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### **A NATIONAL UNITY AND DECENTRALIZATION CHALLENGE**

## **A United Chile Rebuilds Better**

That is the phrase with which we have launched the Housing, City and Heritage Reconstruction Plan of the Ministry of Housing and Urbanism. Despite the pain that we share for hundreds of lost lives and the suffering of thousands of families, we propose the Plan as an opportunity for national unity and future development. This is not only in terms of the challenges that we have to confront together to improve the processes, regulations and standards that should govern our activities in coming years, but also in terms of the lessons derived from the difficulties that we lived through in our country after the catastrophe of this past February 27, 2010.

Although the country is returning, little by little, to normalcy as the aftershocks and the news coverage calm down, the extent of the crisis and the multiplicity of problems that have to be resolved begin to become apparent in the affected areas.

This sometimes devastating feeling is offset by glimpses and glimmers of hope that begin to shine in the spontaneous articulation of the dozens of communities, towns and cities that start to stand on their own through the leadership of their mayors and residents, Intendants and Governors, and the actions and generosity of businesses and their employees, foundations, universities and civic organizations, to whom we are grateful for their sense of solidarity and gratuitousness. These efforts, many of them rooted in the very days of the emergency itself, have little by little led to longer term commitments, where individual positions and interests are being postponed in favor of the common vision and interest: To rebuild, as soon as possible and better.

The challenge before us represents the greatest planning and implementation effort in our country's history, and will require great mettle and judgment, as well as generosity and understanding by all citizens. **It is impossible to expect that the State will reconstruct everything or that it will, on a centralized basis, dictate from Santiago how to do so. It will have to be the communities themselves that, with substantial support and protection from the State, will determine the paths toward their own reconstruction. We will be faced every day with great dilemmas and difficult decisions, such as how to build quickly enough so as to leave the emergency behind, and yet slowly enough to take care with relevant aspects such as identity, participation, care for the environment and a sense of opportunity afforded by the reconstruction if we understand it strategically and with a view towards the long term.**

Another dilemma will be the required decentralization during the process, where the Regions and, particularly, the respective Municipalities will be pressured to the limit of their capabilities. Their shortages and vulnerabilities will be exposed, but also their self-determination, fortitude, and the knowledge of their territory and culture, which is fundamental to our country.

In this context, and given the complexity and diversity of problems challenging us, the MINVU (*Ministry of Housing and Urbanism*) has, in these six months, elaborated the “**A United Chile Rebuilds Better**” **Reconstruction Plan**, which integrates three lines of action:

- **A Housing Reconstruction Program**
- **A Settlement, Social Condominium and Camp Care Program**
- **A Territorial, Urban and Heritage Reconstruction Program**

These three programs or lines of action interact and articulate an extensive array of tools and instruments that have been adjusted strategically to the different conditions and contexts, adapting existing and proven instruments, such as the subsidy programs, to the specific demands of the Reconstruction. On the other hand, this transition period between the emergency period and the definitive reconstruction has allowed us to detect the barriers obstructing the implementation of the plan, such as the clearing of ownership titles, construction on beneficiary-owned sites and other issues that have been resolved as they arose. Today we have a robust, comprehensive and viable Reconstruction Plan because of this strategic and realistic vision as these three lines of action or programs converge and finally complement each other in the territory itself since, as we well know, Reconstruction is more than building houses. It is also a reconstruction of the communities, of their urban infrastructure and of their identities.

The challenge presented by the Reconstruction has resulted in a number of public policy decisions that go beyond the Reconstruction itself and reveal the stamp and spirit that President Piñera’s Government wishes to imbue upon our Ministry. This stamp is based on the following premises:

#### 1. **Valuation of Existing Communities, their Cultural and Neighborhood Heritage**

This refers to the importance of protecting preexisting social networks and communities, strengthening their economy and focusing the Government’s efforts on the most vulnerable and needy families. Of the over 200,000 reconstruction or repair subsidies considered in this plan, over 75,000 correspond to reconstruction on beneficiary-owned sites. That is, the reconstruction will take place in the same locality and on the same land on which the disaster-hit families lived. In this regard, it is especially relevant to have the widest array of solutions and instruments in order to respond to the specific needs of each community.

#### 2. **Rebuild Quickly and Better**

This appeals to the need to move as soon as possible from the emergency to the final and definitive reconstruction and create instances for participation where the affected families can choose and agree on those solutions that most fit their needs. This has required an effort to shorten administrative and housing delivery time frames in order to increase the time available for consultation and participation so that the families become the actual protagonists of their own reconstruction. Rebuilding better means enacting new technical and urban standards for housing and cities in Chile that are capable of anticipating and accommodating the growth that our country will experience during this decade of the Bicentennial.

### **3. The Urgency of Identity**

This refers to the acknowledgment that the reconstruction will take place from within the more than 1,000 cities, towns and villages devastated on February 27<sup>th</sup> that must stand once again on the basis of their identities and their tangible and intangible heritage. Under this plan, we commit to propitiating the recovery of that heritage by establishing incentives and guidelines by which the communities themselves can decide how to reconstruct their urban image. We will not impose or prohibit any constructive expression, no matter how vernacular, provided it guarantees the safety of the lives of its inhabitants.

### **4. Respect for Territorial Attachment and Natural Hazards**

This plan acknowledges the strong attachment that communities have to their territory, particularly the coastal communities that live from, and respect, the sea. We prioritize the protection of people's lives, public and private assets, and we are concentrating our efforts on generating the technical information that will allow these communities to coexist safely with natural hazards; and on having the appropriate information and education to responsibly guide their decision-making. Building risks will be mitigated where applicable and early warning, evacuation and monitoring protocols will be elaborated that guarantee that we will never again have to regret the loss of lives.

### **5. Validation of Strategic and Sustainable Urban Planning**

The catastrophe has challenged us to innovate in the use of tools such as strategic/sustainable Master Plans, and in the establishment of new instances of constituted authority that guarantee the development of more sustainable, safer and more equitable cities. How? By using resources efficiently and creating public spaces that minimize risk and guarantee universal access to opportunities. The master plans will truly be “navigation charts” that will allow communities, mayors, and regional authorities to participate, starting today, in the decision-making that will guide the future of their cities and towns.

## 6. **Responsible Innovation**

The diversity of problems posed by February 27<sup>th</sup> convokes innovation and the exploration of new response capabilities that we must approach with a great sense of responsibility. What is at stake is the future of thousands of families to whom we owe ourselves completely. This is the reason why we have adapted and perfected known and proven instruments, technologies and tools, instead of experimenting or inventing where there is neither room nor time for error. Such has been the case with the adaptation of existing Housing Subsidy Programs to construction on beneficiary-owned sites (CSR), the goal being to be able to respond to the particularities of the Reconstruction; or the invitation to construction companies to offer new technologies and designs that provide answers to the complexity of the Reconstruction, and to the new intersectorial coordination instances that guarantee efficiency in the Reconstruction's management and implementation.

## 7. **Legality and Formality of the Solutions**

In order to ensure the proper investment of the resources of all Chileans, all subsidized constructions must have Building Permits and Municipal Construction Acceptance Certificates pursuant to the General Urbanism and Construction Law (*LGUC*). We encourage contractors to employ manpower from the families forming part of the projects (assisted self-construction), and we will eradicate informality by supporting and facilitating the normalization of property titles.

The facts are clear and the 8.8 earthquake has shown us that we in Chile are capable of facing simultaneous difficulties that we never before imagined, even in our worst nightmares. Notwithstanding certain specific and unacceptable problems that cost the lives of people and the equity of many families, the earthquake brought to light the quality of the specialists, professionals, workers, public officials, volunteers and all who participate in the development of our country.

This public and private collaboration, where local, municipal, community, foundation, company and civil society's capabilities as a whole converge, is evidence of the great decentralization challenge and the trust in local capabilities to which our Government has committed. This Plan acknowledges these capabilities and articulates subsidy and urban planning instruments and tools that will be available to mayors, communities, civic organizations, institutions, construction companies and the citizenry in general so that they may make the most of the reconstruction opportunities considered in this Plan.

The reconstruction process will require a commitment by all Chileans to participate and innovate that is without precedent. We are therefore proud of what we have been able to overcome in these difficult 6 months, and that pride challenges us to be even more innovative and more persevering in the lengthy reconstruction process ahead and in the continuous process of development and improvement that our duties require. The fact that over 70% of the housing that we will rebuild is located on beneficiary-owned sites, which are dispersed throughout various neighborhoods or distant localities, will require construction technologies to bridge the logistical complexities and costs that this implies.

Weather in the affected areas will demand a greater attention to thermal, energy and comfort standards in the new housing at a time when we must adapt to practices and cultures that have been accustomed to large spaces in country houses now in ruins that will be very difficult to rebuild. The reconversion of the operational infrastructure of large urban centers, such as Talcahuano, Constitucion or Talca, poses a challenge in relation to how to approach the Reconstruction from a holistic perspective, where aspects of economic and social development converge with the projects on urban landscape and storm water, transportation, production and risk mitigation infrastructure.

As a Ministry, we are aware that this comprehensive viewpoint in the handling of complex urban projects will require due coordination and management capabilities on the part of authorities. In this regard, President Sebastian Piñera's Government has established new authorities that reinforce intersectorial coordination with the support of the Committee of Ministers on Infrastructure, City and Territory (CICYT), which will allow the integration of complex projects and their continued execution over time by means of reconstruction agreements. Management will be regional to ensure progress from plan to project, and from project to actual works. This project management and coordination platform for the regeneration of urban centers will serve as the basis for the large reconstruction projects for urban centers and infrastructure ruined by the earthquake and tsunami, and will undoubtedly clear the way so that our Country can have an urban development policy in line with its potential and its current and future reality.

These challenges are not just to build better, but in many cases to reinvent our cities and towns. This will require the best from all Chileans and a special sense of unity that will mark this Bicentennial in our history by reversing the catastrophe and transforming it into an opportunity.

(Signature)

Magdalena Matte L.

Minister of Housing and Urbanism

## **A United Chile Rebuilds Better**

President Sebastian Piñera and his new administration took office just 12 days after the earthquake and tsunami that took place on February 27, 2010, at a time marked by the painful loss of life and the damage that this catastrophe caused in thousands of homes in the devastated area. As Minister Magdalena Matte and her team at the Ministry of Housing and Urbanism (MINVU) began their work, the primary objective was to improve housing and urban policies in conjunction with the design and definition of a Housing and City Reconstruction Plan.

The catastrophe of February 27<sup>th</sup> may be considered, in terms of its scope, the largest known urban earthquake as it severely affected the macro-metropolitan area of Greater Concepción, 5 cities with over 100,000 inhabitants, 45 cities with over 5,000 inhabitants, and over 900 rural and coastal towns and communities. The area running from the Region of Valparaiso to Araucania, including the Metropolitan Region, was declared a Disaster Area. The MINVU Reconstruction Plan arose as one way of resolving the complexities of this challenge: “A United Chile Rebuilds Better.”

This plan involves over 2.5 billion dollars in Reconstruction Subsidies, in addition to existing programs. We refer to more than 200,000 exceptional subsidies for repair and reconstruction on beneficiary-owned site subsidies, subsidies for new housing on new sites, or special subsidies for rural housing and for heritage, focused on the neediest families and the vulnerable middle class, which are mostly those that are not able to stand on their own after the catastrophe. The commitment is to pass from the emergency to reconstruction as soon as possible so that thousands of Chileans that are living through this harsh winter under emergency conditions can have access to respectable and safe housing. At the same time, an urban and territorial action plan has been deployed to update the risks considered in Zoning Plans, to restore the urban road network and to guide a comprehensive reconstruction of urban centers and localities severely damaged by the earthquake and tsunami in order to potentiate their development and to recover their identity.

The commitment of President Piñera’s Government to the affected families is to provide definitive housing solutions by means of a participative and holistic process that takes care of the most urgent needs resulting from the emergency and that also contains a medium and long-term urban perspective according to which the affected areas can be rebuilt and the quality of life in them improved at the same time.

## **Constituted Authorities**

In view of the magnitude and scale of the catastrophe on February 27<sup>th</sup>, President Piñera instructed his entire cabinet to adopt a special commitment to urgency and efficiency, which is

the reason why only a few days after taking office, he appointed an Interministerial Emergency Committee, headed by Cristobal Lira, and an Interministerial Reconstruction Committee, led by Marcelo Cox. The first of those committees focused primarily on the emergency stages and rehabilitation, in conjunction with the Ministries of the Interior and of Planning. The emphasis was on the deployment of aid to disaster victims, channeling contributions from private entities, foundations and NGOs in the early days, and on the coordination of very successful activities with the help of private companies and the Ministry of Education, such as the return of all children in the country to school within 2 months of the disaster. The Reconstruction Committee, in turn, focused on medium- and long-term coordination and on activities such as the channeling of important private contributions and donations to the reconstruction fund. These committees helped articulate the coordination in the early months of the new Administration, and by the end of five months after the catastrophe, these tasks were taken over by the corresponding Ministries.

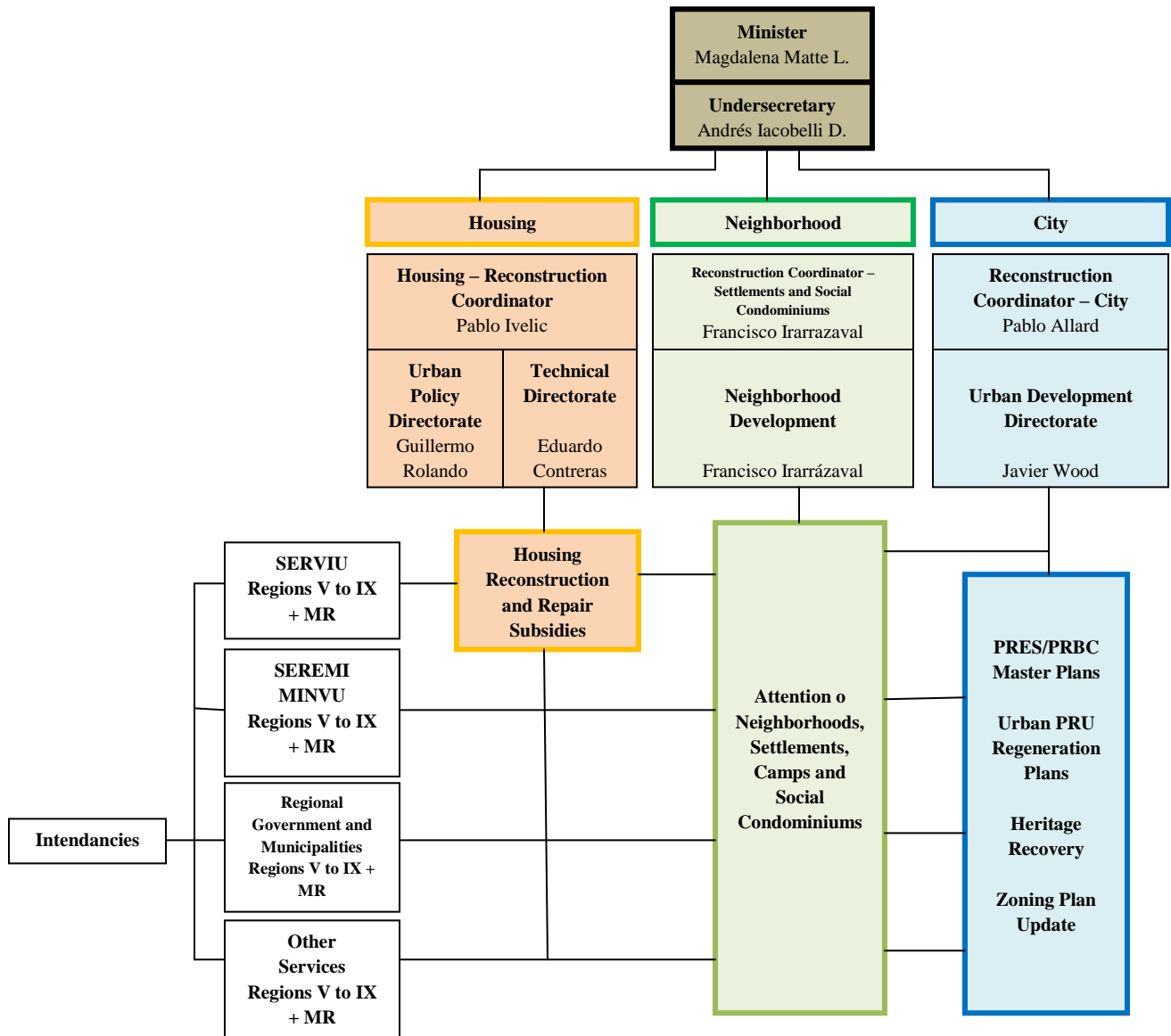
The primarily sectorial activities forming part of the Reconstruction have been implemented by the corresponding Ministries so as not to duplicate functions and to avoid bureaucratizing the process. Such is the case of the Ministries of: Public Works, Health, and Education, which have set up cabinet Reconstruction Committees that are already implementing their corresponding Reconstruction Plans. These plans are coordinated and controlled by the normal management control systems through the Office of the Presidential Chief of Staff, as is the case with the other Ministerial responsibilities.

The Reconstruction Plan of the Ministry of Housing and Urbanism was developed differently. Foreseeing the magnitude of the damage, the National Reconstruction Program was established within MINVU and is coordinated by a special task force headed by the Minister and the Undersecretary. It covers three areas which relate to MINVU's three levels of work: Housing, Neighborhoods and City.

- **House:** The Reconstruction and Repair Subsidy task force is in charge of ensuring access by families left homeless by the catastrophe to definitive housing.
- **Neighborhood:** The objective of the Settlement and Social Condominium task force is to provide a solution to the urban housing deficit that will be sustainable over time.
- **City and Territory:** This task force must update the Zoning Plans to include risks, heritage recovery and the development of the Master Plans that guide the Reconstruction process and contribute to potentiating the identity of the most devastated localities and urban centers and to creating a recognizable urban image.

This Reconstruction Coordination team works in direct collaboration with the Housing Policy Division, the Technical Studies Division and the Urban Development Division in MINVU, which have the power and authority to design, develop and implement the different reconstruction measures. This coordination resulted in approval and deployment of MINVU’s Housing and City Reconstruction Plan within 2 weeks after taking office.

**MINVU Reconstruction Plan Organization Chart**

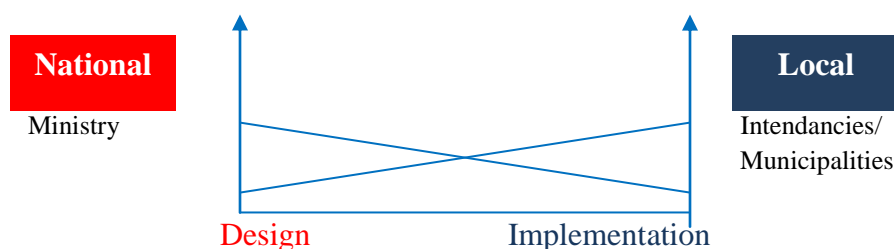


## Regional and Central Functions

The extent of the damage provoked by the February 27 earthquake is so extensive that it is considered one of the largest urban earthquakes known to humanity. It severely struck over 50 cities and 900 towns, villages and communities. To expect the Government to handle the reconstruction in a centralized manner would be counterproductive in this context and would jeopardize its viability. The actual challenge that the Reconstruction poses at the Government level is to trust local, municipal and regional capabilities since the devastated communities are who best know their needs and the identity that must be reconstructed.

This decentralization effort proposes not being a homogeneous or generic reconstruction plan, but instead that each community take ownership and be co-responsible for its own plan as the Reconstruction progresses.

## Diagram of National and Local Functions



The guidelines for action are defined at the National level, and the Regional teams focus on implementation/operation

A regional coordinating structure has been articulated in this scenario, which in these first few months has been adapted to the specific reconstruction needs of each Region.

In the case of the Region of Biobio, where the greatest damage was concentrated in the coastal communities, the Intendant, Jacqueline van Rysselberghe, announced the creation of the CRBC (VIII Region Coastal Area Reconstruction Commission) only a few weeks after being appointed to office. The architect and urban specialist Sergio Baeriswyl was named Executive Secretary of the Commission and he formed a team of first-tier professionals from among the specialists in the Intendancy and in the MINVU SEREMI (*'Regional Office of the Ministry'*). They are executing the PRBC 18, or 18 Coastal Area Reconstruction Plans, for 18 localities in the Region of Biobio.

In the case of the Region of Maule, the Intendant, Rodrigo Galilea, is coordinating the management of the Reconstruction Plan, in direct communication with Clarisa Ayala, the Regional Ministerial Secretary of Housing and Urbanism.

Lastly, in the Region of O'Higgins, where the greatest damage was concentrated in localities and towns that had placed their future development on special-interest tourism that capitalized on their architectural and urban heritage, Intendant Rodrigo Perez Mackenna has installed, in coordination with Ragnar Branth, the Regional Ministerial Secretary of Housing and Urbanism, the VI Region Heritage Reconstruction Office. This Office, led by the architect and specialist in heritage, Nieves Cosmelli, has made progress in creating instances for the survey, protection, training, international cooperation with, and development of Special Heritage Recovery Plans for locations such as Chepica, Lolol, La Estrella and Peralillo, among others.

So, regional coordination has been adapting to the needs of each Region, and as the constituted authorities progress in formalizing these initiatives, it will be possible to consolidate this commitment to decentralization and trust in regional capabilities.

**Concretely, in the case of Housing and Urbanism, the Plan is structured on the basis of:**

- A centralized structure, but decentralized and flexible implementation.
- A central structure, but each Regional Unit has its own dedicated Reconstruction team.

## **Diversity of Initiatives by Locality**

(September 2010)

An area measuring in length more than 400 kilometers was shaken by the earthquake and covered by the tsunami. 239 boroughs were devastated. This cataclysm was initially compared to one or more nuclear bombs, but as more information becomes available on the vastness of the damage, the more it resembles a cluster bomb that spread through the entire Central Chilean valley and coast.

The challenge we face is the greatest planning and implementation effort undertaken by our country. It will require a necessary decentralization of the process, with Regions, and particularly Municipalities, exacted to the limits of their capabilities. This will expose their weaknesses and vulnerabilities, but also their self-determination, strengths and knowledge of their territory and culture, which is the foundation of our country.

A number of data sheets and regional maps are presented below, which show all the initiatives where programs and projects considered in this Plan have been implemented, by borough, in the disaster areas. They are further developed in Sections A, B and C of this Report.

Acronyms for the Initiative Data Sheets by Borough:

PRU: Urban Regeneration Master Plans

PRES: Strategic Sustainable Reconstruction Master Plans

DR: Direct Repairs

Settlements: Emergency Housing Developments

## A. HOUSING RECONSTRUCTION PROGRAM

### A.1 Diagnosis: Definition of the Types of Problems and Solutions

The extent of the area affected by the catastrophe requires the preparation of a Housing Reconstruction Plan with various solutions and flexible resource allocation to allow adaptation to different problem situations.

In order to provide a definitive housing solution for families affected by the earthquake, the Plan began to be structured on the basis of a grouping of problems into seven types:

- 1) Families living in housing provided by SERVIU (*'Housing and Urban Development Service'*), or its predecessors, that was destroyed or seriously damaged.
- 2) Families at an extremely high social risk that were left homeless by the earthquake or tsunami and lived in housing belonging to relatives that was destroyed, lived in destroyed homes without ownership title, or lived in high risk areas.
- 3) Families owning their first homes in coastal cities or towns that were devastated by the tsunami.
- 4) Families owning housing, primarily of adobe, in rural or urban sectors that was destroyed or seriously damaged.
- 5) Families owning houses in traditional areas or of heritage interest that were severely damaged.
- 6) Families registered as homeless that do not benefit from earthquake insurance whose housing was destroyed or seriously damaged, but that qualify for loans.
- 7) Low income families that suffered damage to their homes that can be repaired.

The decision was made to use demand-side subsidies based on existing housing programs to focus and allocate resources, but to make the processes more flexible and ease up regulatory requirements and timing.<sup>1</sup>

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<sup>1</sup> MINVU Executive Decree 332 allows for special housing convocations to attend to people that qualify as disaster victims in catastrophe areas.

Solutions and subsidy instruments were defined on this basis for each problem according to the framework referred to as “7 Types of Solutions for 7 Types of Problems”, as described in the Table below:

Table on 7 Solutions for 7 Problems:

Target Group	Solution	Instrument
Severely damaged or destroyed SERVIU housing.	Construction of new housing on the same site or a new site, depending on the area's population density.	- FSV I CSR - FSV I CNT
Homeless families at great social risk	Construction of new housing on new sites.	- FSV I CNT
Coastal cities and towns affected by the tsunami.	Zoning plan update + urban project for the city + delivery of a home on the property site.	- FSV I CSR + URB
Housing, primarily adobe, severely damaged or destroyed	Construction of new housing on the affected property	- FSV I CSR
Housing in areas of heritage interest.	Reconstruction or restoration of the house according to its original architecture.	- FSV + Urban renovation
Families with debt capacity whose homes have been affected by the earthquake	Delivery of a subsidy to give families access to bank loans.	- DS40
Family housing with minor and repairable damage.	Technical assistance + self-construction repair subsidy.	- PPPF

FSV1 CSR: Housing Solidarity Fund for 1 Construction on Resident's Property

FSV1 CNT: Housing Solidarity Fund for 1 Construction on a New Site

FSV1 CSR + URB: Housing Solidarity Fund for 1 Construction on Resident's Property + Urbanism

DS40: Executive Decree 40

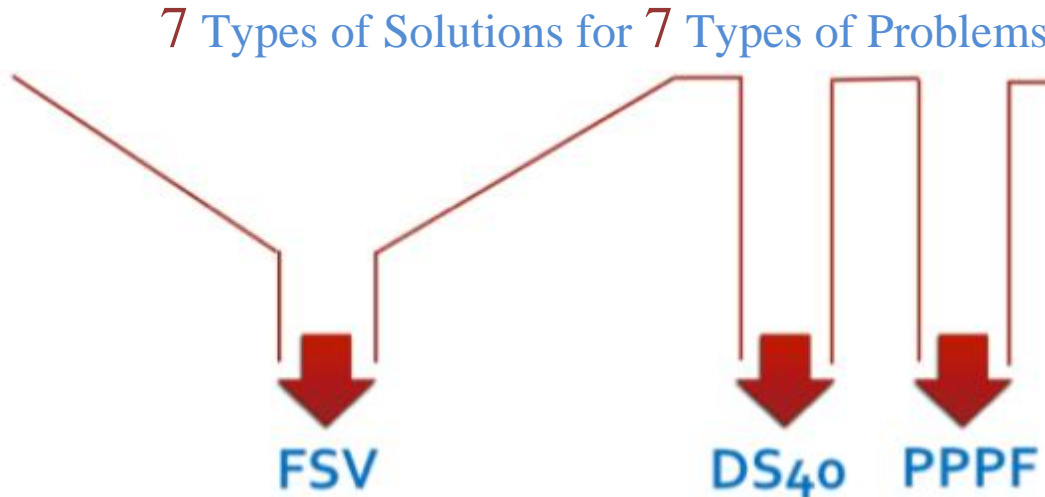
PPPF: Family Equity Protection Program

## A.2 Pillars of the Housing Reconstruction Plan

The Reconstruction Plan was implemented in observance of the regulations governing the Housing Solidarity Fund Programs, the Family Equity Protection Program and Executive Decree 40. Some of their requirements, procedures and operational aspects were changed by means of Exempt Resolutions, as allowed by the Ministry of Housing and Urbanism's Executive Decree 332.

We were thus able to handle the diversity of problems presented by the reconstruction or repair of housing. We innovated responsibly and adjusted existing programs instead of experimenting with new unproven programs. In that way, we could ensure reinstatement of the equity of victims in the most efficient and safest manner possible.

Diagram on 7 Solutions for 7 Types of Problems



**The Basic Principles underlying the Housing Reconstruction Plan are as follows:**

**- Legality and Formality of the Solutions:**

Construction Permits and Municipal Construction Acceptance Certificates must be issued for all subsidized constructions, as stipulated by the LGUC (*'Urbanism and Construction Law'*). There will be no self-construction subsidies, although contractors are encouraged to employ manpower from families participating in the project (assisted self-construction). Housing can only be built on sites provided by the beneficiaries if the title deeds to the property have been regularized.

**- Construction on Own Site:**

The reconstruction of housing on the same sites where the housing damaged or destroyed by earthquake was located is encouraged. The intent is to strengthen the use of land inside urban limits for housing, to maintain neighborhood social networks, to consolidate existing settlements and to avoid migration from rural areas.

**- Competition for Demand:**

Allocation mechanisms will be developed to generate competition to the benefit of the disaster victims.

**- Territorial Scale:**

It is understood that many interventions (social condominiums, fishing villages, heritage areas, etc.) require a comprehensive approach and broader reconstruction plans, which are to be handled and coordinated by the instruments described in items B and C herein (Neighborhood and City).

**- Citizen Participation and the Possibility to Choose**

Mechanisms will be propitiated to allow beneficiaries to choose the housing that best meets their characteristics and needs, in the understanding that housing is a family's greatest investment and that a housing subsidy is the largest government subsidy that they will receive in their lifetimes.

**- Innovation**

Innovation will be encouraged in industry. The use of new constructive technologies, process industrialization and operating efficiencies in construction will be promoted so that the logistical costs of building housing in geographically dispersed sites does not negatively impact the quality of the housing solutions.

**- Dynamic Structure:**

In view of the information available at the time that the Housing Reconstruction Plan was designed, the different types of subsidies will be assessed and the resources redistributed in terms of demand behavior.

**- Targeting of Resources**

Free subsidies are open to abuse by unscrupulous individuals who may not be disaster victims but will attempt to gain access to the reconstruction benefits. The necessary mechanisms to avoid inappropriate access to reconstruction subsidies will be implanted, including: each family must hold a Damage Certificate issued by the Municipal Works Office (DOM) and each family must be registered in the Register of Disaster Victims. Families that are tenants must certify this by means of a lease or utility bills in their name bearing the stricken address. Live-in families must certify this condition by means of the Social Protection Data Sheet (FPS) prior to February 27<sup>th</sup>, and they will not be considered live-in families if the number of inhabitants in the damaged home is under 7 (including the owner's family). FSV1 applicants must sign an affidavit certifying their condition of disaster victim, describing the composition of their family group, assuming the obligation to use the housing, and forbidding its lease during a period of 5 years. Any falsity of any of the above in this agreement will be grounds for the Ministry to withdraw the subsidy and take over the property.

### A.3 Preliminary Estimate of Demand

One of the major problems in the design of the Reconstruction Plan and its cost structure was the reliability of the information available at the time. Initial calculations put the number of damaged housing at 1.5 million, 0.5 million of which were completely uninhabitable.<sup>2</sup> On March 10<sup>th</sup>, ONEMI (*National Emergency Office – Ministry of the Interior*) submitted a list indicating 81,149 destroyed houses, 100,247 homes with major damage and 192,388 homes with minor damage, or a total of 373,784 homes affected by the catastrophe.<sup>3</sup>

ONEMI's numbers were based on information provided by mayors and military emergency authorities, which in some cases was illogical, which lessened its credibility. The Ministry of Planning implemented the Emergency Special Family Survey (EFU), an instrument to assess damage and to identify and prioritize the needs of families that were potential victims of the February 27<sup>th</sup> catastrophe.<sup>4</sup> This effort would be the only earthquake cadastral survey, but the information gathered would not be available in computer format until mid-May. The Ministry of Housing and Urbanism therefore began a study of data to estimate the number of damaged homes and damage levels in terms of the groups defined above. The demand for housing was quantified according to Table 1, based on the cadastres prepared by the Regional Services, the ONEMI 2002 Census data by borough and extrapolations regarding growth, data from the CASEN 2006 socioeconomic characterization survey, and map information showing housing densities in the coastal areas devastated by the tidal wave and the areas touched by the tsunami (an example of this work is shown in Figure 1).

Table 1: Quantification of Housing Damage

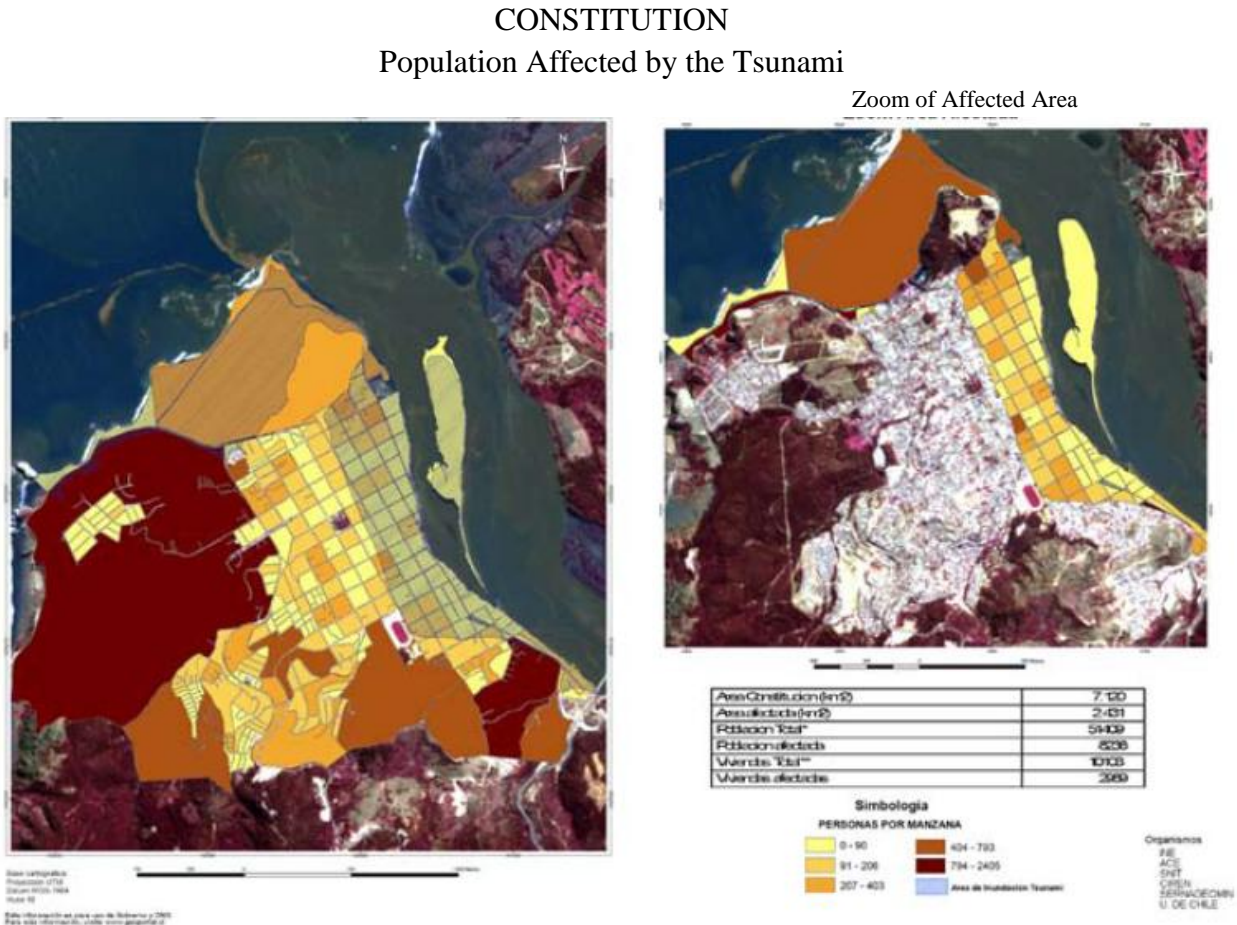
	Destroyed Housing	Housing with Major Damage	Housing with Minor Damage	TOTAL Housing
Coast	7,931	8,607	15,384	31,922
Urban Adobe	26,038	28,153	14,869	69,060
Rural Adobe	24,538	19,738	22,052	66,373
SERVIU Social Housing	5,489	15,015	50,955	71,459
Private Housing	17,449	37,356	76,433	131,237
<b>TOTAL</b>	<b>81,444</b>	<b>108,914</b>	<b>179,693</b>	<b>370,051</b>

<sup>2</sup> Source: *El Mercurio*, Sunday, February 28, 2010.

<sup>3</sup> Source: “*Terremoto 27 de Febrero de 2010*” (*Earthquake on February 27, 2010*), a report provided by the outgoing administration to President Sebastian Piñera.

<sup>4</sup> Source: “*Principales resultados de la Encuesta Familiar Única de Emergencia*” (*Main Results of the Emergency Special Family Survey*), MIDEPLAN, May 2010.

Figure 1: Population Affected by the Tsunami in the city of Constitucion.



The Social Reconstruction Plan should ensure a focus on vulnerability, in the understanding that the socioeconomic situation of affected families varied negatively due to the damage to their homes and, in many cases, due to the effects on the sources of employment and social networks. Tables 2 and 3 provide the eligible percentages for each group, as obtained from the information in the CASEN 2006 survey.

The sum of Tables 2 and 3 is a total of 195,950 subsidies, which is the first estimate for the total number of homes qualifying for a subsidy. This, however, does not necessarily correspond to the real demand, which will only be determined by actual subsidy applications, a process that began with the Register of Disaster Victims.

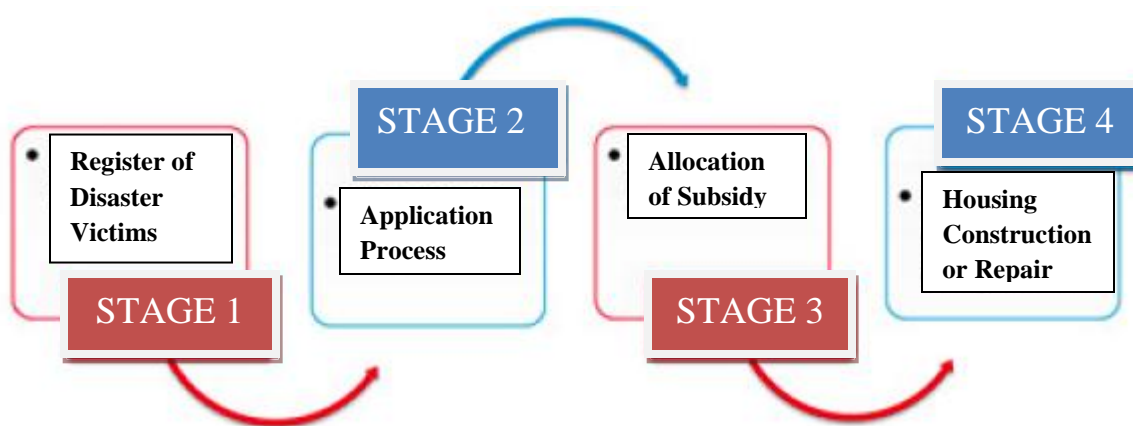
Table 2: Eligibility Criteria

	Destroyed or Severely Damaged	Eligible Percentage	Housing Program
Coast	16,538	70%	11,576
Urban Adobe	54,191	73%	39,559
Rural Adobe	44,321	73%	32,354
SERVIU Social Housing	20,504	100%	20,504
Private Housing	54,805	27%	15,000
<b>SUBTOTAL</b>	<b>190,358</b>	<b>63%</b>	<b>118,994</b>
Vulnerable Live-in Families	27,111	55%	15,000
<b>TOTAL</b>	<b>217,469</b>	<b>62%</b>	<b>133,994</b>

Table 3: Eligibility Criteria

Housing with Major Damage	Eligible Percentage	Repair Program
15,384	60%	9,230
14,869	60%	8,921
22,052	60%	13,231
50,955	60%	30,573
76,433	0%	0
<b>179,693</b>	<b>34%</b>	<b>61,956</b>

Diagram of the Subsidy Program Stages



#### A.4 Preliminary Cost Estimate

Once the problems and preliminary quantification of demand were defined and the criteria for allocations were established, the Housing Reconstruction Plan cost structure was defined as indicated in Table 4.

The average subsidy under the Housing Reconstruction Plan was therefore set at UF 315. Although the characteristics of the subsidies in a normal year are not comparable with the Reconstruction Plan, it can be said, for reference purposes, that the average amount of the subsidies granted during 2009 by the previous Government was UF 280, with an average of UF 416 for housing construction subsidies and of UF 74 for repair subsidies.

Table 4: Housing Reconstruction Cost Estimate.

Solution	#Subsidies	Unit Amount	Total Amount
1/7	20,504	UF 570	UF 11,687,280
2/7	15,000	UF 570	UF 8,550,000
3/7	11,576	UF 570	UF 6,598,463
4/7	68,958	UF 390	UF 26,893,721
5/7	2,955	UF 570	UF 1,684,552
6/7	15,000	UF 175	UF 2,625,000
7/7	61,956	UF 60	UF 3,717,360
<b>TOTAL</b>	<b>195,950</b>	<b>UF 315</b>	<b>UF 61,756,376</b>

The demand and cost estimates at this level facilitated the preparation of a financial plan to ensure the resources. The plan's flexible structure during this stage, however, assumed that only actual subsidy applications and real costs would provide the definitive costs. The total was used as the reference number.

## **A.5 New Tools for the Housing Reconstruction Plan**

Although it is reasonable to base the reconstruction program on current subsidies, given the knowledge of current participants, it is also important to modify some instruments to appropriately confront the different situation presented by the earthquake and tsunami.

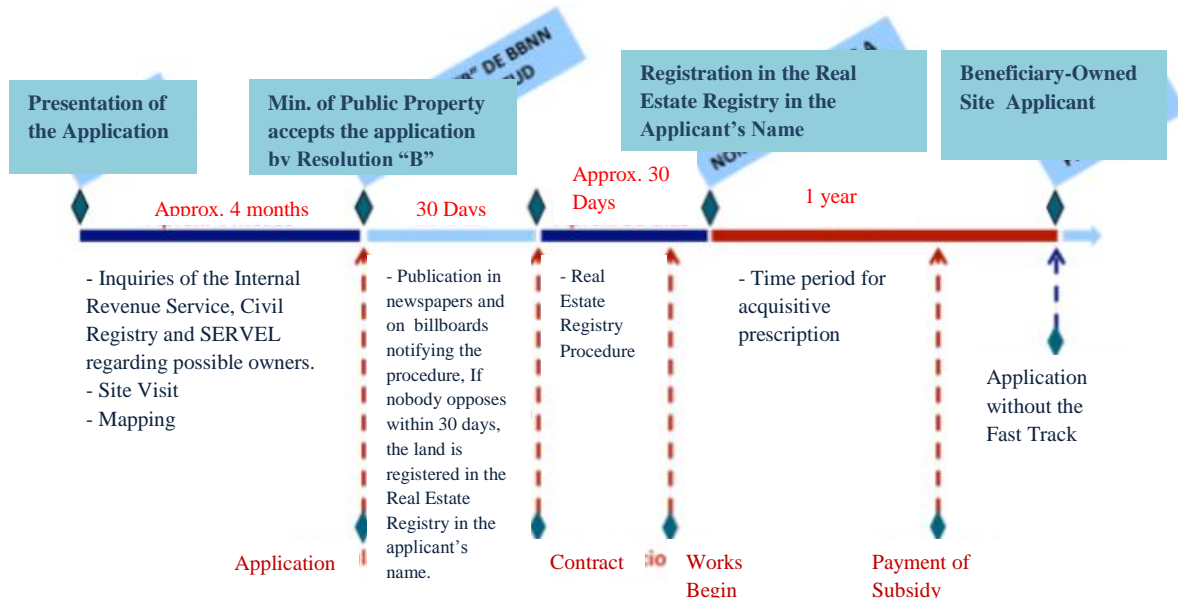
### **A.5.1 Fast Track for the Regularization of Property Title Deeds**

An important percentage of property titles in rural areas and in the historic city centers have not been regularized, which precludes applying for a subsidy (the State does not provide resources to build housing on land where the property owner is not the beneficiary in view of the certain possibility that the property will be claimed by a third party once construction is finished). The regularization of material possession of real estate is a procedure that normally lasts from 18 months to two years. An agreement was reached with the Ministry of Public Property to reduce processing times in order to address this issue and reduce the time in which subsidies are

allocated to families in this situation.<sup>5</sup> At the same time, the procedure inviting applications for construction on beneficiary-owned sites was modified to allow disaster victims to apply during the title regularization process.<sup>6</sup> This reduced the normal procedure in such cases by approximately 14 months.

Timeline for the Fast-Track Regularization of Title Deeds

### FAST TRACK TITLE DEED REGULARIZATION



#### A.5.2 Construction of Pre-Designed Project on Own Site

The subsidy mechanisms in place are for the regular construction of definitive new housing or for construction on new sites, a system with which the housing deficit in the country has been addressed in recent years. The challenge posed by the earthquake, however, implies the construction of a large number of homes in geographically dispersed locations due to the families' need to rebuild on their own land.

In addition to the above, current housing instruments are geared toward the classic situation of “from less to more” for homeless families, whereas the families affected by the earthquake already had equity and are today temporarily living with relatives or in temporary wooden emergency shelters, most of which are located on their own land. They are anxious to recover a condition similar to their pre-earthquake situation as soon as possible. This requires changes in

<sup>5</sup> Bill of Law setting rules of exception to Decree Law 2965.

<sup>6</sup> MINVU Exempt Resolution 3208, published May 27, 2010.

the housing delivery process to, on the one hand, encourage construction innovation, and, on the other, expedite timing and operating procedures.

The invitation to apply for a subsidy for Construction of a Pre-Designed Project on a Beneficiary-Owned Site was made in this context, with a dual aim:

- it invited disaster victims owning land to apply directly to SERVIU and choose one of the pre-certified homes in the pre-designed project portfolio.
- it invited builders to bid on the construction of housing solutions on disperse sites for a fixed amount of money (possible because of the volume of housing units to be built under this arrangement, estimated to total at least 60,000 units).

MINVU is thereby matching offers with demand under a remarkably simple procedure. This eliminates the need to have each project authorized by SERVIU (the housing solutions are pre-certified) and families apply directly to SERVIU, without requiring the participation of external service providers.

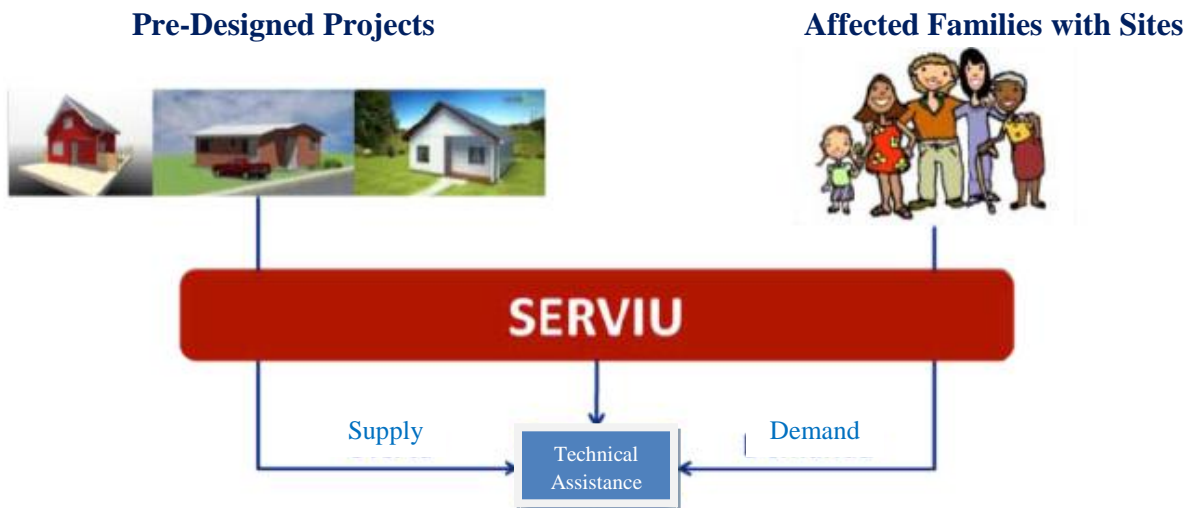


Figure 2: Relationship between Supply and Demand.

This system also provides the following benefits.

- The model benefits applicant families by creating competition since the implementation of a “showcase” of solutions leads solution bidders to seek differentiating factors, such as the offer of additional floor space, better finishes, more rooms and/or extra equipment.
- The families’ real option of being able to “choose” their home empowers them as owners and makes them relevant stakeholders in the reconstruction process.

### **Cases of Arauco and Coelemu**

Arauco and Coelemu are among the boroughs that suffered greatest damage in the provinces of Arauco and Ñuble, respectively. Each developed a success case based on the “A United Chile Rebuilds Better” Reconstruction Plan under the arrangement for Construction of a Pre-Designed Project on Beneficiary-Owned Site.

The most urgent housing reconstruction cases were handled by means of SERVIU’s territorial deployment, with collaboration from the respective Municipalities. The outcome of this task was a group of 83 families in Arauco and 37 in Coelemu, all homeowners whose homes were destroyed by the earthquake that struck the country on February 27<sup>th</sup>.

A public call was made for bidding on the construction of housing on the sites belonging to these families. Since the amount of money for the overall construction of the homes was fixed, the construction companies competed on the basis of the best housing solution, and sought to differentiate themselves from the others by increasing the home’s internal floor space, improving finishes and including additional furnishings.

The bidding process allowed the Arauco families to choose from among 4 housing alternatives and the Coelemu families to choose from among 7 offers.

The housing solutions offered by the construction companies varied in terms of materials (masonry, wood, panels), floor area (from 43 m<sup>2</sup> to 57 m<sup>2</sup>), finishes (ceramics, paint, moldings), construction methodology (industrialized systems and traditional construction), deadlines for completion and equipment (double-glass windows, kitchen cabinets, stove).

The families in each borough met to discuss the alternatives offered and, after a presentation of the different housing types, they held a democratic election by secret ballot, which was validated by a notary public.

The families in the borough of Arauco opted for 57.78 m<sup>2</sup> homes with concrete footers and foundations, structural wooden partition walls, external Smartpanel siding and ceramic tile floors.

In the borough of Coelemu, the families chose a construction company that offered two options, a 45 m<sup>2</sup> masonry house and a wooden house with 50 m<sup>2</sup> of floor space inside.

Competition is also encouraged by promoting innovation in materials and construction techniques. Having neighbors choose the home empowers families as owners and transforms them into protagonists in the reconstruction process.

Families that have benefited from housing subsidies have traditionally said “I got a subsidy,” whereas today the Ministry of Housing and Urbanism has allowed families to begin to say, proudly and convincingly, “I chose my home.”

### The Cases of Arauco and Coelemu (Region of Biobio)

#### Coelemu Pre-Designed Home



#### Arauco Pre-Designed Home



This was all done with the Beneficiary-Owned Site Reconstruction subsidy using a pre-designed project. The base subsidy was 380 UF, supplemented by a subsidy for land improvement, demolition and a sanitary solution that can reach 95 UF. The entire project must be completed within 150 days and the goal is to have the first homes ready in the month of December.

These 2 project success cases are evidence that technically better options can be obtained with this procedure as a result of competition, thereby stimulating innovation in terms of new materials and construction techniques. In addition, the home selection system, where neighborhoods choose through open and democratic elections from a set of SERVIU-certified solutions, marks a new and differentiating milestone in citizen participation.



Clipping from a local newspaper highlighting reconstruction on Beneficiary-Owned Sites

### The Case of Talca (Region of Maule)

The Ministry of Housing and Urbanism, together with the Regional Government and the Municipality of Talca, are developing a project for the reconstruction of homes in Talca's historic downtown area. The project seeks to preserve the Maule capital's urban image, which is dominated by its townhouses and colonial architecture.

POLIS, an architectural and urban design firm, will design the homes, funded by El Bosque S.A. Both companies are linked to the development of Talca's Sustainable Strategic Reconstruction Plan.

Figures of Townhouses in Talca's Historic Downtown



Source: POLIS Arquitectura

The project, in its first stage, entails the construction of approximately 100 homes in Talca's historic downtown destroyed by the earthquake on the same sites where they fell. The intent is to thereby prevent urban sprawl, to respect the affected families' ties to their areas, to maintain existing neighborhood social networks and to preserve the city's architectural image.

These homes will be built with funding from the Housing Solidarity Fund and with an extra subsidy to fund items associated with the exterior façade. This additional subsidy will be an incentive for the rest of the population to opt for this mode by following the design guidelines developed specifically for Talca's downtown area.

### **The Procedure**

Initially focused on the Seminar, Oriente and Santa Ana neighborhoods, SERVIU will identify 100 families whose homes were destroyed who wish to rebuild them on the same sites and to opt for the design that the POLIS consultant is elaborating. Polis will complete the design and prepare the architectural plans, calculations and specialties by means of a participatory process. This file will be provided to builders so that they can submit bids for construction of the entire set of homes. The company submitting the best offer must commence construction work during the last quarter of this year.

According to the Ministry's Register of Disaster Victims, 754 families that lived in Talca's downtown area saw their homes destroyed by the earthquake. Approximately 100 of these families will form part of the initial project. The additional subsidy will be available to all families that rebuild on the same site as that of their destroyed homes, provided that the construction will help preserve the urban image and townhouse architecture of Talca's downtown area.

### **A.5.3 Subsidy Applications with Land in Succession**

An alternative was created so that the disaster victims who lived in homes on land in succession could apply for the expeditious restoration of their homes to pre-earthquake conditions without the need to judicially resolve the succession among heirs. By means of a notarial authorization from the heirs to rebuild on the site, the site resident may apply for the subsidy while the probate distribution is processed. Under this arrangement, only the resident is “marked” in the Ministry’s application system, thereby allowing the other heirs to obtain housing subsidies in the future.

### **A.5.4 Simplifying the Application Process for Own-Site Construction**

The procedures required to access the FSV subsidy under the beneficiary-owned site construction arrangement were simplified in an effort to expedite reconstruction and allow families to return to pre-earthquake conditions in the shortest time possible.

These regulatory changes reduced the information required to apply, lowering the number of required documents from 170 to 18. These changes are considered in Exempt Resolution No. 6064, dated September 24, 2010.

## **A.6 First Housing Reconstruction Program Adjustment**

Although the Housing Reconstruction Plan was formalized on March 29th, the calls to apply and to register in MINVU’s Register of Disaster Victims commenced on April 12<sup>th</sup>. A total of 280,000 families were enrolled in the Register, with over 38,000 applications processed and 30,000 reconstruction subsidies granted 4 months into the operation. Additionally, the delivery of temporary wooden emergency shelters was completed and MIDEPLAN (*Ministry of Planning*) provided the data from the Emergency Special Family Survey. There is now sufficient information to review the plan’s design, make the necessary adjustments and redistribute resources on a preliminary basis according to demand behavior

### **A.6.1 Verification of Demand by the Emergency Special Family Survey (EFU)**

The data collected from the EFU, which is a cadastre headed by the Ministry of Planning and applied across municipalities, was delivered in mid-May. The EFU results are highly consistent with the damage estimate provided by MINVU in early March.

This notwithstanding, there is a differentiating factor with respect to the preliminary analysis in relation to the “recoverability” of the damage. When designing the Reconstruction Plan, major damage was considered severe and unrecoverable damage, whereas the EFU cataloged such

damage as recoverable. This difference did not increase the number of subsidies to be provided, but it did change the reconstruction/repair subsidy ratio.

With regard to the social risk of disaster victims, the EFU indicates that 83% of families living in destroyed homes were in the two quintiles at greatest social risk prior to the earthquake. This percentage increases to 93% if the third income quintile is included. It is reasonable to infer that their vulnerability increased after February 27<sup>th</sup>.

Another important fact provided by the EFU is that 21,042 live-in families were detected in relation to destroyed homes, a number which exceeds the estimate of 15,000 families at extreme social risk and left homeless following the earthquake, discussed in the description of problem 2/7.

### **A.6.2 Register of Disaster Victims**

In view of the impossibility of conducting a push cadastre at the time the Housing Reconstruction Plan was launched, MINVU decided to conduct a “demand side” census (pull cadastre), calling upon the affected population to register in a new special registry in order to apply for Reconstruction Plan Subsidies.

To register in the Register of Disaster Victims, the families had to be visited by technical staff from the Municipal Works Office to certify the damage to their homes. This measure also served as a filter as it prevented people who had not been affected by the earthquake from having access to the benefits. The Register of Disaster Victims was closed on July 30<sup>th</sup> for boroughs with over 10,000 inhabitants, and remained open until August 27 for boroughs with under 10,000 inhabitants.

At the close of registration, over 286,000 families had been registered. Of that number, approximately 137,000 homes were uninhabitable and 149,000 were recoverable.

The numbers in the Register must not be understood to represent the number of qualified applicants and subsidy beneficiaries since the Register was merely a filter based on the status of victim. An important number of families will not have access to the reconstruction subsidy because they may already own a second home, they may be one-family applicants, they may be unable to reliably confirm their status as live-in relatives or tenants at the time of the earthquake, or there may be other circumstances that prevent them from perfecting their application pursuant to regulatory requirements.

As a consequence, and according to the cross-checking of the different variables, it is possible to estimate that the number of qualified applications for reconstruction subsidies will total

approximately 105,000 units and 115,000 units for repair subsidies. This modifies the construction/repair ratio that was initially estimated, with a slight increase in the total number of subsidies.

### A.6.3 Adjustment of the Average Subsidy Value

The average reconstruction subsidy has varied upwards for the following reasons:

- Extraordinary subsidies were included to fund prior work under the beneficiary-owned site construction arrangement (demolition and removal of debris, land improvement, implementation of sanitary services).
- The repair subsidies were expanded to handle more complex works to avoid demolitions, which is also consistent with the higher proportion of repair subsidies versus reconstruction subsidies.
- The payments to technical assistance providers (EGIS and PSAT) are funded with the same budget item as the subsidies. This was not considered in the initial estimates.
- The extraordinary subsidy for apartment building construction was not anticipated in the initial considerations.
- The UF 370 FSV base subsidy was extended to all boroughs for which UF 330 had been set.
- New subsidies were included in the reconstruction plan, mainly the FSV II and terms and conditions for the acquisition of housing built under the FSV I and II.

### A.6.4 First Adjustment to the Plan using Data from the Register of Disaster Victims and Real Costs

In view of demand behavior and the average amount of the available subsidies, the repair subsidies, home purchase subsidies and home construction subsidies have been redistributed as follows:

Original Distribution Table for Reconstruction Program Subsidies

Repair Subsidies	61,956	60 UF/Subsidy	UF 3,717,370
Purchase Subsidy	15,000	175 UF/Subsidy	UF 2,625,000
Construction Subsidy	118,994	466 UF/Subsidy	UF 55,414,006
<b>TOTAL</b>	<b>195,950</b>	<b>316 UF/Subsidy</b>	<b>UF 61,756,376</b>

Subsidy Redistribution Table according to the Program's Progress.

Repair Subsidies	115,000	81 UF/Subsidy	UF 9,315,000
Purchase Subsidy	20,000	411 UF/Subsidy	UF 8,232,800
Construction Subsidy	85,000	520 UF/Subsidy	UF 44,208,576
<b>TOTAL</b>	<b>220,000</b>	<b>281 UF/Subsidy</b>	<b>UF 61,756,376</b>

According to the above, the average Reconstruction Plan subsidy for housing drops to UF 281, with an average of UF 81 for repair subsidies and an average of UF 499 for housing subsidies.

By way of comparison, it should be noted that during the reconstruction of Tocopilla, allocated repair subsidies averaged UF 192, while the housing subsidies averaged UF 931.

It should be emphasized that this redistribution is preliminary and that it is expected that it will be adjusted again once there is more significant progress under the Plan.

## **B. RECONSTRUCTION PLAN AT THE NEIGHBORHOOD LEVEL**

A large group of families live in social housing built by SERVIU and its predecessors in the areas devastated by the earthquake on February 27<sup>th</sup>. The high level of vulnerability, social exclusion and conflict, coupled with the lack of means and the historical urban decay in many of these housing units, made their condition of disaster victim particularly complex and difficult to address by the special instruments in the Reconstruction Plan. While most of these apartments survived the earthquake, their crumbling infrastructure brought to the fore the precariousness of their standard as housing solutions, especially in the case of buildings that were built between 1980 and 2000. Typical types of damage are seen on stairs, roofing and interior panels, with some collapsing completely, causing a regrettable loss of life.

About 15,500 SERVIU apartments were found to be in these conditions. 9,000 of that number will be repaired and 6,500 will have to be demolished and rebuilt. The demolition will, in some cases, include all the buildings inside a condominium, and only a few in others.

In this context, of the almost 80,000 families affected by the earthquake that received temporary wooden emergency shelters, 4,545 families were living under even more precarious conditions, without a place to build their emergency shelters. As a result, a total of 107 settlements had to be implemented nation-wide and equipped with basic services to accommodate those victims.

We have therefore identified three types of demand at the neighborhood level in the general reconstruction plan scenario that require the Ministry's special attention as a result of the combination of historical conditions and the earthquake:

- a. **Reconstruction Demand**, which addresses demolition and reconstruction projects primarily financed by the Housing Solidarity Fund.
- b. **Demand for Repairs**, which addresses the restoration of apartments and common assets, funded by the Family Equity Protection Program.
- c. **Demand for Eradication**, which addresses the delivery of definitive housing for families relocated in settlements, financed by the Housing Solidarity Fund and international contributions.

The three groups will be monitored and managed directly by the Ministry of Housing, from the diagnosis to the delivery of the definitive homes. In particular, multidisciplinary teams of SEREMI and SERVIU professionals will attend to these 20,000 families, including both the physical reconstruction and psychosocial care so as to ensure a comprehensive solution in the shortest time possible.

## **B.1 RECONSTRUCTION OF SERVIU HOUSING**

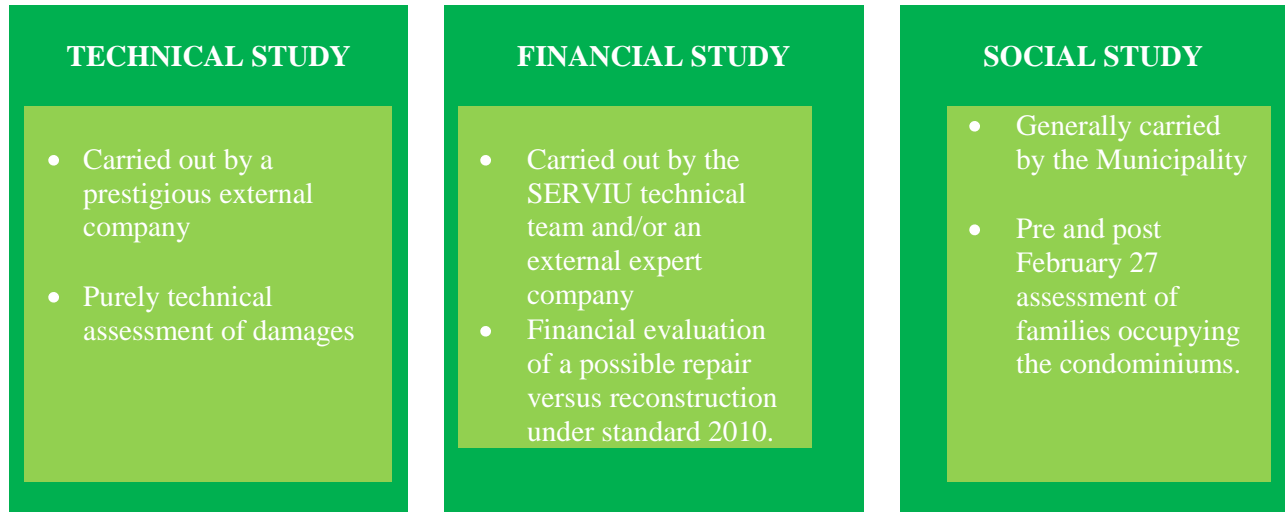
### **Purpose**

The reconstruction of severely damaged SERVIU homes with severe damage falls within SERVIU's purview of responsibility to resolve the housing deficit of a group of families at high social risk. The specific objectives sought through this process are:

- **Quick but better reconstruction:** the process should move from the emergency stage to definitive reconstruction as quickly as possible, but without detriment to the involvement of these families in the planning, design and execution of their definitive solutions. This must be done while at the same time complying in full with all applicable regulations.
- **Family involvement:** Family involvement is a key objective in the reconstruction process. Only in this way can reconstruction take place with a sense of belonging for each family. This is also one way of ensuring their future long-term care of their own home.
- **Competition for demand:** a good quality solution can be improved if there is healthy competition. A competitive process always results in a quality and innovative solution.

### **Preliminary Diagnosis**

Three studies were made for each home in order to select the 6,500 homes that need to be reconstructed. The end result was a report that assessed the repair or reconstruction of the property.



This assessment covered three dimensions: technical, financial and social, which represent the basis for the analysis of the solution.

The technical evaluations were conducted by prestigious external consultants in the days following the earthquake. The result of these reviews was the categorization of the housing's structural condition, specifying whether or not they were habitable and whether their repair was technically feasible.

The financial evaluation was made by the Ministry's technical professionals. The study is based on the financial analysis of an eventual repair versus reconstruction under the Housing Solidarity Fund standards and the structural, thermal, acoustic and fire-proofing standards now in place.

The social assessment was prepared by the respective Municipality or by the Ministry's social workers. Its purpose is to present the condition that the families that occupied the condominiums had at the time of the earthquake. A further purpose was to present any issues present in the community prior to February 27<sup>th</sup>.

On the basis of these documents, the most appropriate solution was determined for each condominium.

## Methodology and Procedure

Given their complexity, each of these projects was faced using a methodology based on the reconstruction plan and the different subsidy programs, with a preponderance of the Housing Solidarity Fund.

This methodology is based on 4 main stages: Social Characterization, Site Transaction, Demolition and Project Bidding. Each of these processes occurred simultaneously so as to commence demolition and project bidding as soon as possible.

<b>SOCIAL CHARACTERIZATION</b>	<ul style="list-style-type: none"> <li>• Definition of the family and its characteristics</li> <li>• Work and information panels</li> <li>• Organization of Committees</li> </ul>
<b>SITE TRANSACTION</b>	<ul style="list-style-type: none"> <li>• SERVIU must acquire land to build new projects for homeless families.</li> <li>• Alternative subsidies and solutions for those who choose not to continue in the project.</li> </ul>
<b>DEMOLITION</b>	<ul style="list-style-type: none"> <li>• Issuance of demolition decrees</li> <li>• Managing the respective bidding processes and award of the demolition contracts.</li> </ul>
<b>BIDDING AND AWARD OF THE CONSTRUCTION</b>	<ul style="list-style-type: none"> <li>• Bidding of the project for a fixed price (competition is enhanced by means of an exclusively technical evaluation).</li> <li>• Award based on the family's choice.</li> </ul>

The bidding process is what gives value to this methodology. The bidding process comprises the same processes as a traditional public bidding, but the difference lies in the evaluation process. Since the amount is fixed, the process encourages competition in terms of a better housing solution for the families, promoting innovation and technical quality in the housing. This allows the beneficiaries themselves to choose the project that will be built.

## Expected results

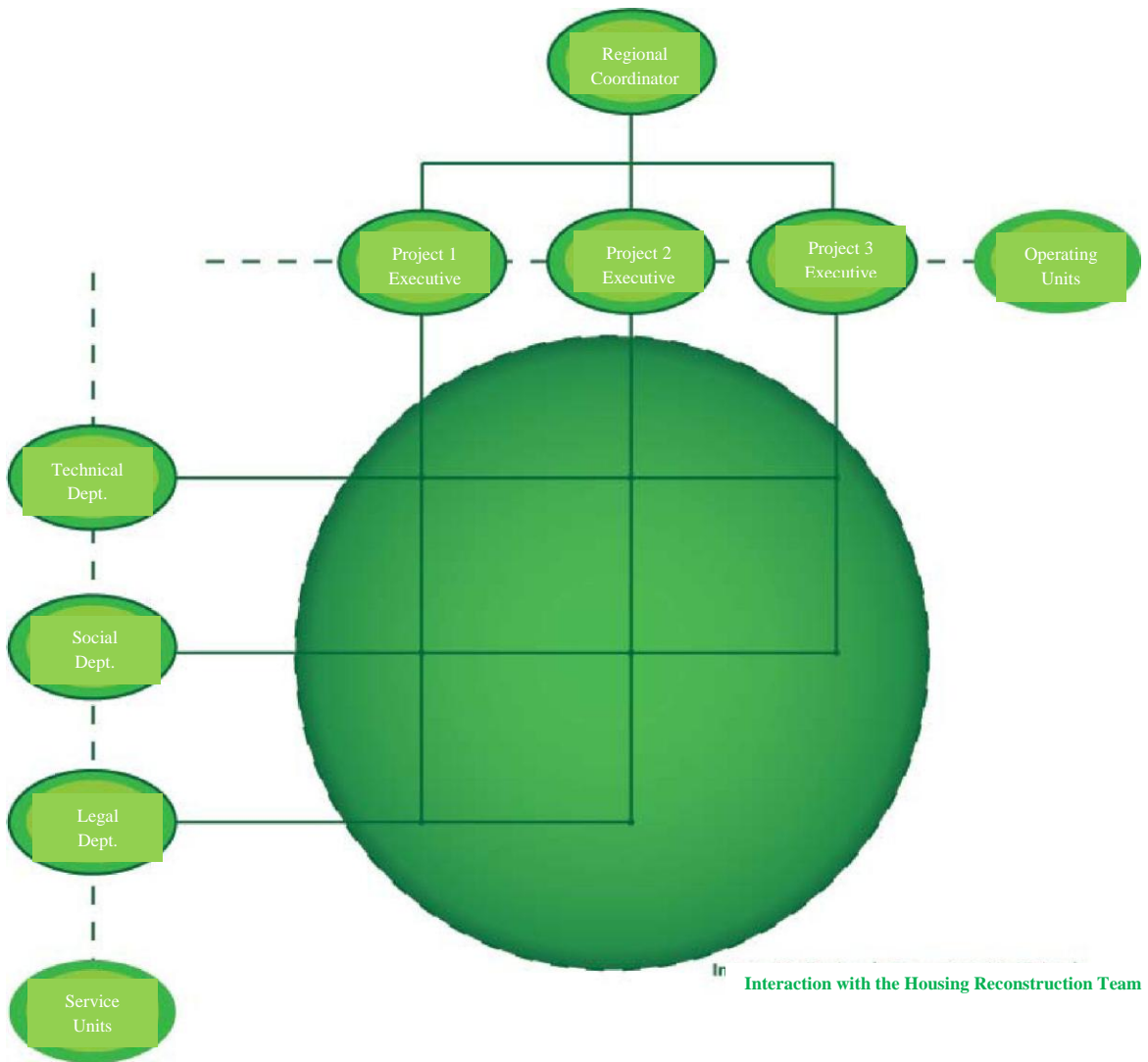
The goals set for the 21 SERVIU projects to be rebuilt are:

- To commence the demolition process during 2010.
- To commence the bidding processes during the last quarter of 2010.
- To commence housing construction during the second quarter of 2011.

- To have the definitive housing built by the end of the second quarter of 2012.

There is a Regional Coordinator in each Region that coordinates with the work in the settlements and direct attention to the repairs in social condominiums.

Diagram of the Organization of the Regional Coordination for Settlements and Social Condominiums



## B.2 REPAIR OF SOCIAL CONDOMINIUMS

### Beneficiaries

The housing selected for strategy aid is:

Region	Borough	Condominium
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<b>Metropolitan Region</b>	Ñuñoa	Villa Olímpica
	Estación Central	Villa Portales
	Cerro Navia	Laurita Allende
	Cerro Navia	Javiera Carrera
<b>Liberator Bernardo O'Higgins</b>	San Francisco de Mostazal	Bernardo Retamal
	Graneros	Los Regidores
	Rengo	San Francisco
<b>Maule</b>	Constitución	Manuel Mesa Seco
	Talca	Manuel Larraín
	Talca	Astaburuaga
<b>Biobio</b>	Coronel	Mártires del Carbón I
	Talcahuano	Centinela
<b>TOTAL NO. OF APARTMENTS</b>		<b>9204</b>

### Methodology

Technical assistance will be provided through the Executive Office of Neighborhoods in the form of a social-legal-construction diagnosis, design of works and formalization of co-ownership. Family Equity Protection subsidies will be allocated directly to finance the construction through which families will receive attention without which they would not otherwise be able to overcome the physical and social impact of the earthquake.

The intervention strategy involves setting up multidisciplinary teams from the local offices of Ministries (social-legal-construction) at the site to support the social and legal diagnosis, compile information and design projects for a rapid allocation of subsidies in close coordination with the SERVIU teams.

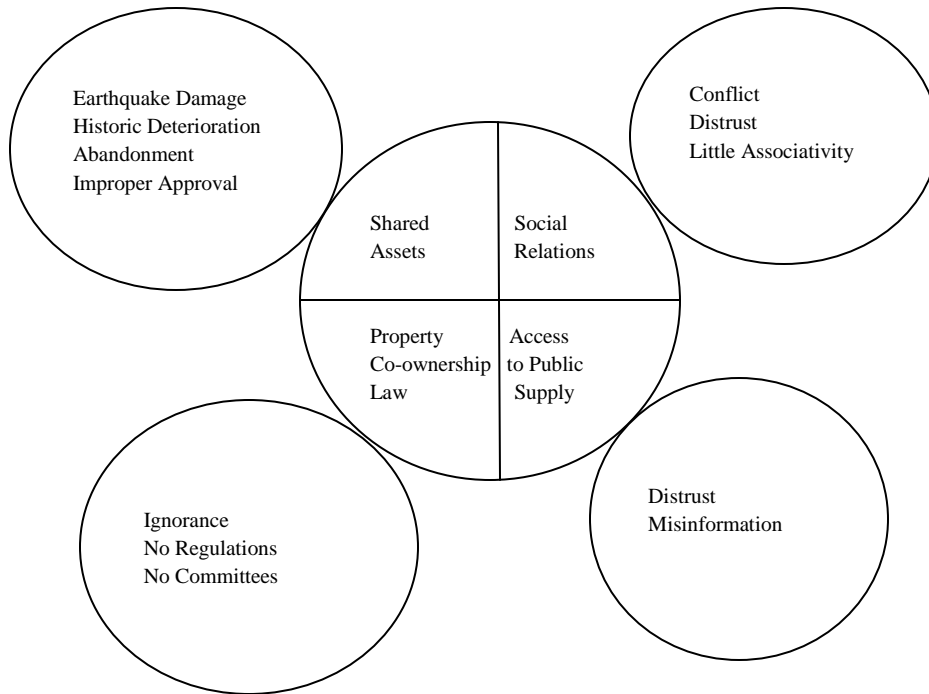
Secondly, formalization of the condominium will be promoted among the co-owners in order to ensure that the repairs and improvements financed by the Ministry are sustainable and to promote responsibility among co-owners for their shared assets.

### Objectives and Goals

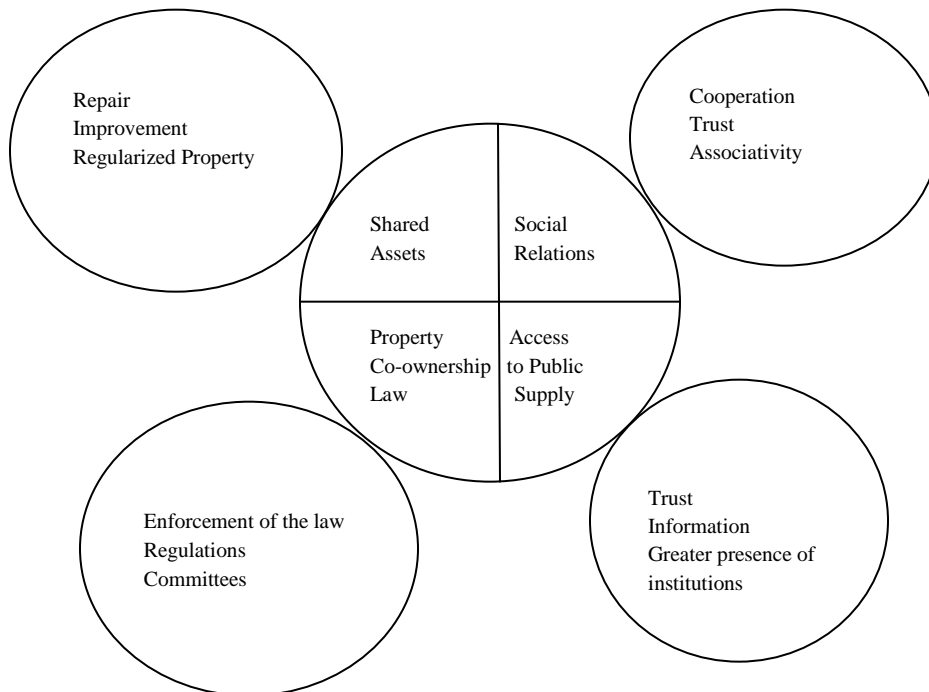
1. Allocate PPPF subsidies for repair of units and improvement of shared assets.
2. Strengthen the capacity of the community to administrate and conserve shared assets by formalizing co-ownership.

These objectives are closely related to the present situation of the condominiums post-earthquake, broken down into four large areas: physical ambit, social ambit, relationship with authorities and legal ambit. We can see the expected impact of this strategy in the following charts:

### Present Situation



### Expected Situation



The goal is to repair and improve thirteen housing units by December 2011 to the benefit of a population of close to 50,000 inhabitants. An average of approximately 120 UF of the PPPF subsidies is expected to be assigned per qualified owner, meaning a maximum of approximately 1,000,000 UF for the repair and improvement projects.

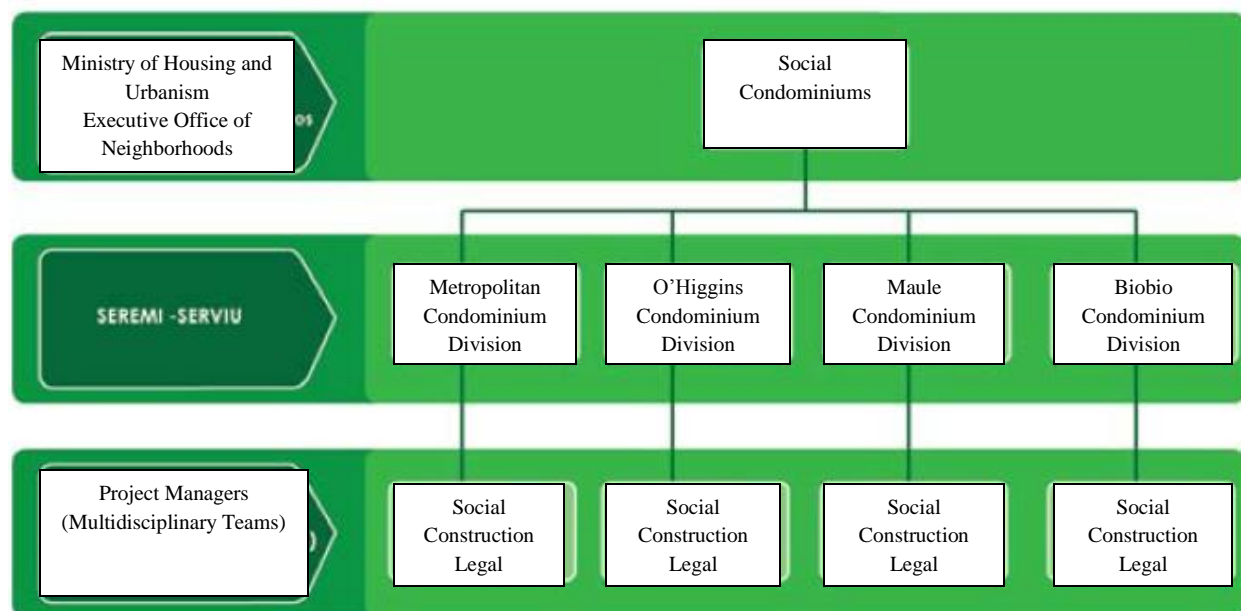
### **Projects to be implemented**

In general, the preliminary diagnoses of SERVIU indicate that the investments must be oriented towards a structural security of the co-owned properties. These projects are in answer to sanitation emergencies and the habitability of condominiums, in particular:

- Repair and replacement of stairs
- Repair and replacement of roof tiles
- Improvement of impermeability and thermal insulation of the facades
- Repair of sanitation systems
- Perimeter fencing
- Internal roads and green areas
- Efficient lighting of common areas

### **Management model**

The Executive Office of Neighborhoods has reorganized its functions nationally and regionally to add a unit specializing in social condominiums as well as settlements and neighborhoods. The professional team responsible for implementing the task is comprised of professionals from the SEREMI neighborhood teams and the SERVIU executives assigned to these projects. 29 professionals are planned to be hired in the social, legal and construction areas, who will do heavy field work in coordination with the social and technical teams of the SERVIU that are already assigned to these projects.



### Technical Assistance and Investment

A total of 29 professionals will form part of the neighborhood teams in the SEREMI's, approximately 50% allocated to the social area, 30% to the construction area and 20% to the legal area. They represent resources of CLP \$84,000,000 under the Neighborhood Recovery Program.

Approximately 1,000,000 UF are expected to be allocated to repair shared assets and apartments through the Family Equity Protection subsidy.

Region	Borough	Housing	No. of Apartments	Investment in UF in 2010-2011 (AD-PPPF)	HR-2010 September to December in Neighborhoods
Metropolitan	Nuñoa	Villa Olímpica	2452	205,968	
	Estación Central	Villa Portales	2663	223,692	
	Cerro Navia	Laurita Allende	76	6,384	
	Cerro Navia	Javiera Carrera	130	10,920	
	Subtotal			5321	446,964
Liberator Bernardo O'Higgins	San Francisco de Mostazal	Bernardo Retamal	146	12,264	
	Graneros	Los Regidores	128	10,752	
	Rengo	San Francisco	312	26,208	
	Subtotal			586	49,224
Maule	Constitución	Manuel Mesa Seco	1477	124,068	
	Talca	Manuel Larraín	60	5,040	
	Talca	Astaburuaga	160	13,440	
	Subtotal			1697	142,548
Biobio	Coronel	Mártires del Carbón I	700	58,800	
	Talcahuano	Centinela	900	75,600	
	Subtotal			1600	134,400
TOTAL			9204	773,136	CLP\$84,666,716

## Control and Monitoring

The critical milestones in meeting goals will be evaluated and controlled weekly through alert reports on progress in each project. The progress and status of each project will be published on the website using the following control sheet:

Information on Social Condominiums		No. of Apt. to be demolished	No. of Residents Resettled	Type of Solution	Preliminary Evaluation by MINVU (Yes/No)	2010 Term Completion (Yes/No)				Local Community (Yes/No)	Initial Local Assembly (Yes/No)	Diagnosis (Yes/No)	Definition of Strategy and Solution (Yes/No)	Design of Work (Yes/No)	Application for Allocation (Yes/No)	Delivery of Solution (Yes/No)	Start of Work (Yes/No)	Formalization of Condominiums	Completion of Work (Yes/No)	Delivery of Work (Yes/No)	
Region	Borough					CCSS Name	No. of Apt.	No. of Inhab.	July												First Week of August
Metropolitan	Alfama	Villa Olimpica	2452	10544	0	0	FSV														
	Estacion Central	Villa Portales	2663	11451	0	0	FSV														
	Coro Negro	Laura's Allende	76	327	8	34	AD-FFFF		13/08/2010	13/09/2010	24/09/2010	08/10/2010	15/10/2010	12/11/2010	17/12/2010	14/01/2011	21/01/2011				
Valparaiso	Coro Negro	Laura's Carrera	130	530	14	60	AD-FFFF		13/08/2010	13/09/2010	24/09/2010	08/10/2010	15/10/2010	12/11/2010	17/12/2010	14/01/2011	21/01/2011				
	Maipú	San Francisco	114	224	0	0	AD-FFFF														
	Maipú	Bernardo Retamal	146	828	18	77	AD-FFFF-CNT		13/08/2010	13/08/2010	20/08/2010	24/11/2010	08/10/2010	09/12/2010	10/01/2011	10/02/2011	10/03/2011	10/03/2011	17/03/2011		
Santiago	Graneros	Los Registros	128	550	0	0	AD-FFFF		13/08/2010	13/08/2010	20/08/2010	24/11/2010	08/10/2010	09/12/2010	10/01/2011	10/02/2011	10/03/2011	17/03/2011			
	Reco	San Francisco	121	1142	91	301	FSV		13/08/2010	13/08/2010	20/08/2010	24/11/2010	08/10/2010	09/12/2010	10/01/2011	10/02/2011	10/03/2011	17/03/2011			
	Reco	San Francisco	121	1142	91	301	FSV		13/08/2010	13/08/2010	20/08/2010	24/11/2010	08/10/2010	09/12/2010	10/01/2011	10/02/2011	10/03/2011	17/03/2011			
Araucanía	Constitución	Manuel Mesa Sepco	1477	6551	54	232	AD-FFFF-CNT		13/08/2010	13/08/2010	13/09/2010	18/10/2010	25/10/2010	15/11/2010	17/12/2010	17/12/2010	14/01/2011	21/01/2011			
	Talca	Antehorcas	60	238	0	0	AD-FFFF		13/08/2010	13/08/2010	20/08/2010	24/09/2010	08/10/2010	15/10/2010	12/11/2010	17/12/2010	14/01/2011	21/01/2011			
	Talca	Manuel Larrain	150	688	0	0	AD-FFFF		13/08/2010	13/08/2010	20/08/2010	24/09/2010	08/10/2010	15/10/2010	12/11/2010	17/12/2010	14/01/2011	21/01/2011			
Biobío	Concepción	Admiral del Caribe	700	3010	23	100	FSV				20/08/2010	24/09/2010	08/10/2010	15/10/2010	12/11/2010	17/12/2010	14/01/2011	21/01/2011			
	Petalhuano	Comandante	900	3870	300	1200	FSV		13/08/2010	13/08/2010	20/08/2010	24/09/2010	08/10/2010	15/10/2010	12/11/2010	17/12/2010	14/01/2011	21/01/2011			
TOTAL			170	4503	17	67															
Nomenclature																					
Completed																					
Critical Week																					
Late																					

### B.3 Settlements

#### Who makes up a settlement?

People left homeless by the earthquake who have been displaced from their places of residence, either because the tsunami razed their land or because the earthquake left the buildings they inhabited in ruins.

#### How many settlements are there in all?

Of the nearly 80,000 families that received temporary wooden emergency shelters, nearly 95% built them on their own land, so they have electricity, water and a defined space. However, 4,291 families had no place to build their emergency home, so 106 settlements had to be built nationwide.

#### How many Settlements are there in the nation?

Valparaíso	3 settlements
O'Higgins	4 settlements
Maule	16 settlements
Bio Bio	84 settlements
Total	170 settlements / 4,503 emergency homes

These emergency homes are outfitted with:

- **An Electrical Kit:** 2 sockets for light bulbs, 2 double electrical outlets and an electrical panel with differential protection. The connection and meter are also included for each family.
- **Thermal Insulation**
- **Impermeabilization**
- **Housing Kit:** Bunk bed, kitchen set, mattresses, blankets and small stove

Given the importance of common spaces, an investment was also developed in community infrastructure in each of the Settlements.

It is important to note that the number of settlements may vary, so MINVU is implementing a Census in settlements in order to create an effective cadastre of families that have a true need for relocation to final housing. This record is now being closed and we will have the final number by the second week of September.

The information on the number of inhabitants by settlement enables us, at the same time, to develop a complete cross with Rukan and with the social protection record of each of these families. The purpose is to understand the degree of social risk of the inhabitants in these groups of housing.





### **B.3.1 Challenges of the Reconstruction Program in relation to Emergency Settlements**

Among the challenges in the reconstruction program is the integral psychosocial intervention in the process of resettlement/relocation, together with the generation of the final housing projects for each of the settlements.

Thus far the physical intervention has been to complete the outfitting of the settlements. In this work, 106 emergency settlements have been set up in conjunction with the Subdere and regional teams.

To us, the concept of integral intervention entails the need to provide a final housing solution accompanied by a complete and relevant psychosocial reconstruction by local, intersectorial and multisectorial coordination with high levels of citizen participation. To achieve the foregoing, there has been much coordination through intersectorial agreements with ministries and public services. They are already under way and timetables have been established in each of the settlements.

In the context of Chile's international cooperation with the European Union, the Settlements program was also added to strengthen the psychosocial intervention until there is a final solution. This project has already been implemented together with Fosis and takes into account social articulators that support the community organization and ensure that services are fluid inside each settlement.

In order to concrete this technical and social work, urban and social task forces have been set up for each settlement. They are run by the Project Officers who coordinate the actions with the municipalities and social leaders. These Project Officers are ultimately responsible for the resettlement of each of these families until each settlement is finally closed.

The Project Officers report to the Executive Office of Neighborhoods, represented at this time in each of the SEREMI's by the Regional Coordinator of the Neighborhood Recovery Program.

85% of the teams have been set up thus far to date in the nation and the remaining 15% will be ready during the first half of September.

Three boards were set up for coordination and a proper handling of information: local, regional and national.

- **National Board:** Executive Secretary of Neighborhoods / National Director of Fosis / First Lady's Cabinet / Undersecretary of Regional Development.
- **Regional Board:** QMB Regional Coordinator / Settlement and Camp Officer / Fosis / Social Articulator.
- **Local Board:** Municipal Representative / Fosis Representative / Project Officers / Intendant's Representative / Social Articulator / Social Leaders.

### **B.3.2 Urban Physical Ambit**

#### **B.3.2.1 Housing Projects**

##### **Project Officer**

As mentioned above, the work inside the settlement is led by a project officer whose first objective is to provide a final solution, before the second winter, to each of the families in the settlement. He and his team must put an order to the demand for housing solutions of each family in the settlement so as to assure that the choice they make is implemented successfully.

##### **Ordering Demand**

The homelessness of each family varies according to how they were affected by the earthquake. There are two large groups inside each settlement:

- Families that were displaced together, like what occurred in the zones affected by the tsunami, in zones where the land was declared uninhabitable or by the general collapse of housing in one neighborhood. For these families it is important to work on maintaining their networks and to look for solutions as a group.
- Families that come from different places, which include live-in families, tenants, people who have a residence site but cannot set up a home on the land, among several other types. In this case, group solutions are irrelevant unless the families deem otherwise.

The settlements will be eradicated through the different subsidy alternatives based on the type of homelessness and the choices made by the families. Notable are constructions on new properties or the acquisition of an existing home. Each Project Officer and his team must advise the families of the complexities and benefits of each alternative and assure that all families choose one of the options.

The settlement team plays the role of searching for agents that can articulate a project for subsidies that function through an EGIS (social property broker), when there is no EGIS in a locality, or when the project is considered emblematic. It may be the SERVIU or their own active participation in resolving activities in the application process.

### **Support in articulating the offer**

In order for families to attain a final effective solution, the Settlement team must ensure that the different stages in the housing process are completed according to the deadlines set in the general reconstruction plan. This implies a strong emphasis on collaboration by the different players, ongoing monitoring of the final solutions and facilitation of all critical points existing in these latter projects.

### **Support and tracking of Private EGIS, Municipal EGIS and SERVIU**

As mentioned above, the Settlement team, both the central members and the field members, must ensure that the housing projects are materialized. The settlement team shall therefore participate actively in creating application files, in searching for land, in formulating projects, and in many other tasks that are considered critical to planning, provided they are not being done by traditional participants. Regardless of whether the team actively adopts any of the above activities, the progress in the housing process must be tracked at all times so that the entire team is always fully aware of the problems that may compromise deadlines and the quality of the projects.

### **Search for Land**

As the construction of new sites is one of the subsidy options most important to the families in settlements, a team was set up for the selection and financing of land. Land is one of the most determining points in the start-up of a project of this type, together with determining several of the factors that influence the final quality, such as the localization, the budget available for the home itself and the density of the project. The central teams play the role of compiling the different land alternatives in the affected zones, advising on the prior evaluation of the land and evaluating and applying to alternative means of financing, such as SUBDERE, if the subsidy does not suffice to purchase or prepare the land.

#### **B.3.2.2 Management Control**

In consideration of the enormity of the issues and the urgency of the deadlines, monitoring of the operation plays a fundamental role in the success of the program. Emphasis has therefore been placed on the declaration of processes, definition of roles, creation of control tools and the start-up of systems to perform the follow-up.

This tracking is done as a cross between the type of solution and families and it consists of a control of milestones that determines the level of progress of the final projects. At the same time, this control can be added to obtain local, regional and national reports.

Settlement 1	CNT (150 Families)		Establishment of Committee	Purchase-Sale Promise	Application to Project	Receipt of Subsidy	Start of Work	Delivery of Work
	CNT1	100 families	Oct-10	Feb-11	May-11	Jul-11	Aug-11	Jul-12
	CNT2	50 families	Aug-10	Jan-11	Mar-11	Jun-11	Sep-11	May-11
	% of families in CNT by stage		66%	33%	0%	0%	0%	0%
	AVC (100 Families)		SERVIU Registration	Subsidy Approved	Family Contract – Technical Assistance	Housing Approval	Delivery of Home	
	% of families in AVC by stage		50%	40%	10%	0%	0%	

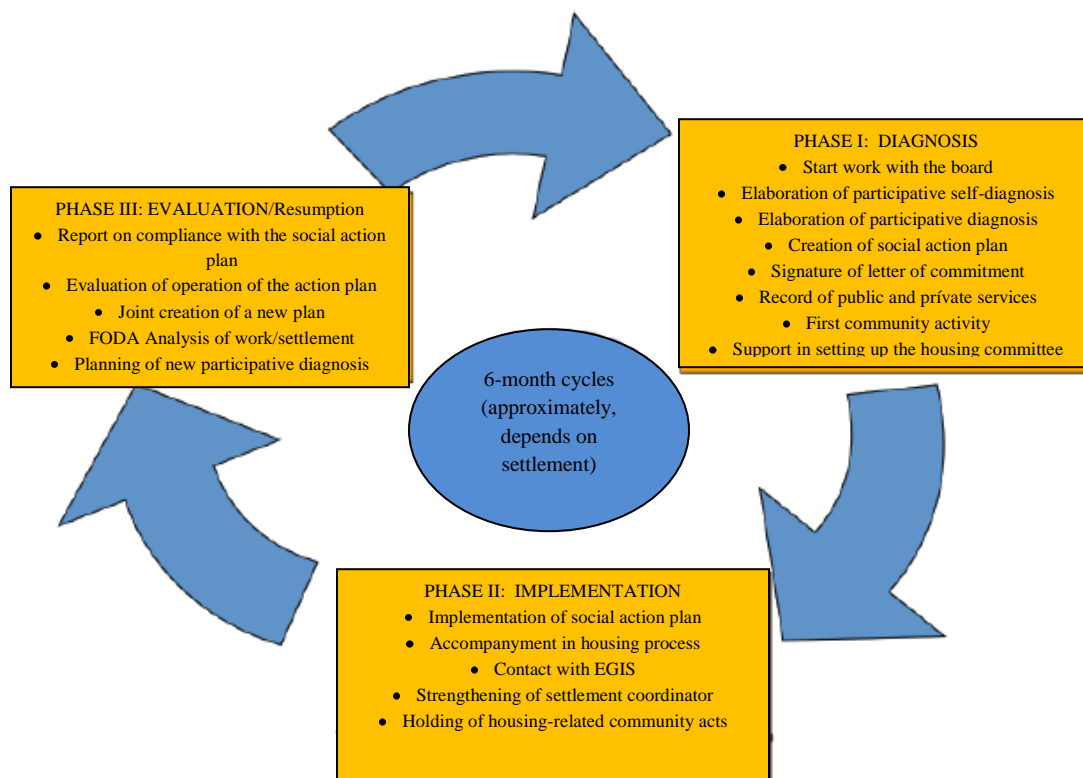
By way of example, below is a project control for families in one settlement in particular.

Region	Borough	Settlement	No. of Families	Establish. of Committee	Purchase-Sale Promise	Application to Project	Receipt of Subsidy	Start of Work	Delivery of Work
	Arauco	8	296	50%	40%	10%	0%	0%	0%
	Coelemu	1	25	70%	30%	0%	0%	0%	0%
	Coronel	4	195	50%	40%	10%	0%	0%	0%
	Lebu	1	19	50%	40%	10%	0%	0%	0%
	Los Angeles	1	19	50%	40%	10%	0%	0%	0%
	Lota	5	238	50%	40%	10%	0%	0%	0%
	Tirua	1	7	50%	40%	10%	0%	0%	0%
	Tome	51	214	50%	40%	10%	0%	0%	0%
Total Biobio		26	1,013	50%	40%	10%	0%	0%	0%
	Constitución	1	25	50%	40%	10%	0%	0%	0%
	Vichuquen	1	11	50%	40%	10%	0%	0%	0%
Total Maule		2	36	50%	40%	10%	0%	0%	0%
O'Higgins	Santa Cruz	1	14	10%	40%	40%	0%	0%	0%
Total O'Higgins		1	14	50%	40%	10%	0%	0%	0%

At the same time, there will be a global tracking of progress by the different types of project. The table below is for the construction projects on new land.

Finally, regional summaries are prepared with figures on goal compliance in order to obtain a general assessment of the situation of families.





This work is divided into 5 courses of previously defined action:

- Community Organization and Leadership
- Job Placement
- Subsidy Application Process
- Psychological Support
- Work with an age-group and high-risk-group focus (preschool, school, adolescent, women, disabled and senior citizens).

### **Community Organization and Leadership:**

- Create a team of empowered, validated and trained leaders.
- Internally diagnose the issues and opportunities of the community.
- Generate coordination and organization among members of the settlements and public and private agencies that work in them.
- Present concrete projects on work to the benefit of the community as a whole.

### **Job Placement**

- Strengthen the work force in settlements and foster employability and job creation.
- Create new instances of work alternative and/or complementary to household income as jobs begin to normalize.
- Support micro-entrepreneurship and the development of productive capacity in settlements.

Subsidy Application Process:

- Socialization of reconstruction mechanisms designed by MINVU focused on the homeless. Regular subsidy plans and housing supply in each locality.
- Coordination and accompaniment in the application process.

**Psychological Support**

- Create open instances of containment between neighbors in the settlements and specialized external agents so that they can overcome the trauma of the earthquake and tsunami and develop their capacity for resilience to face life in the settlements.
- Work with an age-group and high-risk-group focus (pre-school, school, adolescent, women, disabled and senior citizens):
- Strengthen community development by specific work with the previously defined groups.
- Group, recognize and organize the different age groups existing in the settlements and leverage activities that are of particular interest to them.

### C. TERRITORIAL, URBAN AND EQUITY RECONSTRUCTION PROGRAM

The Territorial, Urban and Equity Reconstruction Program of the Ministry of Housing and Urbanism has deployed intense collaboration with regional governments, municipalities and, in some cases, private institutions, universities and civil organizations through which it has been able to integrally orient and coordinate the different efforts and initiatives at reconstruction.

In order to understand the order of magnitude of the damage, we are talking about the most widespread urban earthquake ever recorded. It was felt by more than 12 million people and apart from the damage in the capital city, it severely affected the Metropolitan Area of Greater Concepción – the second largest city in the country – and partially razed 5 cities with more than 100,000 inhabitants, 45 cities with more than 5,000 inhabitants and more than 900 villages and coastal and rural communities.

Our country must face natural catastrophes virtually every year: the flooding of the Biobio River in 2005, the Atacama earthquake, then the Tocopilla earthquake, the Aysen tsunami and finally, the Chaitén volcano eruption. All tragic and complex catastrophes, but limited territorially and of a tolerable magnitude. Despite this, the cycle of reconstruction has not yet closed for many of these catastrophes. In Tocopilla, there are still remains of the emergency and the Chaitenans are still displaced as the volcano continues to erupt and the progressive reconstruction continues in Santa Barbara. The complexity of the task we have before us is of a magnitude that we must now rebuild the equivalent to more than 100 Chaitens or Tocopillas.

Added to this is the complexity of reconstruction taking into account the risk of tsunami. It has now been proven that we must learn to live with our nature. This does not mean turning our back to the sea or running massively away from the risk, but rather planning and designing our cities with this in mind.

Moreover, the greatest portion of the damage is found in communities and villages with fragile economies or that were undergoing very complex processes of reconversion or redefinition. That is the case of the port of Talcahuano, the coastal communities in the region of Maule or the hundreds of small hamlets that were betting their future on the development of special-interest tourism based on their heritage. They are now mourning the loss of their architectural legacy. All these multiple challenges and territorial and geographic ambitions are in addition to the complexity of integrating multisectorial projects and investments, not only for urban regulation but also regulation of infrastructure, transportation and equipment. The true challenges in urban reconstruction will be finding the right instances of intersectorial coordination and relying on a decentralization without precedent in our history, where regions and municipalities will play a key role in converting the catastrophe into an opportunity for the development of their communities.

## C.1 Update of Risk-Based Planning Tools

The tragedy has taught us a lesson in terms of territory and urbanism, the lesson being that we must learn to plan our cities knowing and managing the natural risks to which the privileged geography of the country exposes us permanently. The Zoning Plans are now being updated that had to be modified, because of the catastrophe, based on the risks, as indicated in article 27 of the Catastrophe Law.

Of the 239 boroughs affected by the earthquake and tsunami, 173 do not require any change or update to their zoning plans based on risks, 66 require a change or adjustment to the instruments, 33 of which correspond to boroughs on the coast and the remaining to boroughs in the interior of regions 5 to 9 that are exposed to specific limited risks.

The risk reports by the National Geology and Mining Survey (SERNAGEOMIN) are ready and are being used to prepare the detailed studies of risks and revision of Borough Zoning Plans (PRC). The zoning plans for the seaboard (33 boroughs) will be updated during the course of 2010 and the remainder in the first half of 2011.

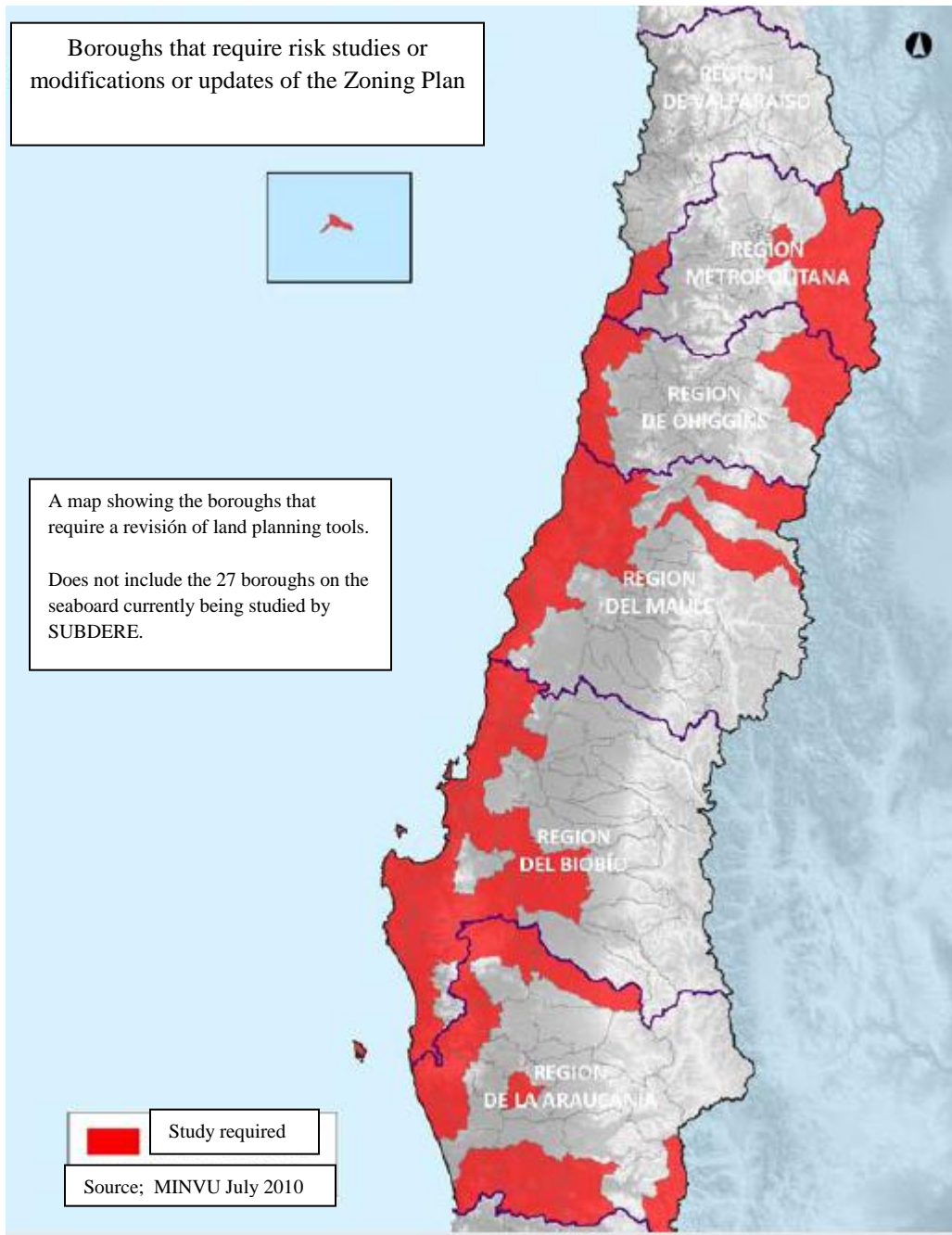
### C.1.1 Criteria on Areas of Risk

The earthquake and tsunami modified the territory dramatically, specially at the lowest points on the coast, such as fishing coves, mouths of rivers and estuaries, wetlands and ponds as well as slopes and ravines. These places were generally inhabited and many of them are now gone. Significantly urgent is the question of where and how these zones can be reinhabited since the State cannot deliver reconstruction subsidies for sites that represent a risk to the life of individuals. Yet the State cannot hinder reconstruction. So, review and adaptation of the areas of risk and conditions of use in those localities that are more exposed to future natural catastrophes are obligatory. Risk reports and studies were contracted, which have progressed significantly and will lead to the following measures:

1. Clearing and immediate release of areas free of geological or tsunami risk in order to begin reconstruction.
2. Determination and delimitation of the areas of moderate risk where an eventual recurrence requires development, land use or mitigative measures, early warning and evacuation.
3. Delimitation and oversight of areas of exceptionally high risk that may not be apt for permanent use or activity due to geographical changes or geological conditions. These

latter are expected to be as few as possible in order to minimize the resettlement and displacement of communities whose economy depend precisely on the ocean.

The Zoning Plans are not frozen. Restrictions are limited to areas determined in risk reports, which will be refined by the risk studies. We must learn to live with our nature. This does not mean turning our back on the ocean or moving ourselves en masse away from the risk, but rather planning and designing our cities well with this in mind.

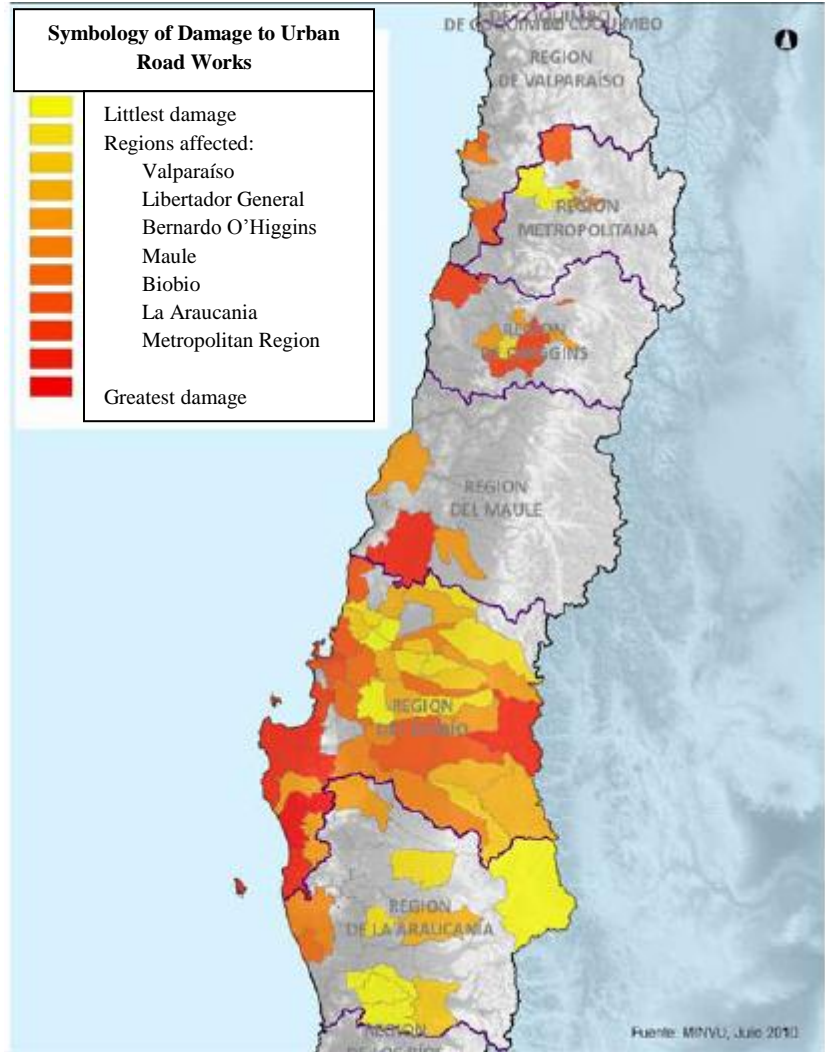


## C.2 Restoration of Urban Roadworks

Reconstruction and restoration of urban roads and rainwater systems damaged by the earthquake is under way through a special plan in regions V, VI, VII, VIII, IX and the Metropolitan Region. Each Regional Serviu is in charge of implementation.

The objective of this plan is to return the functionality of the roads of communication and rainwater catchment systems as soon as possible in the cities damaged by the earthquake. The urban repairs are expected to be ready by December 31, 2010 and the remaining by December 31, 2011.

The project will be financed by sectorial funds through an adjustment of other investment initiatives. Thus far the budget has been prepared, some works have begun and the rest are being bid out.



A map showing the boroughs that require restoration of urban roadworks by degree of damage

### C.3 Special Plans for Heritage Recovery

Activities have been undertaken to recover real estate and zones of historic conservation, such as a preparing a cadastre, protection and prioritization of works. An interministerial task force was set up, training plans and special heritage recovery plans have been designed with the support of foundations, businesses, NGOs and international cooperation.

#### C.3.1 Cadastre and Protection

Teams and capacities were deployed to conduct an analysis and gather information on the Real Estate and Zones of Historic Conservation (as provided in Article 60 of the LGUC regarding Borough Zoning Plans) in the 6 most affected regions, the purpose being to prepare a cadastre.

The data gathered and systematized includes records on the condition of the properties of Historic Conservation (ICH) and Zones of Historic Conservation (ZCH) by Borough and Region.

They break down as follows:

Region of O'Higgins 141 (ICH) / 14 (ZCH)  
Region of Maule 7 (ICH) / 1 (ZCH)  
Region of Biobio 157 (ICH) / 26 (ZCH)  
Region of La Araucanía 20 (ICH) / 6 (ZCH)  
Region of Valparaíso 1009 (ICH) / 57 (ZCH)  
Metropolitan Region 893 (ICH) / 59 (ZCH)

In regions like Maule, the number of ICH and ZCH is notoriously low because most of their localities have no current Master Plan. In this type of locality, the work of the PRI is important in defining an area of priority intervention so as to orient the allocation of heritage subsidies to localities that do not have a record.

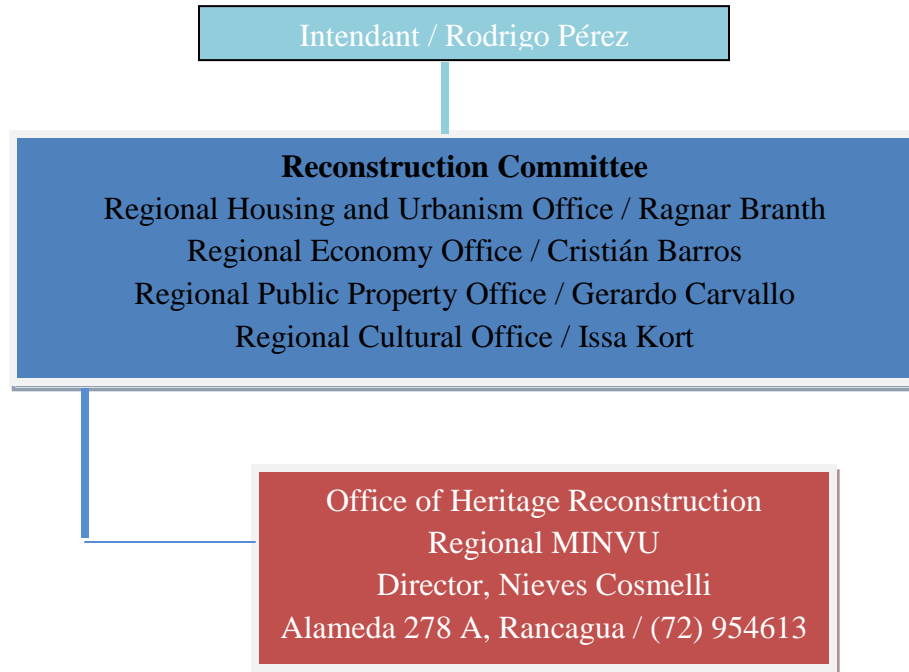
All these data are being uploaded as data sheets on the website [www.patrimoniourbano.cl](http://www.patrimoniourbano.cl).

The second immediate heritage measure was to channel the special resources of the IDB/SUBDERE/MOP to shore up and protect damaged buildings so that they would not continue to deteriorate because of replicas or winter rain.

### **C.3.2 Training and Institutional Framework**

In parallel with the cadastre work, instances of training have been established in restoration, earthquake-resistant construction of works of heritage and other works of art, which have been articulated with universities, foundations and NGOs to train manpower skilled in heritage recovery and safe reconstruction using adobe. Different pilot experiments have been set up with international collaboration and special Heritage Recovery plans have been implemented in localities such as Chépica, Lolol, La Estrella, Peralillo, Sauzal, Curepto and Vichuquén. In terms of the institutional framework, one of the greatest innovations has been the creation of the Regional Office of Heritage Reconstruction of the Region of O'Higgins. Set up at the initiative of the Intendant, the SEREMI and the VI Region MINVU, this agency has progressed in an integrated fashion, focused on rescuing the cultural legacy of the region, both material and intangible. It is headed by Nieves Cosmelli, an architect.

Chart of the VI Region Organization



**C.3.3 Special heritage recovery subsidy programs**

Two special programs have been adapted to aid families in the difficult task of reconstructing heritage homes. These subsidies are based on the principles of:

- recognizing the cost of heritage reconstruction: An additional UF 200 above the normal amounts for reconstruction or repair.
- possibility of repair or reconstruction: Separate from the certification issued by the DOM that indicates whether or not the property is recoverable, the eligible real estate will qualify for as much as UF 580 (+ additional) for recovery or repair of the first 50 square meters, under the commitment that the owners or third parties warrant that the rest of the urban façade will also recover its heritage character.
- eligibility: Properties located in a typical zone or urban track housing authorized by SEREMI, with proper justification given the value as a whole.

- flexibility: If the benefit is extended to commercial properties or persons or successions that own a second home, provided the repair is a critical factor in preserving the urban image.
- materiality: Adobe is recognized as a construction material, but special conditions are established to decide on the safe structure of the property.
- management model: All intervention must be “anchored” in a local organization. Locals must participate actively and it must be supported by the mayor.

**These principles apply via two types of subsidies:**

- Housing Solidarity Fund Program (Additional UF 200 for Heritage Properties): This subsidy will facilitate the reconstruction or restoration of the home following the original architecture in Zones of Heritage Interest (Properties and/or Zones of Declared Historical Conservation and Typical Zones).
- Family Heritage Protection Program (Additional UF 200 for Heritage Properties): A subsidy for repairs in Zones of Chilean Heritage Interest (Properties and/or Zones of Declared Historical Conservation and Typical Zones).

**Heritage Recovery Subsidies**

<p>Housing Solidarity Fund Program</p>	<ul style="list-style-type: none"> <li>• Additional UF 200 for Heritage Properties.</li> <li>• This subsidy will facilitate reconstruction or restoration of the home following the original architecture in Zones of Heritage Interest (Properties and/or Zones of Declared Historical Conservation and Typical Zones)</li> </ul>
<p>Family Heritage Protección Program</p>	<ul style="list-style-type: none"> <li>• Additional UF 200 for Heritage Properties</li> <li>• Subsidy for repair in Zones of Chilean Heritage Interest (Properties and/or Zones of Declared Historical Conservation and Typical Zones)</li> </ul>
<p>If not declared a heritage</p>	<ul style="list-style-type: none"> <li>• In localities where the Property or Zone has not yet been declared for Conservation or a Typical Zone. This subsidy will be defined on an exceptional basis by the Regional Seremis always provided there is technical information to support it. At the same time, the possibility is under study of making this subsidy more flexible to facilitate the recovery of the heritage of non-housing buildings where the identity of a town or locality is threatened by the lack of resources for a harmonic and coherent reconstruction.</li> </ul>

In localities where the property or zone has not yet been declared for Conservation or a Typical Zone, this subsidy will be defined on an exceptional basis by the Regional Seremis, always provided there is technical information supporting it.

At the same time, the possibility is under study of making this subsidy more flexible to facilitate the recovery of the heritage of non-housing buildings where the identity of a town or locality is threatened by the lack of resources for a harmonic and coherent reconstruction.

### C.3.4 Pilot Heritage Recovery Projects

#### Heritage Recovery in Chépica, La Estrella, Lolol and Peralillo



<b>PROJECT NAME</b>	<b>Plan for Recovery of Traditional Ground Architectural Heritage</b>
Responsibility	Institutions: VI Minvu Seremi / National Monuments Counsel / National Center for Restoration and Conservation / Council of Culture and the Arts / Architectural Bureau of the MOP / Architects Association / Engineers Association / Universities. Consultants: Fundación Altiplano
PLACE OF EXECUTION	Region VI Boroughs: Chépica, La Estrella Lolol, Peralillo, among others
TIME OF EXECUTION	25 months starting April 2010 (3 stages)

## Sauzal Heritage Recovery



<b>PROJECT NAME</b>	<b>Sauzal Heritage Recovery</b>
Responsibility	Enterprise: Friends of Sauzal Consultant: Universidad Mayor Counterparty: Sauzal Neighborhood Board / Municipality of Cauquenes / Intendancy and VI Minvu Seremi.
PROFILE OF BENEFICIARY (QUANTITY AND CONDITION)	Homes: (1/1/2010): 200 No. of Homes Damaged (6/23/2010): 198
PLACE OF EXECUTION	Region VI Borough: Cauquenes Locality: Sauzal

### C.4 Master Plans for Reconstruction of the Seaboard (PRES/PRBC)

As part of the Ministry of Housing and Urbanism “A United Chile Rebuilds Better” plan, priority has been given to attending to the affected zones along the seaboard in order to decide as soon as possible on the criteria necessary to ensure that rebuilding homes, cities, towns and localities soon is viable, to leverage their development and improve their quality of life after the emergency. **One of the main hindrances to reconstruction is being able to deliver and implement housing subsidies in areas that will be exposed to some degree of risk and that require restoration work and new investments in infrastructure.**

So, MINVU and several public and private entities have developed more than 20 studies of Master Plans (PRES/PRBC) for the main towns along the seaboard in the catastrophe area. These Master Plans encompass the localities of:

#### Talcahuano

**Dichato** Penco-Lirquén

**Juan Fernández** Tumbes

**Constitución** Lo Rojas

**Licantén Seaboard** Puerto Sur

<b>Pelluhue/Curanipe</b>	Tubul
<b>Cobquecura</b>	Llico
Perales	Lebu
Coliumo	Quidico
Caleta del Medio	Tirúa
Los Morros	Isla Mocha

The objective of these plans has been **to orient decision-making** regarding the **allocation of housing reconstruction/repair subsidies, prioritize works and projects for reconstruction of infrastructure through the optimization of resources, establishment of long-term investment criteria and planning of these cities** while encouraging economic, social and environmental development, adding instances of citizen participation and integrating those variables that will raise the urban standard of our nation.

The Master Plans involve technical studies and preliminary proposals for mitigative works, urban design, infrastructure, housing and instances of citizen participation for coastal localities that require integration and coordination of interministerial projects (mitigative works, fishing coves, river and coastal edges, rain water, sanitation, road works, parks, infrastructure, etc.). A project bank will be created to evaluate and schedule the reconstruction works.

The mechanism used to coordinate and finance Master Plans during the emergency phase was based on Public-Private Association Agreements between Municipalities, regional governments, businesses and social organizations in which MINVU was the guarantor to ensure that the result generated inputs valid in adapting the Zoning Plans and scheduling the investment plans after a technical, economic and social validation by the corresponding agencies. It was found that a few days after the catastrophe, in some of the more than 1,000 localities severely affected by the earthquake and tsunami, there was a spontaneous articulation of dozens of communities, towns and cities that were saved thanks to the leadership of their Intendants, Mayors and neighbors. Also effective was the action and generosity of businesses, foundations and civic organizations. Bit by bit these efforts have led to long-term commitments focused on developing master plans that provide a vision of the future development of those communities. In these cases, in the understanding that reconstruction will require the involvement of all participants in society, MINVU has defined a framework of action in order to channel the aid of the private sector and civic organizations in a manner that will enrich the construction work.

The scopes of these agreements are:

1. **RECOGNIZE LOCAL SELF-DETERMINATION: Do not impose but rather recognize** agreements on aid and collaboration led by municipalities and made with businesses, foundations and institutions.

2. **NON-BINDING EXERCISE:** The Master Plan does not exist in Land Planning Tools. It is understood to be a **prospective and participative technical exercise**.
3. **DO NOT SUPERSEDE THE PLANNING ROLE OF THE STATE:** Master Plans present **alternatives and recommendations** that will be **valuable inputs** in updating the Zoning Plans and prioritizing Investment Plans **after a technical and social validation**.
4. **RELEVANCE:** It is an opportunity to develop an integral and sustainable long-term view within the urgency. **MINVU must ensure that the results will contribute to reconstruction**.
5. **TRANSPARENCY:** **Roles, interests and responsibilities can be seen** and limited by the community and the country.

#### C.4.1 Tools

Given the **sense of urgency and the need to identify projects in time for the 2011 budget debate and keep years from going by without having the tools to contain the pressure from reconstruction** in the affected areas (like Chaitén/Santa Barbara), a period of 12 weeks was defined to develop the diagnosis and integral conceptual design of these Master Plans so as to **have the projects and their Social Profitability (RS)** and thus develop the detailed engineering studies, final profile and design between 2010 and 2011.

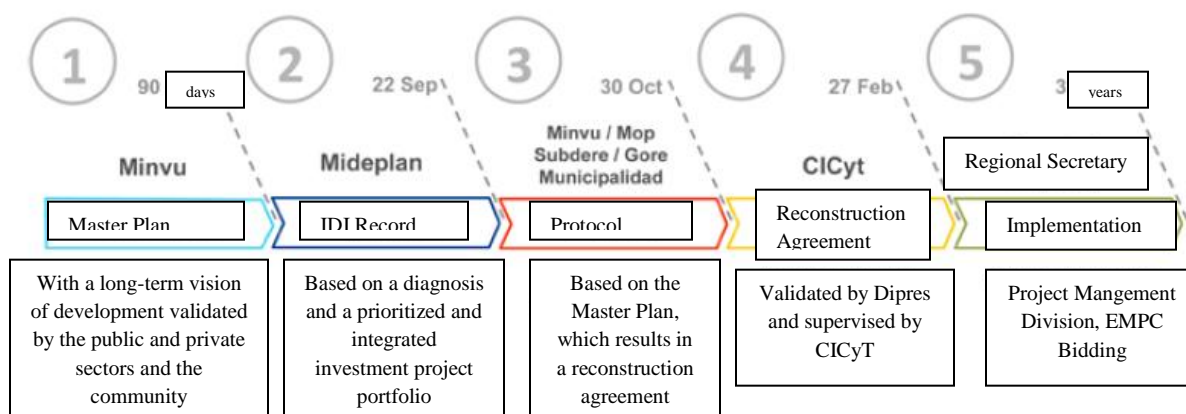
We have coordinated with the different ministries and regional governments to define the proper framework starting with the “**Committee of Ministers on Infrastructure, City and Territory**” (CICyT).

In addition to the Coastal Area Reconstruction Plans (PRBC), **Strategic Sustainable Reconstruction Master Plans (PRE)** are also under way for interior localities such as Talca (Pre Talca, concluded. Collaborators: El Bosque S.A. and Polis Consultores), Concepción, Curicó and Cauquenes (in preliminary conversations), which are added to the **100 Urban Regeneration Master Plans (PRU)** for small and mid-sized localities whose “urban image” is affected by the reconstruction process (See text on Interior Reconstruction Master Plans).

#### C.4.2 Periods

One of the critical aspects of the reconstruction deals with the times and periods that it currently takes to develop public investment projects. In this regard, **the Master Plans will provide a**

**complete portfolio of projects** required for reconstruction in affected localities within 5 months after the catastrophe. This project portfolio **must go through the proper instances of an economic and social evaluation in order to prioritize implementation**. This requires being able to immediately begin the design stages during 2010 once these plans have been validated regionally and approved by the CICyT.



### C.4.3. Amounts

The estimated investment for Seaboard Master Plans includes all intersectorial investment in urban works and reconstruction infrastructure. It does not include housing subsidies for each locality. In the case of Talcahuano, Dichato, Constitución and Juan Fernández, the estimates have a high level of detail. In the case of the other plans, the final information will become available as the Master Plans are completed during August.

These estimations include public financing, exclude possible concessions (Port and Interport Bypass) and the housing subsidy. The private investment originating in new business opportunities associated with the Master Plans is under study.

### C.4.4. Projects and Public Investment under PRES-PRBC18

Below are the projects and public investment for four 4 Master Plans: Talcahuano, Dichato, Constitución and Juan Fernández. The amounts are determined based on information provided through the PRBC and PRES and the source of financing will be multisectorial (MINVU, MOP, SUBDERE, etc.). The total investment in each plan was calculated in thousands of Chilean pesos using the population per borough as of 1/1/2010 for the purpose of determining the per capita investment in plans. In the case of Dichato, a floating population was added because it is a summer resort.

### Signature of Reconstruction Protocols

The Reconstruction Protocol is intended to serve as the basis for, and begin, the process to sign a Reconstruction Agreement, which will, in turn, be signed in the form of a Scheduling Agreement according to governing regulations.

The GORE, MOP, MINVU, SUBDERE and respective Municipality promise to take future actions to consummate the project contained in Master Plans, in particular to strengthen the coordination centrally, regionally and locally. These actions will be subject to the availability of sectorial and regional resources and of recommendations by MIDEPLAN.

It should serve to define an Action Plan and criteria for reconstruction of the seaboard of cities, towns and localities affected by the tsunami on February 27<sup>th</sup>. This will foster the delivery and implementation of housing subsidies and the implementation of public investments for restoration or new mitigative infrastructure in areas that are exposed to some degree of natural risk.

A total of 13 reconstruction protocols were signed in October for the 25 coastal localities affected by the tsunami.

#### C.5 Master Plans for Reconstruction of Interior Localities (PRE/PRU)

Reconstruction of our cities and towns not only involves housing, roadworks and regulation. MINVU's "A United Chile Rebuilds Better" Plan has taken special care that our cities, towns and localities will be able to preserve their identity heritage, leverage their development and improve their quality of life after the emergency. Studies of **Master Plans are under way for more than one hundred interior towns** affected by the catastrophe.

MINVU and several public and private entities have been articulating **various Strategic Sustainable Reconstruction Master Plans (PRE)** in these past five months for the main interior cities affected by the catastrophe. These master plans encompass, on a preliminary basis, the localities of Talca, Curicó, Cauquenes, Concepción and Valparaiso. Others may be added depending on their degree of complexity. **100 Urban Regeneration Master Plans (PRU)** are also included for these PRE for intermediate localities. They are currently being developed by the Urban Development Division of the MINVU.

The objective of these master plans is to **orient decision-making regarding the allocation of reconstruction/repair subsidies, prioritize works and reconstruction projects by optimizing resources, establishing long-term investment criteria and planning for these cities**, while at the same time encouraging economic, social and environmental development, including

instances of citizen participation and the integration of variables that will elevate the urban standard of our nation.

#### C.5.1 Strategic Sustainable Reconstruction Master Plans (PRE)

**The Strategic Sustainable Reconstruction Master Plans (PRE)** encompass technical studies and preliminary proposals for transportation works, urban design, roadwork infrastructure, housing and instances of citizen participation in interior cities that **require integration and coordination of interministerial projects** (on the banks of rivers, rainwater drains, sanitation, roadworks and transportation, parks, infrastructure, etc.). A **project bank** will be generated to evaluate and schedule the reconstruction works.

These plans have been presented as non-binding exercises that orient decision-making and facilitate a consensus regarding a vision of long-term development for the future of these cities. The Public-Private Association Agreement is the mechanism used to coordinate and finance the Master Plans during the emergency phase. It was made among municipalities, regional governments, businesses and social organizations. MINVU acted as guarantor to ensure that the outcome generated valid inputs in updating master plans and scheduling investment plans after technical, economic and social validation by the corresponding agencies.

Given the **sense of urgency and the need to identify projects in time for the 2011 budget debate and keep years from going by without having the tools to guide the pressure from reconstruction** in the affected areas (like Chaitén/Santa Barbara), a period of 12 weeks was defined to develop the diagnosis and integral conceptual design of these Master Plans so as to **have the projects and RS (social profitability)** during the second semester of 2010 and thus develop the detailed engineering studies, final profile and design between 2010 and 2011.

#### C.5.2 Urban Regeneration Master Plans for 100 Localities (PRU-100)

One of the main concerns of President Piñera deals with preserving the local identity and culture of the communities affected by the tragedy. PRUs or Urban Regeneration Master Plans have been deployed for 100 small and mid-sized localities whose “urban image” is being affected by the reconstruction process (in regard to their urban and architectural structure). The PRUs will help guide the harmonic reconstruction of localities, neighborhoods and cities whose urban character and identity are threatened by the dynamics inherent to reconstruction and that are worthy of tools that recognize and protect their value as a whole.

URBAN REGENERATION MASTER PLAN. Urban Area of San Javier, Borough of San Javier, Region of Maule. Diagnosis prepared by Regional DDUUs.

SPARKING PROJECTS

**1. Construction of the Consistorial Building in Restoration**

**Former School E-403.**

Former school E-403 was vacated after February 27<sup>th</sup>. This 1889 building is a priority for recovery because of its heritage. It can be reused for implementation of the Consistorial Building that suffered damages from the earthquake and is spread out over several buildings.

**Estimated Cost**

CLP 1,500,000,000

**Possible Sources of Financing**

1. FNDR (National Regional Development Fund)

**2. Construction of the First Segment of Divider with Bicycle Path on Avenida Balmaceda.**

Pedestrians in San Javier must use interstitial spaces between constructions and vehicle paths. Avenida Balmaceda must be consolidated by a continuation of the existing divider and the implementation of a bicycle path between downtown and the railroad station. The length is 2,240 meters.

**Estimated Cost**

CLP 500,000,000

**Possible Source of Financing**

1. MINVU



**Prioritized Project Portfolio**

**3. Improvement of Gerónimo Lagos Lisboa Park**

CLP 350,000,000

**4. Construction of Public Area – “Downtown Lobby” on Avenida Chorillos**

CLP 400,000,000

**5. Improvement of Rural Passenger Terminal**

CLP 350,000,000

**6. Two Bicycle Paths at Entrances to the City**

CLP 1,000,000,000

**C.5.2.1 The PRU’s involve four phases:**

**Phase 1: Urban Proposal**

A diagnosis of the urban situation to determine the pre- and post-catastrophe condition of each locality, define **an area of priority intervention**, articulate a **development vision** by highlighting potentials and key aspects from an urban viewpoint, and define the **sparkling public space** and roadwork projects. This stage is being developed by regional and municipal teams with the support of universities that have been working in the affected areas.

**Phase 2: Development of the PRU**

This stage is being bid out and encompasses a validation of the Phase 1 urban proposal (citizen participation based on “charrettes”), the development of **guidelines for design and regulations** for the area of intervention, the design of at least **two model housing projects** in harmony with the character of the locality, development of the architecture of **sparkling public space** and roadwork projects, presentation of a **management plan** and financing of the PRU.

### **Phase 3: Implementation and detailed studies**

This stage covers the regular programs of MINVU for investment in public space as well as the special reconstruction programs and Bicentennial works. The works for more than a dozen sparking projects developed in Phase 2 are expected to begin in 2011.

### **Phase 4: Inclusion of PRU to Zoning Tools (IPT) and Territorial Integration Study**

The analysis and design guidelines generated in Phase 2 will be relevant inputs in the update or modification of borough Zoning Plans. The recommendations resulting from the design guidelines can become ordinances and codes that orient construction in zones of priority interest. On the other hand, a territorial dimension will be added to integrate the productive development variables linked to the systems of cities and towns to the analysis of localities.

#### **C.5.2.2 Periods**

The goal for 2010 is to complete Phase 2 for close to 100 PRU in intermediate localities between the 5<sup>th</sup> and 9<sup>th</sup> Regions in coordination with the Regional MINVU SEREMIs and the Municipalities. Given the progress in different analyses and in the cadastre of the affected localities and the imminence of a strong increase in construction once winter ends, a development period of 75 days has been established for Phase 2 of the PRUs. 20 pilot PRUs began in June, developed by regional teams of the Urban Development Division that will be complemented by 80 PRUs that will be bid out and developed during 2010.

The main challenge of the PRUs is to attenuate the pressure from reconstruction without considering the thrust of the reconstruction. It is non-binding until the PRU components are integrated to the tools and standards now governing in, or in the process of elaboration for, each locality. Five months after the catastrophe, Regional Teams completed the Phase 1 diagnosis for the first 20 localities. Universities participating in the Architecture Biennial were asked to analyze the remaining 80 localities and a bid was called to develop Phase 2 of these projects.

#### **C.5.2.3 Localities**

The list of localities where the first 100 PRUs will implemented was defined based on a methodology that weighed variables such as the social risk of the population, the number of homeless, heritage components and other variables that were later compared with the regional teams in order to refine the prioritization for the neediest.

The localities are listed in the regional datasheets from pages 19 to 31.





PRBC-18: 8<sup>th</sup> Region Seaboard Reconstruction Plan

A few days after the catastrophe, the Intendant of the Bio-Bio Region announced that a Commission for Reconstruction of the 8<sup>th</sup> Region Seaboard (CRBC) had been set up. As the Executive Secretary of that Commission, she appointed Sergio Baeriswyl, an architect and urbanist, who formed a team of top professionals from the specialists of the Intendancy and the MINVU Seremi. They developed PRBC18 or the Plan for Reconstruction of the Seaboard for 18 localities in the Bio-Bio Region.

This initiative sets a very relevant precedent for local management and planning that could eventually serve as the basis for the creation of a regional urban project division in the medium term that would coordinate the planning and implementation of intersectorial projects within the framework of the Reconstruction Agreements. The objective of PRBC 18 is to plan the urban reconstruction of 18 coastal localities in the Bio-Bio Region affected by the earthquake-tsunami and assure a quality, inclusive and integral urban restoration that includes the risk of tsunami in the measures for protection of the urban seaboard of the Bio-Bio Region.

The localities included in PRBC 18 are Talcahuano, Dichato, Cobquecura, Perales, Dichato, Coliumo, Caleta del Medio, Los Morros, Penco-Lirquen, Tumbes, Lo Rojas, Puerto Sur, Tubul, Llico, Lebu, Quidico, Tirua and Isla Mocha.

The work under PRBC 18 has been based on a timetable that involves setting up a team of professionals distributed in three coastal zones. In the first stage, they worked on a diagnosis and analysis of the localities in conjunction with regional universities. Thereafter, they began the technical work in coordination with the municipalities and Minvu's Urban Reconstruction Bureau.

The goals of PRBC 18 are to have developed 18 Master Plans and Integral Development Plans for the localities studied by the end of September 2010. This will lead to a definition of specific detailed studies and the implementation and execution of the initial reconstruction works before the first anniversary of the catastrophe. 18 preliminary master plans were finished and validated by instances of participation by the end of five months after the catastrophe and there is progress in the preliminary assessment of investment costs for the purpose of including those costs in the 2011 budget debate and the debate on reconstruction funds.

## **A CHALLENGE OF NATIONAL UNITY AND DECENTRALIZATION**

The meaning of unity proposed in the “A United Chile Rebuilds Better” plan is that we all be involved in the reconstruction. It would be a mistake to pretend that the State could, centrally, define the reconstruction of more than one thousand cities and towns that have been destroyed. So, the plan involves an exercise at decentralization and collaboration between the Government and civil society that has no precedent in our history.

It is not only about collaboration with local communities and institutions that have contributed resources and management capacity during the days following the emergency. It is also about a commitment to delegate a considerable part of the management and decision-making to municipalities, regional agencies and Intendancies as they know their needs and those of their communities better. The deployment of this plan will put many communities and local leaders to test and the government will be ready to help and aid anyone who is challenged by the complexity of the task.

In these difficult months, we have proudly seen how communities in small and large localities have articulated with the aid of civic organizations, businesses and regional agencies to move quickly in planning the reconstruction and recovery of their heritage.

Spontaneous alliances and initiatives have sprung up all over and MINVU has set up a work structure by which all these initiatives can be channeled and formalized as agreements and plans that can be implemented and are viable in the future. Experiences like these are multiplying throughout the catastrophe zone. Minvu’s role has been to ensure that these exercises comply with the technical and citizen validation required and thus become relevant inputs in the reconstruction investment plans.

Progressing quickly while procuring a long-term vision, integrating everyone and trusting in local capacities, recovering our heritage and projecting ourselves in the future are the challenges and opportunities that we are willing to assume so that united, we will rebuild a better Chile.