plan does not explicitly use the term ‘build back better’, its contents are consistent with this principle. The plan is built around four strategic lines:

1. improving hydraulic infrastructure and rehabilitating the Segura riverbed to make it safer in the face of extreme hydraulic events such as floods and droughts;
2. improving prevention and early warning systems to better manage emergencies;
3. strengthening resilience by favouring regenerative economic development, especially in agriculture, tourism, trade, industry, and technology; and
4. improving the protection of vulnerable groups in terms of housing and raising awareness about climate change.⁸⁵

The Vega Baja Regeneration Plan will be discussed in more detail later in this report.

2.4 National institutional arrangements



In the aftermath of a disaster, where personal injuries and material damages have been experienced and prevent the normal functioning of society, it is the obligation of the various public administrations to adopt decisions and implement special measures aimed at restoring normality. This section focuses on identifying and examining the national institutional arrangements relevant to disaster recovery, therefore not exploring those relevant to DRR, preparedness or response.

The National Civil Protection System in Spain has undergone significant developments over the last two decades, with the General Directorate of Civil Protection and Emergencies being established to serve as the main coordinating entity in national emergencies, under the supervision of the Ministry of the Interior.⁸⁶ Throughout this period, new means and state resources have been created, among which the Military Emergency Unit (Unidad Militar de Emergencias or UME) stands out. The UME operates as the emergency division of the Armed Forces, seeking to contribute to the security and well-being of citizens in cases of serious risk, catastrophe, calamity or other public needs derived from, among other things, extreme weather events and floods.⁸⁷ The UME may operate, at the request of the competent authorities, regardless of whether or not a national emergency is declared. The operational actions carried out by the UME are focused on rescuing, safeguarding and protecting people and property, the environment as well as historical heritage.⁸⁸

Likewise, the National Security Forces and Corps have increased and strengthened their capacities in this area in order to be able to provide a more effective response from the national government.⁸⁹ These are the government bodies established at national, autonomous and local level responsible for maintaining public security,⁹⁰ and whose functions include, among other things, to collaborate with civil protection services in cases of disaster or public calamity, and to assist and protect people, to monitor public buildings that require it, and to prevent criminal acts.⁹¹

Similarly, the Autonomous Communities and the provincial and municipal administrations have been equipping themselves with more and better resources within the scope of their competences, thus strengthening their capacities to respond to emergencies.⁹² Together, the civil protection bodies at national, regional and local levels form the National Civil Protection System, which is coordinated through the National Civil Protection Council. The Council, which is a permanent body chaired by the Ministry of the Interior, is composed of civil protection representatives from all Autonomous Communities and local administrations, aiming to ensure effective, coherent and coordinated action among entities and public administrations at all levels of governance.⁹³ To this end, it meets periodically in plenary sessions to approve and ensure the implementation of strategic lines of civil protection in Spain, as well as when required by an emergency situation.⁹⁴

Regarding community engagement, the National Civil Protection Law establishes different rights of citizens in the area of civil protection, including the right to information, the right to protection in the event of a disaster, the right to participation and collaboration, and the right to self-protection. The right to participation dictates that citizens have the right to participate, directly or through entities representing their interests, in the preparation of civil protection standards and plans,⁹⁵ whereas the right to collaboration provides that, in the case of an emergency, any natural or legal person is obliged to contribute to the provision of services required by the competent authorities in the matter of civil protection, without the right to compensation for their contribution.⁹⁶

It should be noted that, although the Autonomous Communities hold exclusive competence in the area of civil protection in case of emergencies which have not been declared national emergencies, the national government can support the Autonomous Communities by deploying and facilitating human and material resources, as agreed by the National Civil Protection Council, and in coordination with the Autonomous Communities.⁹⁷ This was the case during the 2019 Cold Drop in Vega Baja, where the national government deployed members of the National Security Forces and Corps, the Military Emergency Unit of the Armed Forces, firefighting bodies, as well as technical personnel from the different ministerial departments involved in disaster management.⁹⁸

2.5 Institutional arrangements in the Valencian Community



Following the floods caused by the 2019 Cold Drop, the Valencian Council – which is the main collective decision-making body of the executive branch of the Valencian Government – adopted Decree 217/2019 which, among other things, recognized the important role and effort made by all people, institutions, entities and organizations who intervened to protect people and property, conducted rescues, cleaned the flooded area and worked to restore normality after the floods.⁹⁹ These included: the Military Emergency

Unit (UME); the Civil Guard; the local police forces of the affected municipalities; the Alicante Provincial Fire Brigade; the Spanish Red Cross; and the civil protection departments and volunteer civil protection groups of the Valencian Community.¹⁰⁰

In the Valencian Community, the highest decision-making entity in the area of civil protection is the Valencian Council¹⁰¹ which, since 2017, acts through the Valencian Agency for Security and Emergency

Response (hereinafter the Valencian Agency) in the area of civil protection.¹⁰² The Valencian Agency was created as a new, more dynamic and efficient functional structure, aiming to simplify the inter-administrative coordination and cooperation of bodies that intervene in civil protection.¹⁰³ It is through the Valencian Agency that the recovery and 'return to normality' efforts of the different intervention services are supported.¹⁰⁴

In addition, the Valencian Civil Protection Law created two specialized offices focused on recovery. These are the Post-Emergency Office and the Interdepartmental Commission for Post-Emergency Monitoring and Coordination.¹⁰⁵ The composition and functioning of these two offices is stipulated by Decree 163/2016. The Post-Emergency Office is responsible for: collecting all the information on the damage caused and people affected by the emergency; coordinating the actions for the return to normality between all the departments of the autonomous government; centralizing aid applications addressed to the autonomous government; informing the population about the procedures for aid grants; promoting the necessary agreements with other administrations for the management of aid; and monitoring the evolution of all actions to return to normality as well as the processes of provision of aid (i.e., who gets what).¹⁰⁶ The Interdepartmental Commission for Post-Emergency Monitoring and Coordination is responsible for, among other things:

- a. analysing the information requested by the Post-Emergency Office on damage to individuals, public services and infrastructure;
- b. setting out the specific objectives of the post-emergency phase, guaranteeing a unified vision in the decisions adopted;
- c. proposing investments and defining specific projects to achieve the objective of returning to normality;
- d. proposing the criteria for the distribution of aid for the return to normality;
- e. studying and proposing the need to formalize collaboration with other administrations and institutions by signing conventions or agreements;
- f. guaranteeing the complementarity and synergy between the various administrations at all levels in the post-emergency phase;
- g. proposing the approval of a recovery plan; and
- h. establishing the appropriate control and monitoring mechanisms.¹⁰⁷

Furthermore, the Valencian Civil Protection Law outlines in Chapter II specific roles and responsibilities of local administrations, including the Municipal Coordination Centers (CECOPAL), which are convened by each municipality to ensure coordination among all actors involved in the immediate emergency response.¹⁰⁸ Although none of the roles and responsibilities of local administrations outlined in the law appear to relate to disaster recovery, the consultations with key informants revealed that the municipalities are ultimately the main coordinating actor in emergency response and post-disaster operations, requesting the necessary means and support from the provincial and autonomous governments. For instance, following the 2019 Cold Drop, the autonomous government deployed staff to be integrated into the relevant teams of the municipal authorities to support the completion of damage and needs assessments. Specialized companies were also deployed by the Valencian Agency to support municipalities with disaster waste and debris management.

Although there is a general recognition across documents that a number of sectoral actors are involved in disaster recovery, the legal and policy frameworks for civil protection at national and regional level do not appear to set out clear roles and responsibilities for sectoral agencies in recovery. The Vega Baja Regeneration Plan does identify a number of sectoral agencies responsible for the implementation of

the different projects under each strategic line, reflecting a whole-of-government approach to disaster recovery. However, the specific roles and responsibilities of each sectoral actor are not explicitly outlined; for each action within a strategic line, there is simply a list of actors involved in its implementation. For example, for strategic line one (aimed at improving the hydraulic infrastructure and rehabilitating the Segura riverbed), some of the key sectoral agencies named include the regional Department of Agriculture, Rural Development, Climate Emergency and Ecological Transition, the Department of Territorial Policy, Public Works and Mobility, the General Directorate of Water of the Ministry of Ecological Transition and the Demographic Challenge, as well as other local and national authorities.¹⁰⁹

In terms of citizen participation, the Valencian Civil Protection Law created the Social Table for Civil Protection and Emergencies of the Valencian Community as a body to ensure the participation of citizens and civil-society organizations, although no specific functions related to disaster recovery appear to be assigned to this entity.¹¹⁰ The main functions of the Social Table are the following:

- a.** to propose the development of actions in matters of civil protection and emergency management;
- b.** to promote awareness raising initiatives for the general population on prevention, self-protection and the actions of citizens in emergency and catastrophe situations;
- c.** to be aware of the legislative and regulatory actions carried out in matters of civil protection and emergency management by the Ministry responsible for the matter; and
- d.** to have representation in the Civil Protection Commission of the Valencian Community.¹¹¹

In addition, the competent authorities of the Valencian Community, responsible for civil protection, may sign collaboration agreements in order to regulate the participation of other public or private entities in disaster management. For instance, the Valencian Government signed, in 2017, a collaboration agreement with the Spanish Red Cross to define the complementarity and subsidiarity of the resources of both entities in emergency response operations.¹¹²

The auxiliary role of the Spanish Red Cross in humanitarian action is further recognized in the Valencian Civil Protection Law, which provides that it is one of the main collaborating entities in civil protection.¹¹³ More specifically, the Spanish Red Cross is responsible for, among other things, the protection and relief of people affected by accidents, catastrophes, epidemics and other risks.¹¹⁴ Thus, it is considered a collaborating entity of the National Civil Protection System and may contribute with its means to actions, where appropriate, through the signing of agreements with the competent authorities.¹¹⁵ During the 2019 Cold Drop, the Spanish Red Cross formed a Crisis Committee to ensure coordination between the national, regional and provincial Red Cross offices to offer logistical, technical and financial support to the municipal Red Cross offices. Although specific roles and responsibilities for humanitarian actors (such as the Spanish Red Cross) and local communities in disaster recovery do not appear to be clearly set out in the law, the Vega Baja Regeneration Plan is a good example of community engagement in the design and development of a recovery framework.

In terms of coordination, neither the national nor the regional framework appear to legally require actors involved in disaster recovery to meet on a regular basis. Under the framework of the Regeneration Plan, coordination meetings among key recovery actors appear to be held on an ad-hoc basis and based on need. There does not appear to be an established structure or mechanism for such meetings.

3. Key issues in disaster recovery in Spain

3.1 Financing and financial support



National financing arrangements

In Spain, the sources of financing for disaster recovery can be domestic, international and private, operating under the principles of complementarity and subsidiarity, as seen in previous disaster recovery operations. The importance and dimensions of the situations that occur in emergencies generally require the contribution and participation of the human and material resources of all public administrations, organizations, companies, and even individuals. With all these means working in a coordinated manner, the aim is to reduce as much as possible the effects that serious risk situations can have on people, property and the environment. However, it should be noted that the legal framework in Spain (national and regional), including the civil protection laws, the emergency plans and the special plans contain limited provisions on financing.

Under article 156 of the Spanish Constitution, Autonomous Communities enjoy financial autonomy for the exercise of their powers.¹¹⁶ As per article 158, an allocation is made from the annual State Budget to the Autonomous Communities in proportion to the volume of State services and activities for which they have assumed responsibility, in order to provide a minimum level of basic public services throughout the Spanish territory.¹¹⁷ Thus, following the Spanish model of regionalized governance, the national State Budget allocates a percentage to finance general civil protection services at national level,¹¹⁸ while Autonomous Communities have their own annual budgets to finance, among other things, civil protection and emergency management.¹¹⁹ In terms of specific disaster funds, article 11 of the National Civil Protection Law created an Emergency Prevention Fund, which is managed by the Ministry of the Interior.¹²⁰ The main sources of financing for the Fund come from the State's general budgets, however it can only be used to support prevention activities such as risk and vulnerability assessments, risk mappings and awareness campaigns.¹²¹ Therefore, there does not appear to be a dedicated disaster recovery fund in Spain.

The National Civil Protection Law establishes that, whenever there is damage that can be measured in economic terms, the national government facilitates the payment of compensation for property that is covered by public or private insurance schemes.¹²² In order to facilitate this, the competent administration, together with insurance entities operating in Spanish territory and the Insurance Compensation Consortium (the Consortium) may exchange relevant data.¹²³ The Consortium is the government entity, working under the Ministry of Economic Affairs and Digital Transformation, which provides compensation for damage caused to people and property by natural phenomena (and certain other prescribed types of event), on the condition of the affected person having subscribed to a public or private insurance.¹²⁴ In addition, economic aid is also granted by the Consortium when personal injuries have occurred, such as death or permanent disability.¹²⁵

In addition to the above, when an 'area seriously affected by a civil protection emergency' is declared, specific financial measures for recovery can be adopted including the following:

- a. financial aid to individuals for damage to their habitual residence and essential items;
- b. compensation to local companies and businesses for expenses derived from actions that cannot be postponed;

- c. aid for industrial, commercial and service establishments;
- d. subsidies for damage to municipal infrastructure;
- e. aid for damage to agricultural, livestock, forestry and marine production; and
- f. lines of credit subsidized by the Official Credit Institute.¹²⁶

It should be noted that financial assistance can also be provided even when an 'area seriously affected by a civil protection emergency' is not declared, as highlighted in the National Civil Protection Law.¹²⁷ However, in either case, the period for which financial assistance is available following a disaster is not clearly specified.



Valencian financing and the 2019 Cold Drop

As stated above, Autonomous Communities are responsible for financing civil protection activities within their own territory. The Statutes of Autonomy of the Valencian Community outline the general sources of financing of the Valencian Treasury, which are made up of, among other things: the income from the region's assets and other private rights, legacies, donations and subsidies; regional taxes, rates and special contributions; the income from taxes transferred by the State; allocations and subsidies charged to the General State Budgets; the income from the Interterritorial Compensation Fund; the amount collected from fines and sanctions; and the income from European Union funds.¹²⁸

Based on the desktop research conducted, it has not been possible to determine the percentage of the annual budget of the Valencian Community allocated to civil protection. The Post-Emergency Office appears to be the competent authority responsible for managing the provision of financial aid to affected persons in post-disaster settings.¹²⁹ More specifically, the Post-Emergency Office: centralizes aid applications addressed to the Valencian Government; establishes the protocols for informing the population about the aid and the approval processes; promotes the necessary agreements with other administrations for the management of aid; and carries out the monitoring and evaluation of all actions for the return to normality, including granting of aid to affected households.¹³⁰

Following the 2019 Cold Drop, the national government declared the affected communities as an 'area seriously affected by a civil protection emergency' and adopted a number of emergency measures to facilitate the recovery through Decree 11/2019. These measures included aid aimed at mitigating personal injuries, material damage to housing and property, and damage to industrial, commercial, agricultural, maritime, fishing, tourist, and other service establishments.¹³¹ It is relevant to mention that these measures are stipulated by Decree 307/2005, which regulates the types of aid that can be provided in response to emergency situations of a catastrophic nature, and specifies that the main financial source of this aid comes from the general national budget.¹³² It should also be noted that the granting of this aid is subsidiary to any other damage coverage system, public or private, of which those affected may be beneficiaries, being available only whenever such systems do not cover all the damage caused.¹³³ Aid requests are processed and coordinated by the National Government's Delegations and Sub-Delegations in the Autonomous Communities.¹³⁴

In addition, the Valencian Community adopted, through Decree 197/2019, the regulatory bases and the procedures for granting of urgent aid to the affected municipalities. The main beneficiaries of the aid measures provided in this Decree were the affected municipalities within Valencian territory,¹³⁵ and the maximum global amount of aid derived from this Decree went up to 10 million euros.¹³⁶ The amounts granted by this Decree were considered direct aid to cover actions that could not be postponed, carried out at the time of the emergency or immediately after, with the purpose of restoring essential public services to guarantee the life and safety of people, rather than as aid for the long-term recovery.¹³⁷ Therefore, these provisions were established for the immediate or early recovery from the 2019 Cold Drop.

In addition to this government financial assistance to the municipalities, the consultations with key informants revealed that, during the emergency and early recovery phase, there was a significant wave of solidarity. Donations included both financial and in-kind assistance. Managing the huge amount of in-kind donations made by private donors to the administrations and to civil protection actors – such as the Spanish Red Cross – posed a logistical challenge, becoming somewhat counterproductive due to the large amount of donations that did not correspond to the needs of the affected people. According to one key informant, excessive and uninformed solidarity can, in fact, take place due to a lack of recovery planning and a centralized information-sharing system for actors to notify donors of the affected peoples' needs.

In terms of medium- and long-term recovery from the 2019 Cold Drop, the Vega Baja Regeneration Plan is the key guiding instrument. As explained above, the Regeneration Plan consists of four strategic lines of action, each one of which includes a number of key proposed actions. Given the framework of this Plan is quite extensive, covering a wide range of sectors which needed to recover from the 2019 Cold Drop, the financing of the plan varies depending on the action and the strategic line. For instance, the financing for the Regeneration Plan can come from the national, autonomous or municipal administrations, from EU funds,¹³⁸ or from public-private partnerships.¹³⁹

3.2 Assessment, planning, monitoring and evaluation



Assessment, planning, monitoring and evaluation are critical components in the disaster recovery phase, contributing to the identification of actions to be carried out to meet the needs of the affected people, as well as to ensure their appropriate implementation. However, while the procedures for flood risk assessments are defined in Decree 903/2010,¹⁴⁰ there are limited provisions in the reviewed instruments relating to post-disaster needs assessments and to monitoring and evaluation methodologies.

The only provision found in the National Civil Protection Law on post-disaster assessments is related to damage assessments to be carried out in order to determine economic needs. This is established in terms of article 21, which states that material damage needs to be capable of being measured in economic terms in order to be covered by any government financial assistance, and that the quantification of such damage is done by specialized agencies or by the technical services of the Public Administrations.¹⁴¹ In addition, the National Civil Protection Plan Against Flood Risks comprises a series of action plans covering different areas of action. Among them is the Plan on Mapping and Information of Disaster Areas with Aerial Means, coordinated by the Ministry of the Interior, which seeks to gather information on the damage caused by a flood as quickly and effectively as possible, to evaluate the needs and facilitate speedy decision-making processes.¹⁴² To this end, this plan contemplates the inspection and classification of critical infrastructure and buildings of special importance that are at risk, and the identification of whether they should be repaired, reinforced or demolished (depending on the level of damage sustained and the danger they present).¹⁴³

Although post-disaster needs assessments do not appear to be legally required by Spanish law, the Valencian Civil Protection Law identifies the Post-Emergency Office as a key actor supporting municipalities in conducting post-disaster needs assessments and evaluation of recovery activities. These activities include, among other things, the collection of information on damage caused and people affected, as well as the monitoring and follow-up of all actions implemented for the return to normality.¹⁴⁴ More specifically, the Post-Emergency Office: evaluates the needs and aid requests aimed at re-establishing normality after an emergency;¹⁴⁵ requests from the provincial and municipal administrations affected, as well as from the different ministries, information on the impacts and the

economic needs for rehabilitation; prepares a damages report; and proposes a recovery plan.¹⁴⁶ It is, therefore, up to the municipalities to identify their specific needs to recover and rehabilitate the infrastructures they own, the damage to private property of the inhabitants of their municipality and the estimate of the economic amount necessary for their recovery, and to provide this information to the Post-Emergency Office.¹⁴⁷

It should also be noted that damage assessment processes should take into consideration a number of categories of damage caused by floods, as provided in the Valencian Special Plan Against Flood Risk (2018). These damage categories include the following:

- a.** direct damage, meaning damage to property and infrastructure, as well as the costs of intervention, evacuation of affected populations, emergency supplies, etc.;
- b.** indirect damage, which can be difficult to assess, such as the damage caused by the temporary interruption of infrastructure and public services on populations not directly affected by the flood, or secondary damages caused by the interruption of economic activity; and
- c.** intangible damage that cannot be translated into monetary terms, linked to social and cultural disruption caused by the alteration of living conditions in the affected areas.¹⁴⁸

As per the Valencian Civil Protection Law, which establishes the framework guiding the development of civil protection plans at municipal level, municipalities are legally required to adopt a municipal emergency plan within three years from the entry into force of this law, as well as municipal special plans within five years.¹⁴⁹ Under article 29, territorial emergency plans at the regional, provincial and municipal level, as well as special plans, must be reviewed every six years. These emergency plans should include the recovery phase. The preparation of dedicated recovery plans does not appear to be legally required in Spain, nor does there appear to be a defined methodology for recovery planning.

Following the 2019 Cold Drop, several actors carried out post-disaster assessments based on their scope of action. These included European, national and autonomous meteorological agencies, the competent Ministries, and the Spanish Red Cross. However, based on the desktop research conducted, it has not been possible to locate a centralized post-disaster needs assessment which gathered all the information in one document, nor has it been possible to locate aggregated data on the damage caused and the needs to be met in the affected areas. Examining all the sectoral assessments separately would exceed the scope of this report, requiring further research.

The 2019 Cold Drop highlighted the need to promote resilience building in the area of Vega Baja to better resist the effects of future floods, given that it is one of the most vulnerable territories in the Valencian Community, and that current climate models indicate that extreme weather events may occur more frequently in the coming decades.¹⁵⁰ In addition, based on consultations with key informants, the lack of municipal emergency plans in the most affected municipalities exacerbated the devastating consequences of the 2019 Cold Drop due to scarce preparedness and multisectoral planning for such a massive disaster. To this we must add that, according to one key informant, the Automatic Hydrological Information System (Sistema Automático de Información Hidrológica or SAIH) – a government platform responsible for capturing, transmitting, processing and presenting in real time the available data on the hydrological public domain – experienced outages during the peak of the 2019 Cold Drop, therefore hindering access to real time information to plan an adequate response. Moreover, communication channels for coordination among different actors collapsed due to the large amount of people using the same channels at the same time.

As discussed above, in 2020, the Valencian Government developed the Vega Baja Regeneration Plan in close collaboration with citizens and specialized working groups. The Regeneration Plan serves as a recovery plan for the 2019 Cold Drop and also a framework for building resilience to future disasters, pursuing a more sustainable development model,¹⁵¹ and encouraging the preparation of municipal emergency plans.

3.3 Repair and reconstruction of housing and infrastructure



Relevant national instruments

The repair and reconstruction of housing and infrastructure are among the key recovery activities to be carried out in post-disaster settings as human recovery cannot take place without the physical recovery of housing and infrastructure. It should be noted that infrastructure includes (but is not limited to) roads, bridges, electricity networks, hospitals, schools, community centres, parks and green areas. As will be discussed in this section, there are some provisions relevant to disaster recovery in the legal instruments relating to construction and territorial planning. In terms of civil protection laws, the provisions relating to the repair of housing and infrastructure are generally scarce, although the National Civil Protection Strategy promotes strengthening the links between civil protection plans and the instruments for land use planning and urban development.¹⁵² This is further addressed in the Vega Baja Regeneration Plan.

In Spain, housing, urban planning and territorial organization are among the areas of exclusive competence of the Autonomous Communities¹⁵³ and, therefore, lawmaking in this area is exclusively conducted by the autonomous governments. Autonomous Communities develop their own laws and standards in the matter without intervention from the national government and, in turn, municipalities prepare their own urban plans based on the regional laws and standards.

Land management in Spain is governed more generally by Decree 7/2015, the Land and Urban Rehabilitation Law, which serves as the framework for the entire Spanish territory. It guarantees equality in the exercise of rights and in the fulfillment of constitutional duties related to the land, as well as a sustainable, competitive and efficient development of the urban environment by promoting actions that lead to the rehabilitation of buildings and the regeneration of existing urban structures, therefore ensuring the constitutional right of access to decent and adequate housing.¹⁵⁴ Although this law introduced basic principles linked to sustainability into urban planning, it is silent on the reconstruction and rehabilitation of infrastructure affected by disasters or civil protection emergencies. However, it recognizes the need to consider the principle of prevention of natural risks and serious accidents in land use planning, such as those derived from extreme weather events and floods, among other things, which can have serious impacts on infrastructure and essential public services.¹⁵⁵

Regarding the National Civil Protection Law, only a brief mention appears to be made to the repair and reconstruction of infrastructure after a disaster as a measure to be carried out from the immediate response phase and into the recovery phase, for which special financial assistance is to be provided under certain requirements. The Law does not, however, establish specific procedures to promote resilience in the recovery phase, or to expedite the reconstruction, such as fast-track approval processes or waivers and exemptions of certain requirements. Nonetheless, article 16 provides that, during immediate emergency response operations, it is vital to carry out the initial repair of damage to restore essential services and infrastructure to meet the basic needs of the affected population.¹⁵⁶ This provision maintains the necessary coherence with the national security and critical infrastructure protection systems, established by Law 8/2011, which ensures coordination among the competent authorities to protect critical infrastructure.¹⁵⁷ In addition, the National Civil Protection Plan Against Flood Risk highlights the need for early recovery actions such as the inspection of state buildings and infrastructures, the adaptation of land transport routes, both urban and interurban, the repair of the most urgent damage, and the restoration of essential services, including drinking water supply, electricity, water sanitation, telecommunications, as well as clean-up and rehabilitation of housing.¹⁵⁸ Similarly, the need to inspect, clean and repair critical infrastructure in the aftermath of a disaster is briefly addressed in the Valencian Special Plan Against Flood Risk.¹⁵⁹

Furthermore, the Disaster Risk Management Framework (DRM Framework) 2021 offers a summarized and non-exhaustive view of the organizational framework for DRM and climate change adaptation in Spain, reflecting the coherence and coordination between the different administrations involved, as well as the existing planning and management instruments.¹⁶⁰ This document recognizes that the design and construction of new buildings, as well as the adaptation or modernization of existing buildings to make them more resilient to floods, coastal phenomena and extreme weather events, can play an important role in mitigating the damage caused by natural hazards and in accelerating the recovery process.¹⁶¹ Also, it highlights that traditional disaster recovery solutions often recreate pre-disaster situations, thereby continuing to contribute to future disaster-related issues.¹⁶² Moreover, relocation is considered a measure that breaks this cycle as it reduces the exposure of communities to risks by relocating them to sites not prone to such recurring risks. However, relocations are not commonly used as a risk mitigation measure as they are important decisions that must be made on a case-by-case basis, in consultation with the affected population, and the cost can be significant compared to other protection measures.¹⁶³

In 2010, the Ministry of Housing prepared an evaluative study about sustainability in Spanish urban planning. The purpose of this document was to serve as a report and guide, providing a set of proposals for action to achieve greater sustainability in the field of urban planning. Among the main issues identified in this report is the fact that contemporary Spanish urban planning is highly focused on development, devoted above all to the creation and expansion of cities rather than regulating how and what to build.¹⁶⁴ This has been exacerbated by, among other things, the lack of strategic environmental assessments in territorial and urban planning processes,¹⁶⁵ although they are legally required by the Land and Urban Rehabilitation Law.¹⁶⁶

Thus, urban growth, which has facilitated the country's economic growth, is one of its hallmarks, both internally and internationally.¹⁶⁷ Undoubtedly, urban growth is still necessary, but today it also seems clear that urban planning must respond to the requirements of sustainable development, minimizing the negative impacts of such growth and focusing on the regeneration of existing cities. The European Union insists on this through its Territorial Strategy, which proposes a compact city model and warns of the serious drawbacks of dispersed or disorderly urbanization,¹⁶⁸ including environmental impacts, social segregation and economic inefficiency.¹⁶⁹ This is especially important for areas with high exposure to disaster risks, such as the Vega Baja territory, where sustainable urban planning models could be used to reduce the vulnerability of existing infrastructure, as well as to improve the resilience of communities to future disasters.



Relevant Valencian Community instruments

Currently, the main legal instrument governing territorial organization and urban planning in the Valencian Community is Decree 1/2021 (Valencian Urban Planning Law). This instrument aims to guide and regulate the territorial planning of the Valencian Community, as well as urban activity, the rational use of land and the conservation of the natural environment, from a gender-sensitive and inclusive perspective.¹⁷⁰ To this end, it classifies land into three categories: urban land, buildable land and non-buildable land.¹⁷¹ It should be noted that non-buildable land only refers to land in rural areas,¹⁷² exclusively dedicated for buildings and facilities necessary for agricultural and forestry activity, and is subject to strict legal requirements to ensure environmental protection.¹⁷³ Under article 9, territorial and urban planning criteria should ensure spaces free of construction next to the hydraulic public infrastructure, along its entire length, as well as in areas with high risk of flooding, avoiding new urban developments in such areas.¹⁷⁴ It should be noted that this revised version of the Valencian Urban Planning Law was not in force at the time of the 2019 Cold Drop. It has not been possible to ascertain whether the 2019 Cold Drop catalyzed the revision of this text.

The repair and reconstruction of infrastructure in post-disaster settings does not appear to be generally addressed in the normative framework for urban planning and territorial organization. The Valencian Urban Planning Law only refers to the improvement of infrastructure in the recovery from the COVID-19 pandemic, serving as an example of ad-hoc measures to build resilience of infrastructure following an emergency. More specifically, it states that, due to the health emergency resulting from the COVID-19 pandemic, improvement and expansion works are to be executed for: domestic and industrial waste management facilities declared an essential service; and domestic waste recovery services for which European funding is available for reconstruction from the COVID-19 health crisis.¹⁷⁵

The Valencian Urban Planning Law integrates the concept of sustainable territorial and urban development,¹⁷⁶ with the aim of improving the quality of people's lives in urban and rural areas, promoting the sustainable management of the urban environment and risk prevention.¹⁷⁷ Climate change is also identified as a cross-cutting issue to be considered in urban planning in order to promote the adaptation of existing infrastructure.¹⁷⁸ Although these concepts are key to increasing the resilience of housing and infrastructure to disaster risks and climate change, their link to disaster recovery is not clearly set out.

One of the most significant milestones in urban planning in the Valencian Community is the Territorial Action Plan for Flood Risk Prevention in the Valencian Community (PATRICOVA), adopted in 2003 by the Valencian Government, and revised and approved more recently in 2015 through Decree 201/2015. This instrument is part of the planning structure for natural and manmade territorial risks, comprising a series of plans dedicated to each type of risk. Essentially, the PATRICOVA was developed as a basic tool for land management to avoid construction works in flood-prone areas, which were identified through studies of river basins, cartography and historical data.¹⁷⁹ The PATRICOVA was the first territorial plan to explicitly prohibit construction and limit activity in flood-prone areas, making them subject to previous risk assessments and establishing restrictive legal processes for the approval of construction in such areas, among other measures.¹⁸⁰

Prior to the adoption of the PATRICOVA, the normative framework in the Valencian Community was not as restrictive, which led to extensive urban development in flood-prone zones, including areas adjacent to the Segura River. Following the 2019 Cold Drop, it became clear that the devastating effects experienced were, to a large extent, due to the occupation of the traditional course of the river with buildings and construction of all types. It should be noted that some of the infrastructure located adjacent to the Segura River, and which was damaged during the 2019 Cold Drop, included critical infrastructure such as hospitals. For example, the Vega Baja Hospital in the Orihuela municipality had to be evacuated because it was completely flooded. According to numerous media reports, this has raised concerns during recent events given that many municipalities in the most vulnerable areas, such as the area of Vega Baja, pre-date the PATRICOVA.¹⁸¹ As PATRICOVA does not apply retrospectively, it does not apply to buildings that were constructed prior to its entry into force, although their adaptation is recommended. However, guidelines provided by the PATRICOVA to adapt existing infrastructure in flood-prone areas are focused on drainage, sewage and irrigation systems rather than on public buildings or housing. Notwithstanding the recommendations of the PATRICOVA, which promote the revision and adaptation of existing infrastructure,¹⁸² as well as the establishment of mechanisms for the adaptation of future buildings to reduce risks in flood-prone areas, it has not been possible to ascertain whether PATRICOVA applies to the post-disaster reconstruction of housing and infrastructure that was built before PATRICOVA was introduced.

It should be noted that neither of the two main instruments comprising the Valencian urban planning framework — the Valencian Urban Planning Law and PATRICOVA — appear to specifically address the process for repair and reconstruction of housing and infrastructure in post-disaster settings, or assistance mechanisms for the relocation of households to lower risk areas. Instead, they provide more general provisions on urban planning to ensure the safety of the population, risk prevention in vulnerable areas, environmental protection, as well as the sustainable development of urban and rural areas.

3.4 Housing and infrastructure during the 2019 Cold Drop



Following the floods caused by the 2019 Cold Drop, Decree 11/2019 established emergency financial measures to alleviate personal injuries and material damage to property, among many other things.¹⁸³ These grants could be awarded in the event of: the total destruction of habitual residence; less serious damages that do not affect the structure of the habitual residence; and damage to basic household goods that have been affected in the habitual residence.¹⁸⁴

However, grants were only available if one of the members of the family or cohabitation unit who resided in the damaged property was also the owner of the property. Furthermore, for the purposes of these aid measures, only damages that were caused directly and decisively by the catastrophic event were covered.¹⁸⁵ In addition, it should be noted that habitual residence means the effective, continuous and permanent residence address of the family or cohabitation unit.¹⁸⁶ Family or economic co-habitation units are defined as the person or group of people who reside in the same house, united by blood or by any other relationship that implies co-responsibility or economic dependence.¹⁸⁷ Given that it was necessary to prove ownership to receive financial assistance for the repair or reconstruction of damaged houses, any document that demonstrates such ownership, such as receipts for payment of property tax or other documents of a similar nature, would be accepted as sufficient evidence.¹⁸⁸

The processes for households to request and be approved to receive financial aid to recover from any type of emergency are stipulated by Decree 307/2005. Given the beneficiaries are commonly family or cohabitation units, and based on the desktop research conducted, the approach that best describes the repair and reconstruction of households following the 2019 Cold Drop appears to be owner-driven reconstruction, where the government provides cash transfers to households that meet specific requirements. This has been confirmed by the key informants, who explained that a significant number of households received financial assistance, channeled through the Valencian Government, to repair their damaged houses. However, as the government financial assistance was only granted a few months after the 2019 Cold Drop, many households proceeded to repair their houses through private insurance coverage or using their own means.

According to one key informant, the intensive occupation of flood-prone areas, combined with insufficient maintenance of hydraulic infrastructure and of the Segura River itself, aggravated the damage caused by the 2019 Cold Drop. Hydraulic infrastructure such as dams, retaining walls, channelling and drainage systems can be used to reduce flood risk. However, while some such infrastructure was in place, it proved to be insufficient and, moreover, in some instances it had only been partially maintained. During the 2019 Cold Drop, retaining walls broke, thereby releasing large volumes of water. The Segura River itself had also been insufficiently maintained with a large amount of reeds and branches. High volumes of wastewater were discharged into the Segura River during the 2019 Cold Drop due to the structure of existing drainage systems, which greatly increased the volume of water, led to the collapse of bridges, and made it more difficult to contain the water course, therefore causing extensive flooding.¹⁸⁹ Finally, some transport infrastructure was not designed with climatic and environmental risk factors in mind, which also aggravated the flooding. For example, some highways and train tracks created a dam effect, leading to their own destruction and to sudden and extensive flooding in adjacent areas.

According to the key informants, there are many underlying reasons for these issues. One reason is a lack of resources to maintain and improve existing infrastructure, as well as to construct new infrastructure to prevent and reduce disaster risk and protect human life in flood-prone areas. Another reason is the governance structure for the public infrastructure domain. In line with the Spanish model of governance, the public infrastructure domain is divided in three: the public hydraulic infrastructure, which is the responsibility of the National Government, acting through the Hydrographic Confederation

for each river; infrastructure in green and non-buildable areas, which is the responsibility of the Valencian Government and governed by the PATRICOVA; and infrastructure in urban centres, which is managed by the local authorities. Coordination challenges can arise when these three levels of government have responsibility over infrastructure in the same flood-prone territory. This is the case for the Vega Baja territory where the Segura River, which falls within the competence of the Hydrographic Confederation of the Segura River (Confederación Hidrográfica del Segura),¹⁹⁰ crosses urban centres and buildable and non-buildable areas.

In order to face these challenges, the Vega Baja Regeneration Plan promotes a framework aligned with the 'build back better' principle. Overall, the vision of the Regeneration Plan is to turn the catastrophe into an opportunity to promote a resilient environment that favours the economic and social regeneration of Vega Baja, while promoting territorial development that is respectful of the environment, prepares for future disasters and prevents or minimizes construction in high-risk areas.¹⁹¹ To this end, the Valencian Government has been highly committed to the repair, reconstruction and, most importantly, the improvement of existing infrastructure, investing more than 100 million euros in this area.¹⁹² It should be noted that the term 'infrastructure' under the Regeneration Plan applies broadly to hydraulic, agricultural and green infrastructure, communication networks, roads and transport.

A key point addressed in the Regeneration Plan, under strategic line one, is the clean-up, repair and improvement of existing hydraulic infrastructure. To this end, the Regeneration Plan proposes to build channeling and sustainable drainage systems to separate rainwater from wastewater in urban areas, aiming to reduce the volume of wastewater discharged into the Segura River and also to reduce the pollutant load emitted into the natural environment.¹⁹³ Other related actions contemplated in the Regeneration Plan include the construction of retaining dams and pipes to channel the water coming down from the mountains away from urban areas, and the improvement of wastewater treatment and its reuse for agriculture.¹⁹⁴

Furthermore, the Regeneration Plan includes, through strategic line four, several actions aimed at providing greater protection to vulnerable groups, especially in terms of housing, as well as raising awareness of disaster and climate change risks in the Vega Baja territory.¹⁹⁵ The actions mainly focus on improving the public transport network and developing a virtual guide for reducing the vulnerability of buildings to floods in order to promote a resilient housing model adapted to the environment and to the specific risk level. This digital tool should constitute an agile and dynamic platform that allows the study and analysis of methods and solutions for the prevention of damage, as well as the improvement of resilience in existing buildings.¹⁹⁶ Notwithstanding all these specific actions proposed in the Regeneration Plan, it has not been possible to determine the level of implementation of these projects. Evaluating the practical implementation of this framework would require further research, through extensive interviews and consultations with government officials, affected communities and other stakeholders.

3.5 Mental health and psychosocial support



Under the Spanish Constitution, the right to life, physical and moral integrity of every individual,¹⁹⁷ and the right to health protection and to healthcare¹⁹⁸ are recognized as fundamental human rights. The provision of mental health and psychosocial support in post-disaster settings is, however, barely addressed in the national and regional civil protection frameworks. The National Civil Protection Law identifies psychosocial support as one of the key activities in immediate emergency response operations (but does not mention it in relation to the recovery phase),¹⁹⁹ while the Valencian Civil Protection Law does not

contain any provisions relating to psychosocial support. In terms of the special plans, the National Civil Protection Plan Against Flood Risk highlights that, in the event of an emergency, citizen service centers are set up to provide psychosocial support, among other things.²⁰⁰ The phase and operating period of such centers is, however, not clearly specified. The Valencian Special Plan Against Flood Risk and the Regeneration Plan do not address psychosocial support.

As the Valencian Community holds exclusive competence in the area of social services, as in health care,²⁰¹ it has developed its own legal framework for the provision of inclusive social assistance within its territory, namely Law 3/2019. The provisions established by this law apply to emergency situations, which are identified as those derived from accidents, catastrophes or states of vulnerability and lack of social protection, in accordance with the applicable regulations on civil protection and emergency management.²⁰² In such cases, social emergencies may arise, requiring immediate action by professional teams of social services to avoid an aggravation or deterioration of a situation of vulnerability.²⁰³ Actions in situations of social emergencies have priority over any other action and are implemented as long as the emergency persists.²⁰⁴ Specific actions carried out by the public system of social services in the Valencian Community include virtual personalized attention and psychosocial and socio-educational care, which comprises a number of interventions of an interdisciplinary and comprehensive nature. These include, for instance, psychological care, case-by-case monitoring, and educational and social support for individuals, families or cohabitation units, provided free for all citizens.²⁰⁵ However, it should be noted that the link between the provision of social services and disaster recovery activities is not clearly set out in the law.

The 2019 Cold Drop had a huge psychological impact on the affected population, as reported by the Spanish Red Cross (SRC), who played a vital role in the provision of mental health and psychosocial support. The impact of the SRC interventions in Vega Baja has been reflected in a short documentary film called [The Footprint of the Water](#) (La Marca del Agua), gathering a number of interviews of affected families and SRC staff. The SRC managed to collect more than half a million euros in the province of Alicante, which was used to carry out more than 1,640 interventions.²⁰⁶ In total, the solidarity actions of the SRC have reached more than 900 homes over the two years following the 2019 Cold Drop, with nearly 1,400 goods delivered to homes, including furniture, electrical appliances and other types of in-kind assistance, and financial aid provided for rental payments.²⁰⁷ Moreover, at the time of the floods, SRC staff paid visits to affected households in order to identify psychological and material needs, which allowed them to assist those in need. Based on consultations with key informants, psychosocial support was provided face-to-face and through a dedicated phone line for a year and a half after the floods (until March 30th, 2021). Psychosocial support was provided by the SRC to more than 300 affected households.²⁰⁸ Another initiative of the SRC to support the recovery of affected populations was to carry out educational workshops in schools located in some of the affected municipalities in the Vega Baja area. As the 2019 Cold Drop had a significant psychological impact on children, the SRC identified that it was essential to address children's mental health needs, and to prepare them for future floods by teaching them basic concepts (such as 'DANA' or 'cold drop'), the different phases of an emergency, how to act during an emergency, and how to manage the emergency from a psychological perspective. The main challenge experienced during this period was the overlap between the recovery actions from the 2019 Cold Drop and the beginning of the COVID-19 pandemic. This was due to the emergence of new humanitarian needs caused by the pandemic. Strict movement restrictions and protracted quarantine periods also posed a challenge to the continuity of recovery actions, forcing SRC staff to adapt to the new circumstances.

3.6 Education and livelihoods



A critical step in disaster recovery is for children to resume their schooling and for adults to resume their livelihoods. The need for schooling to resume as soon as possible following a disaster is not explicitly addressed in the national or regional civil protection framework. However, the national law on education, namely Law 2/2006, was modified by Law 3/2020 to include a provision recognizing the need to develop a contingency plan within the education sector to face emergency situations. More specifically, it proposes that the Ministry of Education, in collaboration with the educational administrations, should define a contingency planning model to ensure continuity in schooling, in order to guarantee the right to education of students under any circumstances.²⁰⁹ This Plan should include organizational and operational aspects and, where appropriate, the participation of members of the educational community in the mitigation and response to the emergency situation.²¹⁰ Despite this framework for contingency planning, it has not been possible to locate a general contingency plan for the education sector at the national or regional level. Nonetheless, the Ministry of Education and the autonomous governments have shown, over the past three years, strong leadership in managing the impacts of the COVID-19 pandemic on education.

In terms of restoring economic activity and livelihoods after the occurrence of a disaster, the National Civil Protection Law establishes, under article 24, a number of actions to enable economic recovery. For instance, lines of credit can be opened and subsidized by the Official Credit Institute, and fiscal measures are provided to a number of beneficiaries in order to alleviate economic hardship due to the emergency.²¹¹ These measures include, among many other things: reduction of the tax on economic activity for companies whose premises or goods have been damaged, or who need to relocate or temporarily close; exemption from the real estate tax fee; and a moratorium of up to one year without interest in the payment of Social Security contributions of companies and self-employed workers who suffered damages.²¹²

The special plans against flood risk at national and regional level do not appear to make provision for the restoration of economic activity as they exclusively focus on early recovery actions. However, the Vega Baja Regeneration Plan sets out a framework for long-term economic recovery and development in the area of Vega Baja. Under strategic line three, the plan aims to promote a resilient ecosystem that favors regenerative economic development, with special emphasis placed on agriculture, tourism, trade and industry, cultural heritage and technology.²¹³

3.7 Environmental protection and waste management



The civil protection laws at national and regional level recognize that civil protection and emergency management encompass all actions aimed at the protection of people, goods and the environment.²¹⁴ However, none of the instruments reviewed explicitly set out measures to prevent environmental damage, or to restore and strengthen the environment during disaster recovery operations. To the contrary, Law 21/2013 on environmental assessments establishes that plans or programs relating to national defense or civil protection are excluded from the application of strategic environmental impact assessments.²¹⁵ This is further supported by the Valencian Urban Planning Law, which establishes that plans relating to civil protection are excluded from environmental and territorial evaluation procedures.²¹⁶ Following the 2019 Cold Drop, Decree 11/2019 established that the exemption from strategic environmental impact assessments for repair or rehabilitation of infrastructure, equipment or facilities should be determined by agreement of the Council of Ministers.²¹⁷ There appears, however, to be no record of the Council of Ministers having made a decision on this matter.

In terms of disaster waste management, the civil protection and emergency management framework does not appear to make specific provision for this issue. In Spain, the current legal framework for waste management is regulated by Law 7/2022. More specifically, the purpose of this law is to establish the legal regime for the prevention, production and management of waste and contaminated soils.²¹⁸ Under article 89, the deposit of waste in landfills and its incineration are subject to tax payments, except when ordered by public authorities in situations of force majeure, extreme necessity or catastrophe, in which case there is a tax exemption.²¹⁹

Under the Vega Baja Regeneration Plan, environmental protection is not addressed as a specific line of action, but rather as an inherent aspect of the plan and a cross-cutting issue to be considered under each strategic line. Many of the activities contemplated under strategic line one of the Regeneration Plan serve not only to reduce flood risk but also to promote environmental and waste management outcomes. For example, the construction of drainage systems to separate rainwater from wastewater in urban areas will reduce the pollutant load emitted into the natural environment. Equally, the construction of retaining walls, dams and pipes to channel water coming from the mountains away from urban areas will reduce waste in urban areas, as water from the mountains typically carries solid elements (stones, vegetation, waste) into urban areas.²²⁰

The Regeneration Plan also includes other measures specifically dedicated to environmental protection and waste management. It identifies the need to invest in improving wastewater treatment and its reutilization for agricultural activities.²²¹ It also highlights the need to improve, in the medium term, the reduction of floating solid waste in the wastewater networks,²²² and to promote recycling and adequate waste management overall in the long term.²²³ Further, the Regeneration Plan identifies three additional actions to be carried out to capture floating urban waste, including plastics. These include:

- the placement and maintenance of grids in the irrigation ditches to prevent urban waste from reaching the river;
- the recovery and installation of floating screens at the mouth of the river to prevent waste from the river reaching the sea; and
- the installation of bins near the river to reduce littering.²²⁴

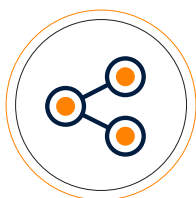
3.8 Protection and inclusion of vulnerable groups



Protection mechanisms for especially vulnerable groups are key to guaranteeing human recovery in post-disaster settings. For the purpose of this section, the term “vulnerable groups” is used to refer to women and girls, older people, children, people experiencing illness or disability, marginalized racial and ethnic groups, migrants, and sexual or gender minorities. The National Civil Protection Strategy promotes improving the care of people in a situation of special vulnerability for social or personal reasons, identifying this as a variable to be considered both in the preparation of action protocols and in the training of civil protection agents.²²⁵ In addition, the National Civil Protection Law highlights that all civil protection actions are carried out under the principle of equality, taking into account the different strengths and vulnerabilities of people.²²⁶ As per article 2, vulnerability is defined as the characteristic of a group of people or goods that makes them susceptible to being affected to a greater or lesser degree by a disaster.²²⁷ However, neither the civil protection laws (national and regional), the National Strategy, nor the special plans against flood risk (national and regional) appear to establish increased protection measures for vulnerable groups or for sexual and gender-based violence (SGBV) prevention measures for disaster-affected communities.

At the autonomous level, the Valencian Government has adopted several instruments to prevent and combat SGBV. These instruments include Law 7/2012, establishing the legal regime to fight against SGBV, and the Valencian Strategy Against Sexual and Gender-Based Violence 2021-2025. Notwithstanding this dedicated SGBV prevention and response framework in the Valencian Community, SGBV in emergency and post-disaster settings does not appear to be explicitly addressed or regulated. During the recovery from the 2019 Cold Drop, protection and SGBV considerations were integrated into the Spanish Red Cross' activities. To this end, the Spanish Red Cross identified potential vulnerabilities in order to adequately address them. However, dedicated programs for SGBV prevention were not established by the Spanish Red Cross as the needs assessments conducted did not reflect a need for it, in comparison to the response to the COVID-19 pandemic, and during the quarantine period, where SGBV increased exponentially.

3.9 Sustainable development, disaster risk reduction and climate change adaptation



During disaster recovery efforts, linking the actions implemented to long-term sustainable development, while promoting climate change adaptation (CCA) and disaster risk reduction (DRR) remains a significant challenge in Spain. The National Civil Protection Law recognizes that coordination is essential for the efficient and harmonious functioning of the civil protection system and for optimizing its resources, and that it is critical that all actions and means are primarily aimed at permanently and sustainably reducing risks and vulnerabilities, as well as increasing individual and collective capacity to react to future emergencies.²²⁸ While article 10 promotes DRR as key to guaranteeing the efficiency of society's response to emergencies in a manner that is compatible with social and economic sustainability, the extent to which this applies to the recovery process is not clearly specified.²²⁹ Similarly, article 7 of the Valencian Civil Protection Law provides that the different administrations involved in civil protection are responsible for promoting actions aimed at reducing future risks and preventing catastrophes.²³⁰

Building resilience to adapt to the effects of climate change is broadly addressed in the National Civil Protection Strategy. This document recognizes that the ultimate objective of civil protection, as an instrument of public security, is to protect people and property, guaranteeing an adequate response to all types of emergencies and catastrophes, considering the different risk enhancing factors – such as climate change – and the need to strengthen community resilience.²³¹ Among the strategic lines of action in the National Strategy is updating post-emergency instruments, with an approach based on strengthening society to be increasingly resilient in the face of disasters by, for instance, promoting self-protection and resilience behaviours.²³² In addition, the National Strategy encourages revising and updating the civil protection framework with the aim of ensuring and enhancing policy and legislative coherence with existing instruments on CCA.²³³ Thus, based on the desktop research conducted, CCA and DRR measures are promoted by civil protection instruments, but not legally required to be integrated into disaster recovery processes.

In contrast to the general civil protection instruments discussed above, the Vega Baja Regeneration Plan promotes an approach to recovery focused on building resilience to the effects of climate change to prevent future risks, while contributing to the implementation of the Sustainable Development Goals (SDGs) of the UN 2030 Agenda. The Plan is, therefore, a good example of a recovery instrument which recognises and promotes the synergies between civil protection and development actors, and between disaster recovery, DRR, CCA and sustainable development. More specifically, the Regeneration Plan aims to use the recovery from the 2019 Cold Drop as an opportunity to guide the Vega Baja territory towards a more sustainable and innovative economic development model, increasing environmental

standards, and relying on innovation and technology while promoting economic growth in sectors such as water quality, clean energy, sustainable transport and housing, green tourism, circular economy and local agriculture.²³⁴ These actions are proposed under strategic lines two and three of the Regeneration Plan, which focus on the climate emergency and economic development. A key aspect of the Plan that promotes the integration of sustainable development, CCA and DRR into the recovery process is the development of a framework with short-, medium- and long-term actions. This is essential as it enables long-term thinking in short-term actions.

In addition, there are other policy documents currently in place dedicated to DRR, CCA and development which refer to disaster recovery. As mentioned in previous sections, the Disaster Risk Management Framework of 2021 recognizes the need to reduce risks and vulnerabilities in order to accelerate the recovery process, especially in terms of infrastructure.²³⁵ Overall, the DRM Framework aims to promote CCA, risk prevention and resilience to disasters by integrating climate change into risk assessments and planning documents. Also of relevance to CCA is the National Climate Change Adaptation Plan 2021-2030 (Plan Nacional de Adaptación al Cambio Climático or PNACC), which seeks to promote coordinated and coherent action against the effects of climate change in Spain, in order to reduce disaster risks, avoid future damage and create a more resilient economy and society.²³⁶ The PNACC includes many strategic lines of action, including one on disaster risk reduction. This line of action focuses on ensuring coherent management of disaster risks, including the integration of adaptive criteria in policies and measures, as well as in post-disaster actions.²³⁷ The Plan identifies that it is vitally important to incorporate CCA into recovery actions aimed at restoring normality in the affected areas once the immediate response to the emergency has ended.²³⁸

In terms of development, there are several documents adopted at the national and regional level. At the national level, these include: the National Sustainable Development Strategy 2030, where climate change adaptation is a fundamental element, and is identified as a cross-cutting issue to be addressed in order to guarantee environmental protection and resilient communities;²³⁹ and the Action Plan for the Implementation of the 2030 Agenda.²⁴⁰ The Valencian Government is also highly committed to the implementation of the SDGs, working in close collaboration with municipalities and cities of the Valencian Community, as well as with universities and civil society organizations.²⁴¹ To this end, Law 18/2017 was adopted by the Valencian Government to serve as a framework for international cooperation and sustainable development. However, it should be noted that it has not been possible to locate a development strategy or plan of action for sustainable development at the regional level. Moreover, these national and regional instruments related to development do not explicitly mention disaster recovery as an opportunity to pursue sustainable development.

3.10 Transparency, accountability, fraud and corruption



Working in accordance with the principles of transparency and accountability is key to guaranteeing effective disaster recovery operations. These principles seek to prevent fraud, corruption and the misappropriation of recovery funds, as well as to guarantee beneficiaries' full enjoyment of the assistance provided. Although the documents reviewed do not explicitly address transparency and accountability in the management of funds and resources for recovery, there are more general provisions in the civil protection laws established to ensure transparency. Article 26 of the National Civil Protection Law establishes that the National Civil Protection System is subject to evaluations and inspections, aiming to contribute to improving the quality of the response of the authorities in the comprehensive management of risks and emergencies.²⁴² As per article 27, an annual report is to be submitted by the National Council for Civil Protection to the Senate, allowing the effectiveness of the National System to be assessed.²⁴³

Furthermore, a sanctioning regime is established under the Valencian Civil Protection Law. This regime classifies violations of the provisions according to their severity and establishes corresponding sanctions.²⁴⁴ Some violations identified include the following:

- a.** failure or refusal to respect the instructions issued by the competent authority in matters of civil protection when an emergency plan is activated;²⁴⁵
- b.** failure to mobilize resources or services attached to a civil protection plan activated at the request of the competent civil protection authority;²⁴⁶
- c.** any infraction committed during the activation of a civil protection plan that endangers the life or integrity of people and exacerbates the situation of serious collective risk and the consequences of the disaster.²⁴⁷

In addition to these civil protection provisions, there are also general criminal law provisions relating to fraud and corruption in the Spanish Criminal Code, approved by Law 10/1995. More specifically, Chapters VIII and IX of the Criminal Code outline the legal regime to prevent fraud and overall abuse of power by the authorities or public officials, including their engagement in illegal activities.²⁴⁸ These provisions apply to the actions of authorities and public officials generally, including in the disaster recovery context. To the key informants' knowledge, there were no reports of misappropriation of resources during the recovery from the 2019 Cold Drop.

4. Key findings and recommendations

Spain is a country with a moderate level of disaster risk, although some regions, such as the Valencian Community, have a higher level of risk than other regions. Overall, floods are the type of disaster that cause the most damage in Spain. The intensive occupation of flood prone areas due to historically permissive urban planning codes creates a high level of exposure to floods. To this we must add the increase in the frequency and intensity of extreme rainfall caused by climate change. In the Valencian Community, there are historical records which show that flooding is recurring and, therefore, there is a need to prepare and promote resilience building to better resist the effects of future floods.

The legal framework applicable to disaster recovery in Spain, and to DRM more generally, is governed by the civil protection frameworks at the national, regional and local levels. Civil protection is one of the areas of exclusive competence of the regional governments (Autonomous Communities) under Spain's decentralized model of governance. Accordingly, the national civil protection system is designed to be activated only when a national emergency is declared. In cases where a national emergency is not declared, the regional and local civil protection plans are activated instead, although the national government may still offer technical support to the regional and local administrations under the principles of solidarity, complementarity and subsidiarity. Thus, the civil protection framework in Spain comprises civil protection laws, civil protection plans, and special emergency plans against specific risks at the national level and, in some instances, at the regional and local levels. This is the case in the Valencian Community, which has adopted its own Civil Protection Law, a Territorial Emergency Plan and a Special Plan Against Flood Risk. Local authorities do not hold legislative competence in the area of civil protection and, therefore, at the local level only municipal plans can be prepared. Since the 2019 Cold Drop, affected municipalities have adopted 39 municipal emergency plans and/or special plans against flood risk.

Although it has not been possible to locate any recovery-specific instruments, the recovery phase, or 'return to normality phase' as it is commonly referred to in Spain, is addressed through the National Civil Protection Law and the Valencian Civil Protection Law, as well as through the national and regional plans, which include brief sections on recovery. Nonetheless, it should be noted that most recovery actions outlined in these documents focus on early recovery activities, such as the restoration of essential services, or the inspection and clean-up of damaged infrastructure. Medium- and long-term recovery appear to be achieved through the adoption of ad-hoc emergency decrees, as well as post-disaster planning documents such as the Vega Baja Regeneration Plan. Furthermore, the internationally recognized 'build back better' principle is not explicitly addressed in any of the instruments comprising the national and Valencian civil protection framework. However, the Vega Baja Regeneration Plan is consistent with the 'build back better' principle, promoting a multisectoral approach to using the recovery phase as an opportunity to restore and improve infrastructure, strengthen the resilience of communities and pursue a more sustainable development model while also adapting to the effects of climate change. Indeed, the Vega Baja Regeneration Plan is, more generally, an example of good practice in recovery planning because of its comprehensive nature and consultative development process.

The development of the Vega Baja Regeneration Plan and its contents was not legally mandated or guided by any standards or guidelines, whether national or regional. Given Spain's decentralized governance structure, it is possible that recovery planning is not always as advanced in other regions or supra-municipal areas, or in response to other disasters. The regulation of disaster recovery in Spain could, therefore, be strengthened by legally mandating the development of regional and local disaster recovery plans. There are two main types of recovery planning that need to occur: (i) pre-event recovery

planning, which outlines the general planned arrangements for recovery; and (ii) post-event recovery planning, which outlines the specific planning or legal measures that will be taken to recover from a specific disaster based on the assessed impacts and needs.

With regard to pre-event recovery planning, it is recommended that the law should not only mandate this type of planning but also set out clear standards for the content of such plans, requiring that the plans:

- define the recovery interventions that will be implemented to address the most common types of disaster affecting the relevant geographical area;
- elaborate a general methodology for conducting multisectoral post-disaster needs assessments for an effective recovery;
- identify and establish communication channels for multi-sectoral coordination, serving as a centralized platform for information sharing among actors;
- outline the specific roles and responsibilities of all different actors and stakeholders involved in disaster recovery including government agencies in various sectors and at all levels, the Spanish Red Cross, NGOs, CSOs, communities, individuals, and the private sector;
- set out a strategy for ensuring the continuity of essential services in post-disaster settings (including health and education) and supporting the livelihoods and mental health of the affected population in the short, medium and long term;
- set out a strategy for the expeditious repair and reconstruction of housing and infrastructure to be resilient to future climate and disaster risks;
- set out clear measures to address cross cutting issues in disaster recovery such as the protection of vulnerable groups and environmental protection;
- establish recovery-specific financing mechanisms to ensure the availability of sufficient funding in disaster recovery (for short-, medium- and long-term interventions);
- promote policy coherence and strengthen linkages between disaster recovery, disaster risk reduction, climate change adaptation and sustainable development; and
- set out arrangements for monitoring the implementation of recovery plans and operations, and mandating regular progress reports.

It may be appropriate for pre-event recovery planning to be integrated into general emergency management planning, rather than constituting a separate process and a separate instrument. In some cases, it may be necessary for recovery plans to be prepared at the supra-municipal level (e.g., where a group of municipalities are likely to be, or have been, affected by the same disaster). Therefore, the legal framework should be flexible enough to permit the preparation of supra-municipal recovery plans in lieu of or in addition to municipal recovery plans.

This report has identified the following key challenges relevant to the recovery from the 2019 Cold Drop.

- **Municipal emergency planning:** The absence of municipal plans at the time of the 2019 Cold Drop created coordination challenges in the recovery phase. Key informants reported that, while actions to be carried out during the emergency phase were very clearly understood by all actors, the steps to follow for recovery were not as clear. The 2019 Cold Drop therefore highlighted the need for preparation and planning for flood events to occur at the municipal level, not only at the regional and national levels, and to cover all phases of disaster risk management.

- **Urban planning and territorial organization:** The Territorial Action Plan for Flood Risk Prevention in the Valencian Community (PATRICOVA), adopted in 2003, is one of the most significant milestones in urban planning in the Valencian Community, explicitly prohibiting construction in high flood-risk areas. However, given that most existing housing and infrastructure in Vega Baja pre-dates the PATRICOVA, at the time of the 2019 Cold Drop there was a large amount of housing and infrastructure in flood-prone areas of Vega Baja, leaving people and property highly exposed.
- **Reconstruction, improvement and maintenance of infrastructure:** The damage caused by the 2019 Cold Drop was significantly aggravated by gaps in, or insufficient maintenance of, hydraulic infrastructure (e.g., retaining walls, dams, drainage, channels) and the Segura River itself. According to key informants, allocating adequate resources for the maintenance, improvement and reconstruction of public infrastructure, especially hydraulic infrastructure, is a longstanding challenge. Also, a complicating factor is that responsibility for transport and hydraulic infrastructure is split between different levels of government.

The adoption of the Vega Baja Regeneration Plan and 39 new municipal emergency plans represents significant progress towards addressing the above challenges as part of the recovery from the 2019 Cold Drop. In particular, the Regeneration Plan identifies critically important risk reduction projects including the clean-up, repair and improvement of hydraulic infrastructure. In order for the recovery from the 2019 Cold Drop to truly build resilience to future floods, the Vega Baja Regeneration Plan will need to be fully implemented. In practice, this will require a large increase in funding for the reconstruction, improvement and maintenance of infrastructure. Equally, it will require strong coordination between the national, regional and local levels of government. As the key informants suggested, training and dissemination activities for actors and the general population will be necessary to ensure the full implementation of the new municipal emergency plans. Further, the continual review and updating of these new plans — and the development of plans in municipalities that do not yet have a plan — will be essential for effective response and recovery in the future.

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