

Disaster Recovery Management and Urban Development: Rebuilding Cities after a Disaster



Recupera Chile Project, Cobquecura case Final Report

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Felipe Sandoval Vodanovic
Jesus Iglesias Cuervo

1. Introduction	3
2. Patrimonial heritage recovery	5
3. Cobquecura tourism recovery abstract	15
4. Tourism model for Cobquecura	16
5. Historical background	18
6. Tourism model in Asturias	20
7. Adaptation of the model to the case of Cobquecura	23
8. Strategy for tourism recovery in Cobquecura	33

1. Introduction

On February 27, 2010 an 8.8 magnitude earthquake struck Chile. The earthquake affected a 600 kilometer area, doing the most damage in the Bio Bio, Maule and O'Higgins regions. Over 520 people lost their lives and 370.000 homes were damaged or destroyed in more than 900 communities.

In March of 2011, the David Rockefeller Center for Latin American Studies at Harvard University organized a seminar where Harvard faculty, including president Drew Faust, shared recovery best practice ideas with government, academic and foundation leaders in Chile. In meeting with government officials in charge of the reconstruction effort, it was agreed that what was missing was a community-focused approach. The result of the conversation was the creation of the Recupera Chile initiative, launched by the David Rockefeller Center (DRCLAS) office in Santiago as a Harvard initiative to create a network of partners to work in a few communities as a proof of concept of how community-based recovery could work. The goal is to use these communities as a model that can be replicated elsewhere. Working with the PRBC18 master planning group for the Bio Bio Region, DRCLAS selected the communities of Dichato, Perales and Cobquecura (epicenter of the earthquake) as the communities to partner with to create a long-term engagement to support their recovery.

Instead of being a one-off project, the Recupera Chile initiative is about really making a difference in these communities - a deep-dive involvement in their recoveries. The value is that the project will have a direct immediate impact, but will also be part of the longer-term impact of ensuring the recovery of these communities over time.

In January 2012, a team of 20 Harvard Students and 12 faculty and staff worked on economic recovery planning in these coastal communities devastated by the earthquake and tsunami (Dichato, Perales and Cobquecura). The January team identified six priority economic recovery projects needed in these communities to be able to restore livelihoods and rebuild the economic activity.

- Marine and coastal diagnosis and restoration
- Aquaculture evaluation and planning
- Land damage assessment
- Patrimonial heritage recovery
- Development of Tourism
- Building entrepreneurial capacity through training

As part of the course in Disaster Recovery Management and Urban Development of the John F. Kennedy School of Government, the students participating in the Recupera Chile initiative have decided to work solely with the community of Cobquecura in the projects of Patrimonial Heritage recovery and the Development of Tourism.

Cobquecura

The commune of Cobquecura, located along the coast of the Pacific Ocean at the coordinates 36 '07" south latitude and 72 '47" west longitude, belongs to the Province of Ñuble and marks the northwest boundary of the Bio Bio Region of Chile. According to the Census 2002, there are 5,687 inhabitants living in an area of 538.25 square kilometers with two urban centers; Cobquecura and Buchupureo (the old port), which is currently a surfers' hub.

The town of Cobquecura is an area of large-scale commercial forestry (tree-plantations), with very little absorption of local labor into this industry. For this reason there is a high unemployment rate (20%). The emigration rate is 9%, as people leave Cobquecura to seek employment elsewhere. The community mostly lives on beach tourism. In 1992, due to the presence of sea lions and unique rock formations, the beach of Cobquecura was declared by The Council of National Monuments a "Natural Sanctuary".¹ In 2005, the old town center of the village of Cobquecura, with buildings from the XVIII and XIX centuries, was declared by The Council of National Monuments a national patrimony (heritage) district under the category of "Typical Zone".²



Buchupureo beach



Natural Sanctuary "Loberia"



Cobquecura's typical zone

¹ According to the Council of National Monuments, dependent of the Ministry of Education the category of "Natural Sanctuary" are terrestrial or marine areas of conservation interest to science or to the State, because they show species, real or important natural formations from the point of view of zoology, paleontology, geology, botany or ecology.

² According to the Council of National Monuments, the categories of "Typical Zone" are sets of urban or rural property, urban value, and environmental landscape. They can be groups of buildings, parks, wilderness, etc.

2. Patrimonial Heritage Recovery

Due to the 2010 earthquake, 40% of the patrimonial (heritage) buildings in the “Typical Area” were severely damaged, while another 36% had minor damage. This tragedy had a devastating effect on people’s lives, on the local economy, and on tourism.



The goals of this project are:

- Promote Cobquecura as Chile’s capital for earthen (adobe) patrimonial studies and experimentation
- Attract new investment to secure a sustainable development for the community
- Provide enough jobs to not only retain the local young population from migrating to other cities, but also to attract people from other regions.

In order to achieve these goals, we defined specific objectives:

1. Identify the different actors at a national level that have been involved in patrimonial (heritage) reconstruction (political institutions and agencies, community leaders, technical experts, other).
2. Identify Chile’s funding sources for patrimonial reconstruction as well as international funding.
3. Understand the dynamics and potential obstacles of reconstruction of earthen (adobe) patrimonial buildings, so to create a plan to empower the community in the decision making process of the village reconstruction.
4. Meet with the community to analyze and plan for the implementation of Cobquecura’s new Master-plan (MINVU 2010)³ and the town’s economic development plan (PLADECO 2009)⁴.
5. Analyze and compare international experiences in the use of earthen (adobe) patrimonial constructions in relation to what has been done in Chile.
6. Promote the research, training and diffusion of patrimonial construction techniques.

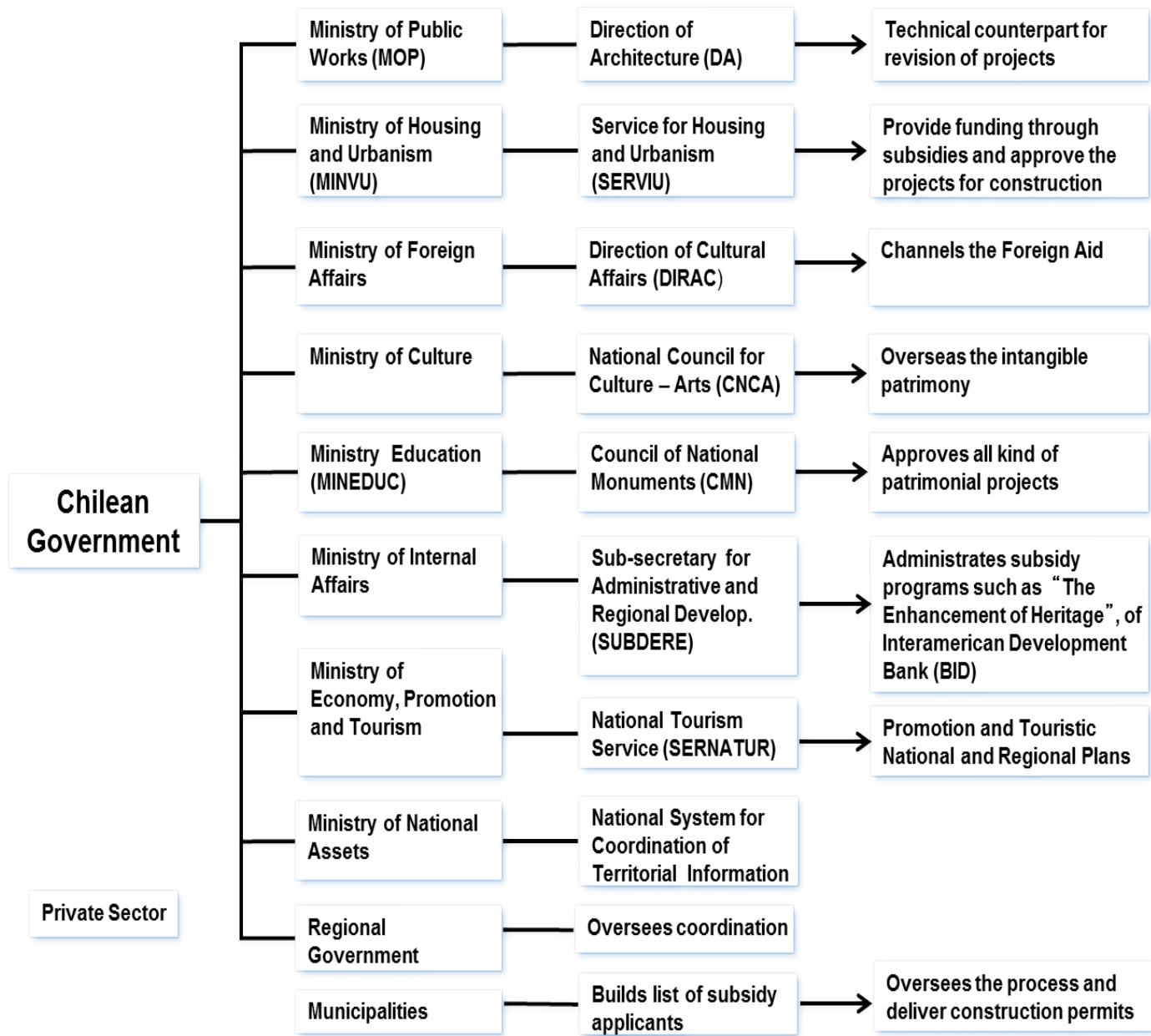
³ Ministry of Housing and Urban Development (MINVU), 2010. Plan de Reconstrucción del Borde Costero PRBC-18, Plan Maestro de Cobquecura.

⁴ Municipality of Cobquecura, 2009. Plan de Desarrollo Comunal (PLADECO)

In order to understand the Patrimonial Heritage Recovery process of the village of Cobquecura, we first have to describe which institutions are participating, their role and responsibility, as well as what is meant by the term “patrimony,” and which categories of reconstruction programs Cobquecura can apply for.

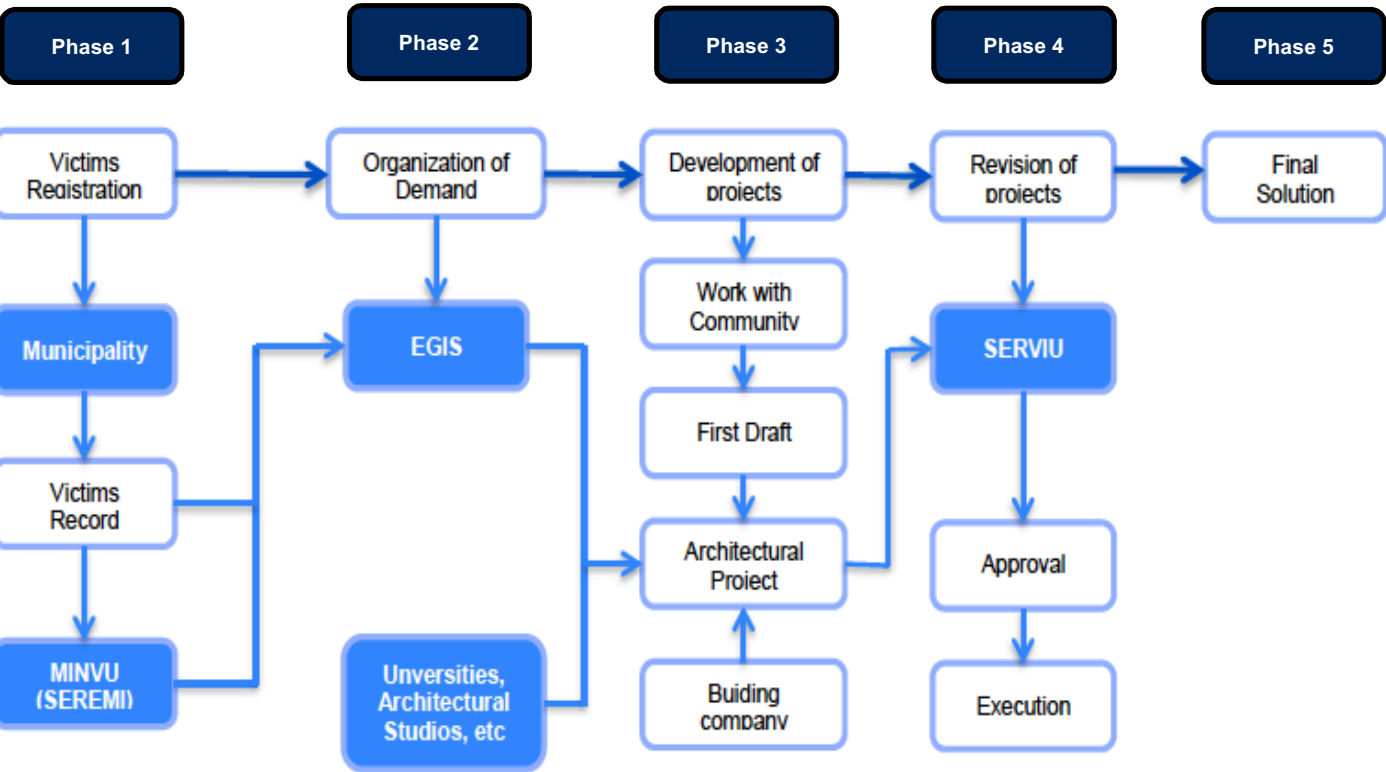
Institutions involved in Patrimonial Heritage Recovery

The following map lists all the national government agencies, local authorities, and private entities who have been directly participating in the different stages of Chile’s Patrimonial Heritage Recovery.



Among the various institutions dealing with patrimonial heritage shown on the previous map, the key players are: The Ministry Housing and Urban Development (MINVU) and its sub-department, the Service of Housing and Urban Development (SERVIU), the Council of National Monuments (CMN) under the Ministry of Education (MOE), the Department of Architecture (DA) of the Ministry of Public Works (MOP) and the Sub-Secretary for Administrative and Regional Development (SUBDERE).

These institutions of government each have different missions and responsibilities. For example, the Council of National Monuments (CMN) under the Ministry of Education (MOE) has the responsibility of reviewing and approving each and every patrimonial project defined in the existing territorial planning instruments, such as the Historic Preservation Zones of the Communal Regulating Plans (for those in force as published in the Official Journal, as well as for those proposed and pending approval at the time of the earthquake). The Council of National Monuments has responsibility for current and proposed “Picturesque” or “Typical Areas,” defined by the National Monuments Council of Chile as provided by Law 17.288 (1970). The Ministry of Housing and Urban Development (MINVU), historically in charge of the construction of social housing, was put in charge of the National Reconstruction Program. So MINVU is planning, reviewing, and approving all housing reconstruction projects. And MINVU is funding and managing the construction of each and every housing reconstruction project through its different subsidies. The Sub-Secretary for Administrative and Regional Development (SUBDERE) and the Ministry of Public Works administers a special subsidy provided by the Inter-American Development Bank (IDB). There are also several local and regional actors, such as the regional government (GORE), the municipalities, communities, the Entities of Administration of Social Property (EGIS), and the Provider of Technical Assistance Services (PSAT), which assist families in all necessary aspects (technical and social) to access and implement a housing subsidy.



Methodology for identifying Heritage Areas (MINVU 2011, 18-19)⁵

The methodology to identify areas damaged by the earthquake and tsunami that need specialized historic reconstruction (as opposed to non-heritage areas that require only simple, non-historic reconstruction techniques) has been done on the basis of (1) the areas defined in the existing territorial planning instruments, such as Historic Preservation Zones of the Communal Regulating Plans, both as published in the Official Journal and as proposed and pending approval at the time of the earthquake 27F. And (2), areas which are “Picturesque” or “Typical” (current and proposed) as defined by the National Monuments Council of Chile as provided by Law 17.288 (1970) on national monuments. And (3), CMN has been working with municipalities to integrate other areas of heritage interest that were not designated or under study at the time of the earthquake but have some heritage values and attributes. Thus, the territorial level Reconstruction Plan identifies 4 types of Estate property categories, considering the official categories and those not declared by law:

1. The housing in “Typical Zones” (TZ) or Picturesque areas are declared as such by a Decree of the Ministry of Education, in agreement with the Council of National Monuments (CMN). To intervene in these areas, applies a document called Instructions or Guidelines of Intervention. The proposed intervention must have prior authorization of the CMN to obtain the work permit. Cobquecura has an authorization from CMN, approved on September 2010.
2. The same institution also defines individual properties of heritage interest in “nature” or “national significance,” called Historical Monuments (MH) by the issuance of a decree of the Ministry of Education, as stipulated in legislation. Interventions on Historical Monuments also require prior authorization of the CMN.
3. Housing in Historic Conservation Zones (ZCH) is declared as such by the Communal Regulating Plan of each municipality, as provided by the General Law of Urban Planning and Construction (LGUC) and General Order (OGUC). To intervene in Historic Conservation Zones, requires prior authorization from the respective Regional Ministerial Secretary (SEREMI). In many cases, the OGUC, the Sectional Plan, or a Local Ordinance defines the form, criteria or conditions to be applied in those areas.
4. These same instruments also define properties of heritage interest individually, called Real Estate of Historic Preservation (ICH), and shall also be subject to prior authorization indicated above.

In addition to protecting and restoring existing heritage districts, the methodology aims to recognize and integrate new areas and buildings of historical interest, which do not yet hold any of the official declarations referred to above. One way of doing this is through a new support tool for urban planning, the PRU or Urban Regeneration Plans. A second way is through designation by the SEREMI and regional teams that define places as “Heritage Areas of Concern,” which while not “Typical Zones” or “Scenic Zones,” or “Historic Conservation Zones,” also have heritage features.

⁵ Ministry of Housing and Urban Development (MINVU), 2011. Plan for the Patrimonial Reconstruction, 18-19. Ministry of Housing and Urban Development, Chile.

Key Obstacles and Response Actions of the Patrimonial Reconstruction process (MINVU 2011, 20)⁶

Obstacles	What is being implemented
<ul style="list-style-type: none"> • Need to institutionalize the patrimony recovery, create and implement the Plan for Patrimonial Reconstruction. • The funding available through subsidies FSV and PPPF for patrimonial recovery or rebuilding are not enough. • Issues of ownership and title succession. • Absence of EGIS (private entities contracted by the government to provide technical assistance to residents seeking/implementing a housing subsidy). A lack of architecture and construction professionals to address the reconstruction, especially in rural areas. • Ignorance of the Plan for Patrimonial Reconstruction by victims and municipalities. • Lack of policy and technical capacity in the building of adobe construction. To date the structural engineer has to take full responsibility for the seismic stability of any patrimonial restoration project. 	<ul style="list-style-type: none"> • Formation of patrimonial teams in SEREMI and SERVIU for the affected regions. Creation of a patrimonial committee between SUBDERE, MOP and MINVU. • Additional subsidy of 200 U.F. in patrimonial areas. Focus the plans of urban regeneration to specific projects where patrimonial areas coincide. • The victim may make a nomination within regulation of title BB.NN, saving approximately 14 months in the process. In cases of succession it is allowed to bid subsidies to those who have effective possession or pending possession. • Manage funds for the design of specific projects (engineering, architecture). Use of PRU plans. Involve universities in the basic survey of architecture to facilitate the work of EGISs. • Dissemination of plan assets: leaflets, documents, website. Communicate with owners and municipalities about the programs to re-build. Buy plots critical to the recovery of the urban image of those localities with less SERVIU resources. • Presentation of MINVU Code for Structural Intervention in Earthen Patrimonial Constructions⁷. Conduct training of building systems in adobe through the Catholic University and Altiplano Foundation for construction workers and local contractors.

⁶ Ministry of Housing and Urban Development (MINVU), 2011. Plan for the Patrimonial Reconstruction, 20. Ministry of Housing and Urban Development, Chile.

⁷ In 2010 MINVU asked a panel of experts (constituted under the Institute of Construction) to develop the first "Code for Structural Intervention in Earthen Patrimonial Constructions". On June 2011 the final report was delivered.

Reconstruction Subsidy FSV1

This reconstruction subsidy applies to homes with a “Certificate of Uninhabitable Damage” entering via the Solidarity Fund Housing Program (FSV Type I) Construction on Own Site and that have an EGIS (Entities of Administration of Social Properties). If the certificate issued by the Director of Municipal Works (DOM) considers housing as uninhabitable, the eligible properties have the amount of money needed to rebuild a 50 m² home or 50 m² portion of a larger home (a base subsidy of UF 380 for reconstruction + a UF 200 subsidy if the home is in a patrimonial area). This means that priority is given to recover the "urban image" of the town and that the owner or third parties is responsible for ensuring that the rest of the building (for buildings larger than 50 m²) also be rebuilt respecting the heritage values. Therefore, the Ministry Housing and Urban Development (MINVU) provides UF 580 plus an additional UF 60 and UF80 for demolition works, connection to services, etc., in rural and urban areas respectively. When values are converted into American dollars (1UF=\$21,500 CP / US\$1= \$500 CP), for 50 m² there are available US\$27,500 (rural areas) and US\$28,400 (urban areas). It should be noted that to be eligible for this reconstruction subsidy, an EGIS is required.

An EGIS is a private entity (often for-profit) that is hired by the government to identify and gather/organize homeowners in need of the subsidy. The EGIS provides advice to the homeowners (free of charge to the homeowners) for how to apply for and manage the implementation of the subsidy. The EGIS provides technical assistance to homeowners throughout the housing reconstruction process. In many cases, in urban and town-centers, the EGIS serves in the role of organizing the homeowners into a group and handling the housing construction as a single project – this is especially true when the housing being built is a social housing apartment block, social housing townhouses, or when the reconstruction is being done for an entire block or subdivision. An EGIS might also work in rural areas where scattered, isolated households (often farmhouses) were destroyed and the homeowners need the technical assistance to apply for and manage the subsidy.

Repair Subsidy PFFF

This subsidy for repairs (not reconstruction/rebuilding) applies to homes with a “Certificate of Damage” (with possibility of repair) that enter via Protection Family Heritage Program (PPPF) and have an EGIS. If the certificate issued by the Director of Municipal Works (DOM) considers housing as habitable, then the properties have the amounts to repair the damage (a base subsidy of UF 55 for repairs + a UF 200 subsidy for patrimonial areas). The subsidy is based on a recovery that prioritizes the "urban image" of the town. Therefore, the Ministry of Housing and Urbanism (MNIVU) provides up to UF 255 to repair housing so as to respect the heritage values of the patrimonial areas. In special cases where the damage is greater (due to structural damage, or additional damage as a result of aftershocks, rain or other

factors), the applicant may request a reevaluation by the DOM and apply for access to UF 580 to repair the resistant structure of their homes, reinforcing structural elements such as walls, beams, roofs, foundations, or other structural or protective components. When these subsidy amounts are converted into U.S. dollars (1UF=\$21,500 CP / US\$1= \$500 CP) this repair subsidy in patrimonial areas is US\$11,000 and US\$25,000 for the exceptional subsidy. It should be noted that an EGIS is required for this repair subsidy.

Reconstruction Subsidy D.S. 40

This reconstruction subsidy applies to homes with a “Certificate of Uninhabitable Damage” or entering via the Housing Subsidy Program D.S. 40. If the certificate issued by the Director of Municipal Works (DOM) considers housing as uninhabitable or damaged, the homeowner can potentially opt for this subsidy, where an EGIS is not required. In this case, the homeowner is responsible for hiring and managing their own contractor and therefore manages their own reconstruction (rebuild) or repairs. These properties are eligible to receive the subsidy amount based on whether their damage was “uninhabitable” (requiring reconstruction) or “habitable with repairs” (requiring repairs). Houses that require reconstruction are eligible for a base subsidy of UF 350 for reconstruction + 200 subsidy for patrimonial areas) for the rebuilding of a 50 m² area, meaning that this subsidy prioritizes recovery of the “urban image” of the town. The Ministry of Housing and Urban Development provides up to UF 550. When converted into American dollars (1UF=\$21,500 CP / US\$1= \$500 CP) the subsidy is up to US\$23,650. Since this allowance is not required to have an EGIS, contractors must comply with the DS 63 National Register of Home Builders private mode. People can also apply to auto construction housing, regularized before the Municipality.

Commissioning Heritage Value Program

In an e-mail to Felipe Sandoval on February 2012, the Chilean structural engineer Mr. Gerardo Fercovic⁹ commented that, before the 2010 earthquake and tsunami, the government subsidies explained above, were the primary funding tools used in the restoration and rebuilding of earthen (adobe) patrimonial constructions. And, since 2007, Chile has been applying for grants of the Commissioning Heritage Value Program. This grant under the Inter-American Development Bank (IDB) has been administrated in Chile by the Sub-Secretary for Administrative and Regional Development (SUBDERE) and operated as a technical counterpart by the Department of Architecture (DA) of the Ministry of Public Works (MOP). The main difference between this grant and the other subsidies is that it is mostly focused on the restoration and rebuilding of public buildings with heritage values (not private property).

⁸ Ministry of Housing and Urban Development (MINVU), 2011. Plan for the Patrimonial Reconstruction, 20. Ministry of Housing and Urban Development, Chile.

⁹Mr. Gerardo Fercovic (structural engineer member of the panel of experts mandated to develop the first Code for Structural Intervention in Earthen Patrimonial Constructions), e-mail message to Felipe Sandoval, February 2012.

While talking to the Chilean architect expert in Earthen Patrimonial Constructions, Mr. Patricio Arias¹⁰ about our recommendations to the village, he suggested that the city of Cobquecura should set up (with the Bio Bio Regional MOP representative) the nomination of an important public building, for example the old chapel, which before the earthquake was used as the village's community center. According to his experience, because most of the patrimonial buildings in Chile are Chapels or Churches, the IDB has been open to finance these kind of buildings which are considered to be of a semi-public nature. He described a similar case that was presented years ago in the city of Valparaiso, for the "Espacio Santa Ana," once known as Chapel Santa Ana.

Costs of Construction Using Heritage Techniques

In regard to the subsidies available for Reconstruction and Patrimonial Recovery, on April 2012, Felipe Sandoval received an e-mail from Dr. Luis Eduardo Bresciani¹¹ (former Head of the Urban Development Department of the Ministry of Housing and Urban Development). According to the information at the Universidad Catolica de Chile, educational institution involved in numerous projects of patrimonial restoration, the cost per square meter to restore or rebuild in earthen patrimonial techniques such as adobe, quinchá, etc., are approximately UF 18 per square meter. In contrast, the cost of basic housing varies between UF 9 and UF 12 per square meter.

According to information gathered, the size of a patrimonial construction in the "typical zone" of Cobquecura, averages 250 square meters. When we do the calculation:

Currency Conversion Rate:	1 UF= \$21,500 CP / 1 US\$= 500 CP
Cost of Heritage Construction per Square Meter:	UF 18 per square meter
Average Patrimonial Home in Cobquecura:	250 square meters
Cost to rebuild a patrimonial home in Cobquecura:	250 sq m x 18 UF= UF 4,500
Cost to rebuild in U.S. Dollars:	US\$ 193,500

As shown here, the subsidies offered by the government are not enough to cover the cost of rebuilding the average heritage (patrimonial) home in Cobquecura using the traditional/heritage building techniques. So extra help must be sought in order to fully restore Cobquecura heritage buildings.

¹⁰ Mr. Patricio Arias (Chilean architect expert earthen patrimonial constructions), skype call with Felipe Sandoval, May 2012

¹¹ Dr. Luis Eduardo Bresciani (Doctor in Urbanism at Harvard GSD, Former and current Head of master in Urban Projects, Universidad Catolica de Chile), e-mail message to Felipe Sandoval, April 2012

Master Plan for Cobquecura

The PRBC18 Master Plan of Cobquecura was developed by the Ministry of Housing and Urban Development (MINVU) and was the first time in which the community participated in a true consulting process. As a result of the process, the plan shows twenty relevant urban infrastructure projects (green areas, new roads, improvement of existing streets, creation of boulevards, etc.) for a \$10 million USD total investment.

While talking to Dr. Luis Eduardo Bresciani¹² he indicates that the Master Plans developed by MINVU have no legal power nor do they create any obligation of the government of Chile. As a planning instrument, they do not exist in Chilean legislation or in the budget law. In his opinion, they are essentially a diagnosis of the damage and then an action plan that serves as a guide for the reconstruction. This means that implementation of the plans is largely dependent upon the commitment of the regional governors and the local municipalities. Despite this, it is noteworthy that the plans had a high level of community participation and are a compilation of the projects that the community wants to see implemented. The Bio Bio region, in which Cobquecura is located, has been more diligent about implementing the plans than other regions in Chile.

Another problem, according to Dr. Luis Valenzuela¹³, is that most Master Plans are focused on urban design and many are not inter-disciplinary in scope (they do not cover economic recovery, psycho-social recovery, etc.). What communities need is a way to translate the Master Plans into funding systems and official public policy with the force of law. The elements within the master plans become disaggregated within the existing funding mechanisms, with different ministries responsible for different projects. Dr. Luis Valenzuela says that you cannot easily get funded as an inter-disciplinary (inter-ministry) “master plan”.



¹² Dr. Luis Eduardo Bresciani (Master in Urban Design, Harvard GSD, Former Head of Urban Development Department at the Ministry of Housing and Urban Development and current Head of master in Urban Projects, Universidad Catolica de Chile), skype call with Felipe Sandoval and Jesus Iglesias, April 2012.

¹³ Dr. Luis Valenzuela (Director of Territorial Intelligence Center, Universidad Adolfo Ibáñez), skype call with Felipe Sandoval and Jesus Iglesias, March 2012.

The implementation of the Master Plan in Cobquecura is moving ahead according to Ms. Claudia Solar¹⁴, Chilean architect and coordinator of the patrimonial team of SERVIU Bio Bio, who points out that as of May 2012, the Ministry of Housing and Urban Development is already working on the design of the first five of the twenty projects proposed in the Master Plan.

Cobquecura's Challenges for Patrimonial Reconstruction

In her email to Felipe Sandoval on May 9, 2012, the coordinator of the patrimonial team of SERVIU Bio Bio said that the Ministry of Housing and Urban Development subsidies (through the Housing Solidarity Fund Program and Protection Program Homestead) has allocated for reconstruction, rehabilitation and repair, a total of 73 houses located in the Typical Zone and Urban Heritage Area of Cobquecura. Currently, and under direct administration of SERVIU, they are starting work on 32 of these projects. These are homes where the original buildings could not be repaired, so it is necessary to reconstruct new housing projects using conventional materials that are seismically safe. Ms. Solar states that the 32 new house projects were reviewed and approved by the Council of National Monuments and these follow the Instructions or Guidelines of Intervention set for Cobquecura. As seen in the image shown below, the difference between the original construction and the new re-invention is large. In part, this is due to the subsidies being set to cover smaller buildings (as discussed above), and in part, due to the use of conventional building techniques versus using the traditional heritage methods. The new buildings are seismically safe facsimiles, but are not faithful heritage restorations.

One of the problems is that there is no building code for seismically safe adobe (earthen) construction. Under current building codes, building in the historically accurate traditional technique of adobe, is not permitted. There are several techniques developed to make adobe construction seismically safe, but these have not yet been included in the building codes. Another challenge that Cobquecura faces is for the local authorities and community leaders to find partnerships, strategic associations, and donors in order to maintain the



“urban image” of the town (as called for in the Plan for the Patrimonial Reconstruction). Cobquecura also needs to lobby the Ministry of Housing and Urban Development for a substantial increase in the amount of the subsidies offered for patrimonial reconstruction, and for relaxing the MINVU position on those citizens who own a second house in the village, so they can also access the subsidies and make repairs to the heritage buildings.

¹⁴ Ms. Claudia Solar (Chilean architect and coordinator of the patrimonial team of SERVIU Bio Bio), e-mail message to Felipe Sandoval, May 2012

Recommendations

National Level (Ministries)

- Advocate for models of effective collaborative co-management of the public policies, so as to fix the Master Plans in legislation and to ensure ongoing community involvement
- Educate the population on seeing patrimony as a development resource rather than a burden.
- Approve the MINVU Code for Structural Intervention in Earthen Patrimonial Constructions, so to have a legal framework to work with on seismically safe adobe construction projects.

Regional Level (GORE)

- Advocate before the Congress “Special Commission of Historical and Cultural Heritage” formed in 2010, for better subsidies and the revision of the tax incentives (Territorial Tax Law and Cultural Donations Law) to strongly encourage the patrimonial preservation.

Local Level (Municipality)

- Advocate for financial and technical support from the private sector or foundations (e.g., learn from the experiences of Curepto and Constitucion and experiences of collaboration like in the Mediterranean Region)
- Apply for funding sources such as:
 - “Commissioning Program Heritage Value”, for the former chapel restoration (IBD)
 - “National Fund for Development of Culture and Arts” (FONDART)
- Promote the creation of a technical training and research center and a rural museum of adobe. The perfect strategic partner would be the Technical Institute DUOC (under Universidad Catolica de Chile), considering they have technical careers related to patrimony and tourism. Also, next year they will be in charge of the organization of International Iberoamerican Seminar of earthen architecture and construction (SIACOT)¹⁵
- Increased community engagement/involvement in the decision making process and planning process of the village, perhaps through projects that bring them together (e.g., restore the former chapel and return it to its use as a community center).

¹⁵ Mr. Patricio Arias (Chilean architect expert earthen patrimonial constructions), skype call with Felipe Sandoval, May 2012

3. Cobquecura Tourism Recovery

The purpose of this section is to develop a strategy for a successful recovery of the tourism industry in Cobquecura. This strategy for Cobquecura consists of the application in Cobquecura of some solutions that were successful in another place with a similar character as Cobquecura (similar weather, landscape and geography). Tourism is a concept that refers to many activities that often have dependencies on economic, social, and cultural conditions in the region and nation. Therefore, it does not make sense to design and implement a tourism program in Cobquecura without taking into account the relationship with the entire region of Bio Bio and Chile in general.

4. Tourism model for Cobquecura

Chile can be considered a very centralized country. In spite of the existence of several regions, such as Bio Bio, the authority of those regional governments is limited and they do not have their own legislatures or revenue streams independent of the national government. So the main responsibility for touristic policy and regulation lies with the national government and with the municipalities.

The solution proposed for Cobquecura tourism recovery is the model of “Rural Tourism” developed in Spain in the 1990s. More precisely, the model that was developed in the Autonomous Region of the Principality of Asturias. This “Rural Tourism” model was successfully applied in that region, and it should be adapted to work within the administrative organizations of Chile, the Bio Bio region, and Cobquecura. The reasons for choosing this model for Cobquecura and the Bio Bio region are:

- It was a successful initiative that fostered an increase in tourist visits and spending (dollars) in a region that was not a traditional touristic destination.
- Since the 1960s, Spain has had a strong background and accumulated experience in tourism development, with some tourism development initiatives in Spain started as early as the 1920s (Paradores Nacionales National Company).
- The Asturias Region has many similarities with Bio Bio: Natural preserved areas, unique fauna, coastline and coastal mountains, good beaches for surf, hiking, and tourism, similar weather, and similar distance to the capital of their respective countries.
- It was implemented in a region that was affected by a loss of population (especially the young) who moved to urban areas.
- It was implemented in a region that has suffered a gradual loss of the traditional arts and crafts.
- It was applied in a region with a strong and independent character, much like Bio Bio.
- It allowed preservation of traditional buildings and some handcrafts industries.
- It is specifically oriented toward residents, homeowners, local entrepreneurs, and local small businesses. Business generated with this initiative remains at a small scale and stays within the local economy.

The region of the Principality of Asturias is located in the Northwest coast of Spain, and in spite of being a coastal province, it was not included in the major tourist routes in Spain.

There were several reasons for this:

- Spain is one of the most visited tourist destinations in the world due to its weather and beaches, but Asturias is in a rainy and cold region that looks similar to Ireland, Switzerland or New England rather than to a Mediterranean environment.

- Communications to the region were bad: The highway that connected the capital of the province with Madrid was not finished until 2000. In spite of the fact that there was a commuter rail system as a consequence of the old coal mining and iron factories, the rough terrain and a population that was spread out across the geography, there was a lack of good roads within the region. Many areas in the province could be considered as being very isolated.

On the other hand, there were reasons that gave the region a strong touristic potential:

- The relative isolation of the region allowed for the preservation of many local traditions and lifestyles that had disappeared completely from other Spanish regions: Milk farms, local handicraftsmen, and a well preserved and rich cultural heritage.
- Being out of the big tourism routes and not being considered an important destination, contributed to the preservation of the coastal areas, traditional villages, and historic buildings. The region was also spared from the haphazard big development of the 1960's, and lacked the big hotels and urbanism that affected the main touristic areas along the Mediterranean coast of Spain. This gives the region an unspoiled feel.
- The tourism prices were low and the touristic services were few, but they were not overexploited.
- The existence of a long coastline combined with high mountain areas very close by allowed for an important diversification of touristic activities.
- The existence of a very strong local character and particular architecture and heritage.

5. Historical background

In the 1980's the region of Asturias was affected by an industrial reconversion that affected the main wealth and employment resources in the province: Coal mining and steel industry.

The access of Spain to the European Union was a shock for the regional economy. The EU's farming policy imposed heavy restrictions on milk production for Spain in exchange for the subsidized abandonment of farming activities. However, EU touristic policies encouraged the development of a competitive tourism industry in Spain.

The existence of this picturesque area in the north of Spain, with its well preserved traditional architecture and traditional farming and handcrafts, compelled the local administration to develop a plan for rural tourism.

Autonomous Communities (Comunidades Autónomas) in Spain are regional entities that are given strong administrative decentralization. They can regulate and pass their own legislation on many topics such as tourism, education, health, agriculture and regional roads. The first important experiment with rural tourism in Spain was initiated in a small town in Asturias, called Taramundi.

In the early 1980's, Taramundi was a village doomed to a slow death from an aging population and young people leaving the area for better employment opportunities elsewhere. Taramundi was outside of the main touristic routes in the region. It was in the mountains, and there was very poor communication with the rest of the province. Connection to the regular electrical network did not occur until 1982. Before that, the town's electricity had been produced by a generator that used the river as the main source of power.¹⁶

But as often happens in isolated areas, there was still a very small population of handicraftsmen, especially ironworkers. The town was (and still is) famous for their elaborated knives that were sold in the all of the neighboring municipalities. There were few non-traditional houses, with almost all of the houses having been built of stone using traditional building techniques.

Taramundi asked for help from the Regional Government, and the CSIC (Consejo Superior de Investigaciones Científicas or Council of Scientific Research) proposed a model of rural tourism based on location, heritage and architecture: The old Casa Rectoral (houses that were near the local church that served as a home for the priests, and that were often abandoned or rented out by the Church) were turned into a rural hotel with apartments operated by the municipality and the regional government.

¹⁶ <http://www.elcomercio.es/v/20110214/occidente/cuatro-estrellas-buena-salud-20110214.html>

A museum of water was created, because traditionally the Iron and knife industry, the town electricity, and the wheat and corn mills depended on the power of water. The handicraftsmen increased in number from 6 in the 1980's to 30 in 2011.¹⁷ This was the first experiment in the region with rural tourism, and since it was successful, new legislation was passed in the early 1990's to extend the model to the entire region.



*Traditional architecture in Taramundi*¹⁸

With the new legislation and the support of the regional government for tourism promotion, other municipalities in the surrounding area of Taramundi copied or improved upon the example initiatives that the government had started in Taramundi. Today, this mountain region is an important attraction area for what is called “Quality Tourism,” defined as a form of sustainable tourism that: (1) is respectful of the natural environment, (2) supports local architecture rather than massive touristic buildings, (3) avoids a large and non-controlled number of tourists, (4) prevents degradation of the environment and the urbanization that happened due to mass tourism in the Mediterranean areas of Spain during the 1960's.

¹⁷ <http://www.elcomercio.es/v/20110214/occidente/cuatro-estrellas-buena-salud-20110214.html>

¹⁸ <http://oficinaturismotaramundi.blogspot.com/>

6. Tourism model in Asturias

Main characteristics of the regulated rural tourism in Asturias

Rural tourism is regulated by a 2000 law.¹⁹ This law changed a previous rule from 1991 (Decreto 26/91)²⁰ and it has regional character, so it has been approved by the parliament of Asturias (Junta General del Principado de Asturias). Other communities have their own legislation on rural tourism.

This law creates four categories of rural business:

- Rural Apartments.
- Village houses (Casas de Aldea).
- Big traditional Asturian houses (Casonas Asturianas)
- Rural Hotels.

These categories depend on the use and the size of the house.

The tourism law encourages the preservation of traditional architectural elements and describes the minimum requirements for obtaining status in each category. The difference between Casas de Aldea and Casonas Asturianas is that the Casona must have a big size and have elements of that particular architecture. It is similar to the difference that could exist in Cobquecura between the traditional small or medium size house of a farmer in Cobquecura, and one of the big Casonas de Cobquecura in the center of the town.

Casas de Aldea are limited in occupancy to seven guestrooms (a maximum occupancy of 14 people) in order to keep the character of a local small business. Casas de Aldea are contrasted to Rural Hotels which have a larger capacity, and are thought of more as ordinary hotels with some peculiarities of the local area.

Casas de Aldea can be rented completely or by the room. In either case, the owner or the administrator must live there or very close, and provide full breakfast service for no extra charge. It is also allowable to serve other meals for a price, but only to guests staying in the house.

¹⁹ <https://sede.asturias.es/bopa/disposiciones/repositorio/LEGISLACION02/66/8/001U001Q1K0003.pdf>

²⁰ http://www.aedave.es/common/mt/compendio/legislacion-sectorial/turismo_rural/asturias/dec_26-91_astur.shtml

Casas de Aldea can be classified in three quality categories (one, two or three triskels). For each category there are minimum requirements, for guest rooms per bathroom, minimum size of rooms, minimum size of common areas, number of parking spaces, handicapped accessible rooms, complementary rural activities, and elements of traditional architecture.

a. Subsidies for rural tourism in Spain

As a member of the European Union, Spain has access to balancing funds of the European Union. The goal of those funding programs is to reduce the difference of income of the regions in the Union. Since Asturias had a crisis due to industrial reconversion, there was a program for funding and development of rural tourism in the region.

The rules for access to funding were established by rules of the Government of Asturias through the PRODER and PRODER II funding programs. Those programs were available for individuals, companies or public institutions, such as municipalities to develop programs for touristic development²¹.

Due to the cultural differences inside the region, the particular conditions for access and evaluation of projects were developed by the local groups responsible for rural development (each group covered an assigned area of one or more municipalities with certain cultural characteristics).

The conditions for access to funding included²²:

- A maximum of 50% of the cost of the project could be covered.
- Reconstruction and rehabilitation of buildings would be a priority over building new buildings.
- Architectural coherence with the area was a requirement to get funding. This point depended on the regional groups.
- Certain improvements, services offered, category of the Casa de Aldea, local management, employment generation, handicapped services, etc., increased the score of the project and therefore the available funding.
- There was an obligation of maintaining the business for 5 years (PRODER) or 10 years (PRODER II).

This funding program did not only cover Casas de Aldea or similar buildings. Museums, Traditional convenience stores (that had almost disappeared from the region), and even hiking paths could be funded in this way.

²¹ <http://www.mcasturias.org/pages/index/legislacion>

²² http://www.naviaporcia.com/images/documentos/documento_43.pdf

b. Conclusions of the new model of tourism in Asturias.

SITA (Sistema de información turística de Asturias) controls the progress of tourism in Asturias using metrics from annual surveys of rural tourism users in each category²³. The conclusions of the 2010 survey about the local model of rural tourism suggest that:²⁴

- Most people were especially pleased with their stay and experience in certified rural houses.
- It was respectful to the existing environmental conditions (one of the most valuable aspects mentioned by tourists was good environmental quality).
- This tourism model was insufficient to support running a full-time business, but it was successful for enhancing and supporting local earnings. Due to its seasonal character, locals should keep their traditional occupations and use tourism businesses as a way to supplement their income. 75% of rural house homeowners declared that their annual income from rural tourism hosting was less than \$12,000. (Spain had \$32,120 GDP per capita in 2011).
- However, this meant that the model of rural tourism avoided the 'theme park effect', and preserved the local character, occupations, and traditions.
- People enjoyed complementary activities and used rural houses as a 'operations base' to go to other places and expand their knowledge of the area.
- Rural tourism initiatives are neither incompatible nor harmful to the existing non-rural tourism industry. They are complementary. Since the implementation of the rural tourism policy, the number of both types of touristic services has increased yearly in the region.
- The Internet played a major role as a primary source of information for this kind of tourism.
- Government support to tourism initiative was crucial for the support of the model.

²³ <http://www.sita.org/>

²⁴ http://www.sita.org/documentos_pdf/El_Turismo_en_Asturias_2010_ed_2011.pdf

7. Adaptation of the model to the case of Cobquecura

Cobquecura is already a touristic place, but it has suffered a disaster that has put in danger its character of being a traditional town and its category of being an architecturally privileged place. The association of Cobquecura as the epicenter of the 27F earthquake and as a place where earthquakes happen often is bad for tourism in the town.

Both pre-disaster and post-disaster, the touristic potential of Cobquecura has not been properly used. In spite of the existence of tourist visits, the majority of the population still lives on incomes derived from traditional jobs. Tourists already come to Cobquecura, but there are few tourism businesses and amenities, so the economic opportunity is not captured by the residents.

Furthermore, in the Bio Bio region, there is no model of rural touristic development beyond the conceptual level, and the legislation of tourism is very general.

For rural tourism purposes, Cobquecura has two characteristics that make it a privileged place for the development of a model similar to the Spanish model:

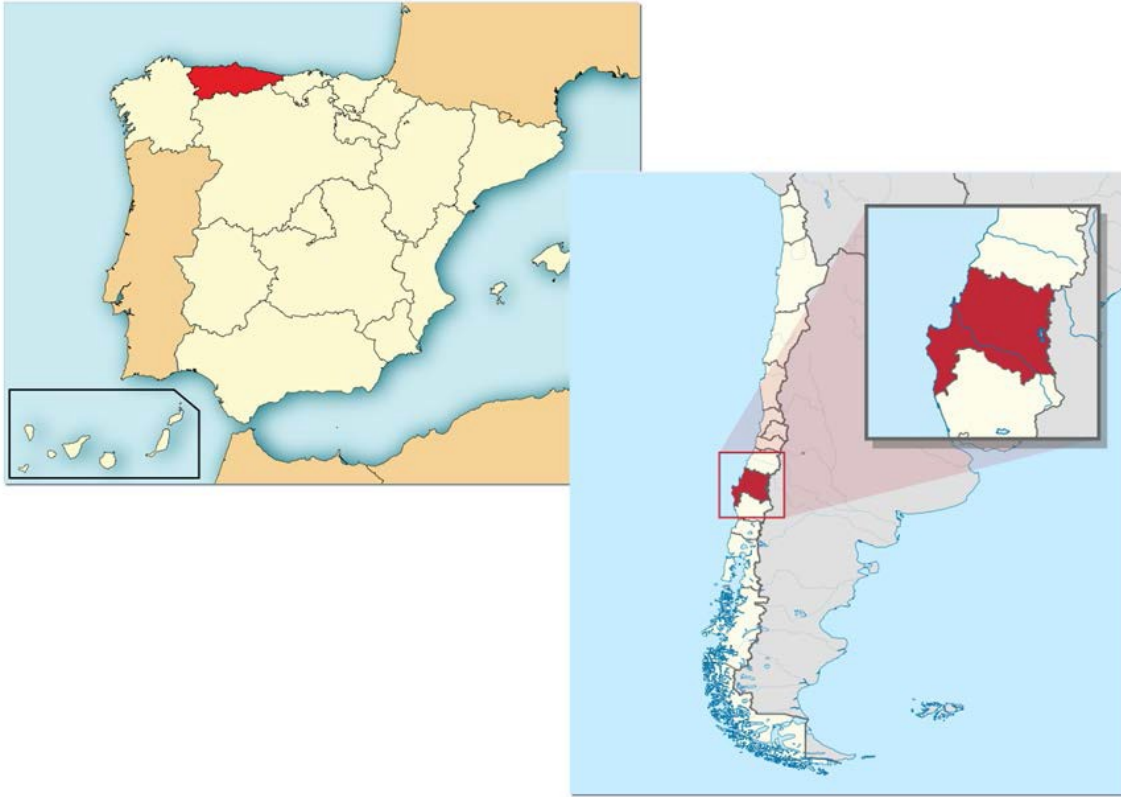
- There is attractive traditional architecture. Part of this architecture has been damaged, but a reconstruction based on rural tourism premises would help the entire town. Heritage buildings are important to tourists, and therefore to the local economy and to future economic growth of the town. Therefore, reconstruction that focuses on faithful reconstruction of heritage buildings should be seen as an economic imperative.
- There are people with traditional jobs. (farmers, fishermen, handicraftsmen) who are under extreme financial stress – they are finding it increasingly difficult to survive in those occupations. Those people could get an important advantage by adopting a new model of rural tourism. For some, this will replace their traditional occupations, but the goal should be to use rural tourism as a means for these residents to supplement their incomes and raise their standard of living.
- There is a privileged environment for the development of complementary activities that may attract the people to the new model of tourism.

Since Cobquecura has several thousands of inhabitants and there are still people occupied in traditional jobs, the town does not need a direct intervention of the Government to enter directly as a touristic business shareholder (except perhaps in the question of reconstruction of damaged areas). In the case of Cobquecura it would be recommended that administration and rulemaking be directed to help support the community and grow the local entrepreneurial base.

The implementation of an official model of tourism requires the support of the different levels of government. In Spain, this can be done in an easy way, since regional authorities have the power of legislation regarding tourism.

However, the administration structure of Chile is different, since the regions such as Bio Bio do not have legislative authority.

The recommendation of this report is to turn Cobquecura into the Chilean referent for the development of a regulated initiative of rural tourism, as was done in the town of Taramundi in Spain. In this way, the negative perception of Cobquecura as the epicenter of the 27F earthquake could be changed.



Asturias (Spain) and Biobio (Chile) regions²⁵

²⁵ www.wikipedia.com

Cobquecura Facts

The Bio Bio regions and Asturias are similar in spite of being in very different places in the world:

	Biobio	Asturias
Surface	37,068.7 km ²	10,604 km ²
Population	2,036,443 hab	1,076,896 hab
Density	53,49 hab/km ²	100/km ²
Distance from regional capital to national capital	515 Km	451 Km

Table 1. Comparison between Asturias and Cobquecura²⁶

Weather tends to be Mediterranean in the coast of Bio Bio, and Atlantic in the coast of Asturias. Both places present a green landscape with a combination of mountains very close to coastal areas, and inner high mountain areas.

Both regions present similar distances to their National capitals (about 500 Km), and therefore, they can be a similar potential tourism attraction for highly populated capital areas.

Cobquecura has a tourist generation source in Concepción, the capital of the Bio Bio region (145 Km away), with a population of more than one million. The town of Taramundi, where the rural tourism model was first introduced in the Asturias region, is 127 Km to the regional capital, Oviedo. Oviedo is only about 300,000 people, but there are two cities very close in the central area of Asturias (Gijón and Avilés), and well connected by highways. For tourism purposes they can be considered as a single metropolitan area of 800,000 people. So the tourism market-size is roughly equivalent for Cobquecura and Taramundi.

Farming and Fishing

Cobquecura is near the sea in a local depression of fluvial origin. It makes the access to the area difficult, but provides an excellent combination of coast/beach/mountain area. Part of the riverine valley is used for agriculture.

²⁶ www.wikipedia.com

The mountains that surround the valley where Cobquecura is located are covered with forests of pine and eucalyptus. Both trees are commercial, and largely used for the wood industry in the case of the pine, and for paper and cellulose for eucalyptus. According to information collected from Cobquecura's residents, some farmers are leaving part of their agricultural lands and renting them to cellulose companies for eucalyptus plantations.

There is also active fishing activity in Cobquecura since it is near the sea.

Asturias has a very similar background: There is some commercial farming that is being left due to an aging population, but there are still farming and fishing activities. Commercial pine and eucalyptus plantations are very common, especially in the western area, where Taramundi is located.

Handicraftsmen

In Cobquecura some traditional arts are still alive, and they are important potential attractors for tourism. Asturias preserves old handicrafts due to the isolated character of the region and the need for many towns to be self-sustainable due to bad communications. Therefore, there are still some interesting manufactures of touristic interest, such as pottery, knives, and wood manufacturers. Local handicrafts in Asturias have increased since the implementation of the rural tourism policy.

Historic and Artistic Legacy

Cobquecura is a catalogued historical place due to its large number of colonial houses. This category has been recognized officially by the Chilean Government. This is a potentially important point of attraction for highly educated and international tourism. Cobquecura is also famous for its constructions in adobe and plain stone (piedra laja). Asturias history is very old, since the tourist can visit old roman roads, ruins of celtic villages, medieval churches, and picturesque towns built in stone. In both cases, the heritage architecture is an attraction for tourists.

Environment

Cobquecura is a privileged space with many natural monuments such as the Church and the Lobería (that is a natural refuge of Sea wolves). It means that there is natural interest to visit Cobquecura. Furthermore, it has a combination of landscape that combines beach, forests, river, and mountains that generate a landscape that is very attractive to tourists who are looking for open air activities (hiking, surf...). The Asturias region has a very similar combination of forests, mountains very close to the coast line, and beaches. There are populations of bears, boars and wolves. There are lots of open air activities.

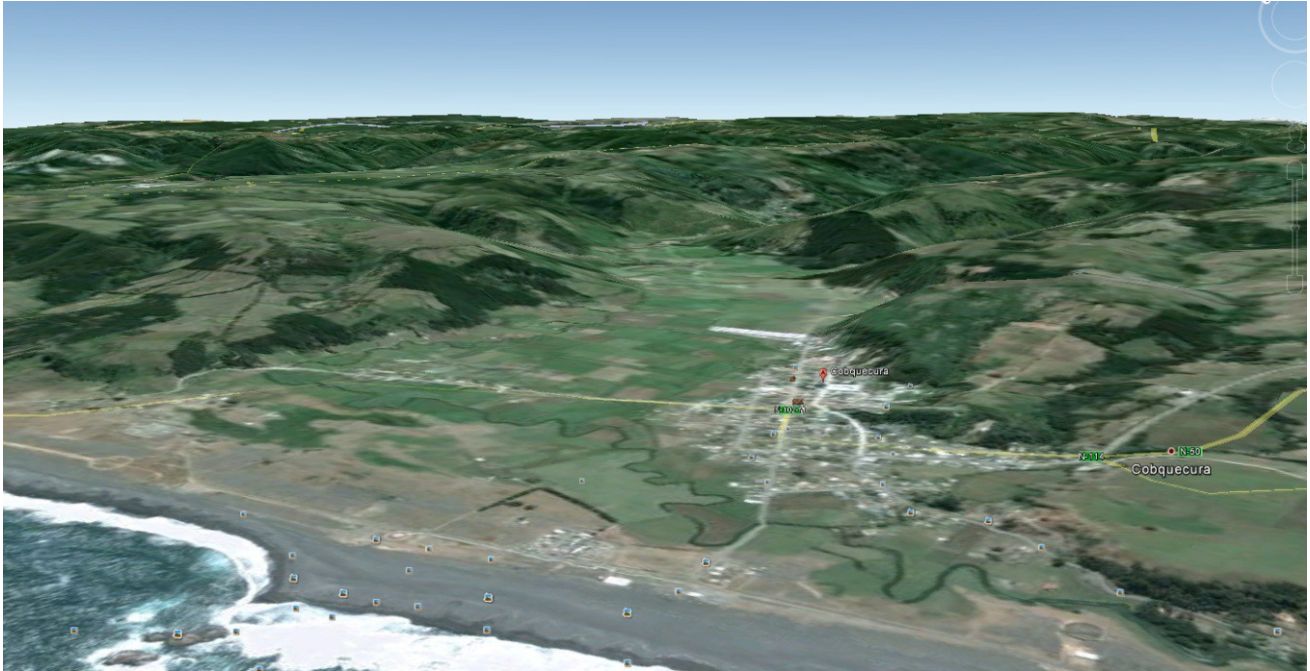
Geographical configuration of Cobquecura:



Two areas of the Municipality of Cobquecura: Cobquecura and Buchupureo. In yellow lines are delimited the plain areas of Cobquecura and Buchupureo. The rest, contained between those yellow lines and the thick red line is rough terrain.

Buchupureo is in the North of Cobquecura (about 12 Km) and it depends on the same municipality. Buchupureo attracts lots of tourists, especially those who practice surfing. It is common that tourists are hosted in Buchupureo for beach and other activities and visit Cobquecura.

The advantage of this natural configuration is that it allows a good separation between beach tourism and cultural/eco tourism in the area, and makes sure both kinds of tourism can co-exist without disturbing each other. There will be two different markets of tourism instead of only one.



Aerial view of Cobquecura plain area



Aerial view of Buchupureo plain area.

Stakeholders in Cobquecura Rural Tourism Case

Cobquecura municipality:

The municipality of Cobquecura is an active part of the reconstruction, but it lacks power and resources in absolute and relative terms, since Cobquecura is a small municipality. The municipality should play a key role in any proposed touristic program, since they can approve rules for local urban issues.

Bio Bio Regional Government:

The Bio Bio region is one of the strongest regional governments in Chile. However, in Chile, regions do not have parliaments and therefore cannot pass legislation (they act more as a delegated power of the central government). Another problem for Cobquecura is that it is very close to the northern border of the Bio Bio region and far from the regional capital of Concepción. The Bio Bio regional government is crucial for the development of the rural tourism project through SERNATUR, that has regional offices in Bio Bio and could be a bridge between the municipality and the government of Chile.

Government of Chile:

The government of Chile does not seem to have an active agenda in Cobquecura recovery, but it is an institution that should be taken into account for any touristic project, since the Law of Tourism gives to the Government power over touristic regulation, certification, and seals of quality.

Tourists:

In spite of Cobquecura's disaster, tourists are still coming in similar numbers as previously (according to residents' testimonies). Since many touristic businesses were in Buchupureo, and most of them were not affected by the disaster, they are still working.

According to the Plan de Turismo de Cobquecura (Tourism Plan of Cobquecura) or Pladetur, about 40% of existing tourists in Cobquecura in 2002 went to Cobquecura/Buchupureo to enjoy their beaches. Other activities were complementary but important in their visits to Cobquecura.²⁷ It means that there is an important field of tourism that has not been exploited yet, which is the tourism oriented to traditional activities.

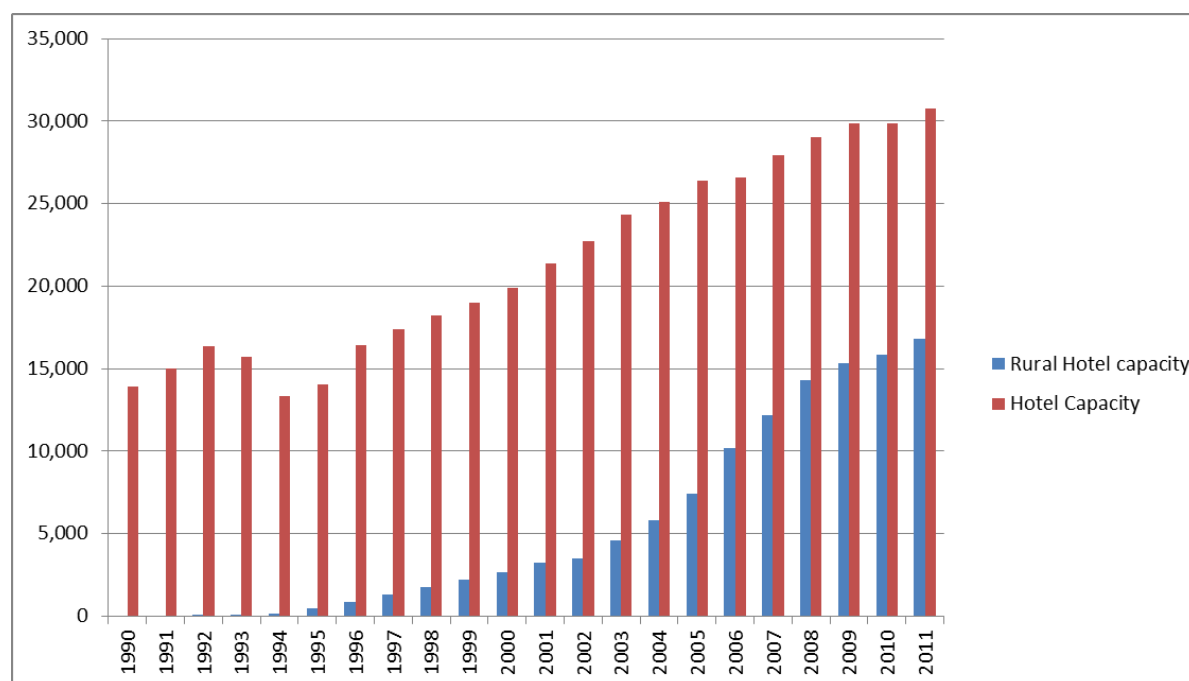
²⁷ PLAN DE DESARROLLO TURISTICO DE LA COMUNA DE COBQUECURA 2002-2006, MARIA ALEJANDRA CERDA MALDONADO UNIVERSIDAD AUSTRAL DE CHILE TESIS PAIS, ABRIL 2002, pp 82

Existing touristic business:

Current touristic businesses are a key for the future of the rural tourism project, since they could see the new program as a threat to their existing business, since new competition will be created. It will be necessary to explain to them that the rural tourism will attract more tourists, and those tourists will be in Cobquecura for different purposes than their usual customers. The final effect will be beneficial to them.

According to Pladetur, there are not enough hosting services in Cobquecura to meet the demand during the summer period. The promotion of Conquecura as a rural touristic place would not harm its position as a traditional beach destination, since the demand for this kind of tourism is concentrated in Buchupureo, and the result would be a total increase in the number of visitors.

The graphic below represents the evolution of the capacity of rural tourism business and conventional hosting services in Asturias (Spain) since 1990. The result was an increase in both kinds of business, except in crisis periods, such as 1994 and 2010. In 2011, conventional tourism capacity increased in spite of the economic crisis. Rural tourism business increased their number regardless the economic situation:



Evolution of touristic capacity in Asturias

Graphic shows that rural tourism generated a new kind of demand and could have been beneficial for the already existing hotel business.

Potential new rural tourism business and Cobquecura residents:

In general, many homeowners in Cobquecura who live and work there in traditional business or have houses that could be considered as traditional, could get an important benefit from a rural tourism initiative. Therefore, opposition to the project is not expected. The main challenge will be to generate enthusiastic support in order to get the needed collaboration from the government of Chile, the Municipality of Cobquecura, and SERNATUR.

Since tourism has been an important source of income in Cobquecura, residents should be concerned about it. The purpose of this project is to offer an equitable opportunity to residents in the municipality to participate in a sustainable tourism industry.

According to the Pladetur survey (year 2002), 79% of people considered themselves to be glad for tourist visits, and the reasons were:

Answer	Percentage
Personal benefit	21.3
Like to meet new people	44.5
Good for local development	33.7
Increases concern about beaches preservation	0.5

Reasons for residents' tourism support in Cobquecura²⁸.

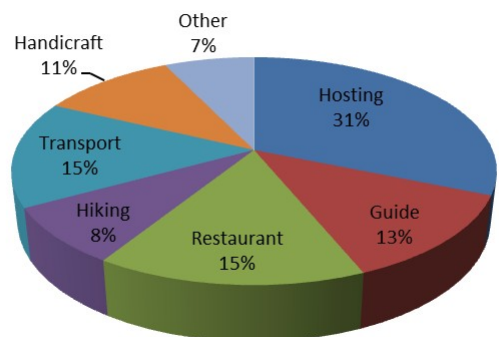
People in Cobquecura like tourism not only for economic reasons, but also for the desire of meeting new people. This attitude is good for touristic development. Personal interactions with visitors/guests and small business owners are a key feature of the rural tourism model.

Furthermore, people in Cobquecura showed the desire of being involved in touristic activities. About 68% of participants in the survey said that they would like to offer touristic services versus a 38% who did not want to do so.

²⁸ PLAN DE DESARROLLO TURISTICO DE LA COMUNA DE COBQUECURA 2002-2006, MARIA ALEJANDRA CERDA MALDONADO UNIVERSIDAD, pp 101

The services that people would like to offer were:

Services locals would like to offer



Services that Cobquecura’s residents who desire to work in touristic industry would like to offer²⁹.

All those services are compatible with businesses engaged in rural tourism, especially handicrafts, guide services and restaurants.

Current situation of Cobquecura

Cobquecura has been affected by an earthquake that destroyed an important part of its historical town center. The damage affected Cobquecura buildings and infrastructure, but many homes out of the town center remained unaffected, and there are still many farmers who retain their traditional activities.

Cobquecura was declared a National Monument, so it is expected there there will be a complete reconstruction of the damaged houses and buildings in the historical area. Due to this character of National Monument, it is expected that there will be a reconstruction that preserves at least the atmosphere and character of the damaged historical houses.

Many areas of Cobquecura remain as touristic places and are still receiving visits, especially Buchupureo. According to locals’ testimonies, most of this touristic infrastructure was not affected by the disaster, and remains working, since many touristic businesses are in Buchupureo rather than in the town center of Cobquecura.

²⁹ Ibid. pp 102

8. Strategy for Tourism Recovery

Since Cobquecura has suffered recently from an earthquake, a strategy is needed that will rebuild people's confidence in the town as a unique, historical, and traditional Chilean place.

Cobquecura's beach, surf tourism, and hotels have not suffered as much from the disaster as did the historic town center of Cobquecura. Therefore, a recovery strategy should be focused on the Cobquecura town center's particular characteristics that attract high-value tourism: People interested in the experience of architecture, traditional jobs, farming and observation of nature. This is a method of sustainable tourism that could contribute to the preservation of the environment and of cultural traditions while providing revenues to the town in an equitable way.

Eco, agro, rural tourism

In the Bio Bio region there is no initiative for rural tourism that exceeds the conceptual level. Several regions (Including Bio Bio) have their own conceptual plans for implementation of rural tourism, but there are not specific rules or a model of implementation for rural tourism.

Bio Bio is a region with a strong potential to implement a regulated model of rural tourism using Cobquecura as a test laboratory. With this action, Cobquecura could be used at the regional and National level as a symbol of implementation of a successful model of rural tourism.

With an adequate promotion, Cobquecura would improve tourism revenues and that would help in the complete recovery of the area. Rural tourism would be both an economic development strategy and a 27F earthquake recovery strategy for the epicenter of the earthquake.

Model applied

The model that is suggested is the model that was applied in the Principality de Asturias, Autonomous Community of Spain. This region has many coincident relevant characteristics with respect to the Bio Bio area. This model is based on getting a certificate from the administration for a "hosting" business to be considered as a rural house.

The benefits expected for the application of this model in Cobquecura are:

- Contribution to preservation of the traditional architecture: Traditional buildings with original constructive elements will be considered to be categorized as rural houses.

- Preservation of traditional jobs in Cobquecura: Traditional businesses will be able to obtain the category of rural houses. Participation in daily traditional labors such as farming can be offered to tourists (agri-turism). Rural tourism tends to be seasonal, and this fact will prevent people to leave their traditional occupations in order to live exclusively on the hosting of tourists.
- Equity: The proposed certification system would prevent the building of big hotels or high capacity businesses, since that kind of business is not suitable for a small town like Cobquecura. Many houses in the Cobquecura area are not big, and benefits for tourism would be shared by the entire community.
- It would prevent rural exodus, since it would generate employment and revenues. Young people have been leaving Cobquecura due to a lack of economic opportunity, and the lure of better opportunity elsewhere in Chile. Rural Tourism would create economic opportunity and stem the socially destabilizing exodus of young people from the community.
- Control and fraud prevention: Since there would be an external supervisor other than municipality.
- Certain warranty of success, since the model was successful in a similar area.
- Sustainable, since resources of wealth in Cobquecura will not be harmed, and no aggressive urbanism is required to make a model like this work.

Current Administrative situation.

Chile is a Unitarian country. That means the central government retains a high degree of power. There are administrative regions, but they do not have parliaments and therefore they cannot pass their own legislation. In the model that is used as a reference (Asturias, Spain), the region could pass its own legislation on tourism, since Spain is a decentralized country, and the central government does not have too much to say about tourism

Chile's tourism legislation is based on:

- **Ley de Turismo 20.423, (02/04/2010) (Current tourism Law of Chile)**

This Law is very general and defers many technical aspects about tourism to a future regulatory development. But this law also defines two important points for a rural tourism project in Cobquecura:

It defines "Ecotourism" as a kind of tourism that is environmentally responsible, of low impact, that encourages environmental preservation, and has the active socioeconomic participation of local populations. It defines "certification" as a document issued by a competent organization that states that a touristic business meets a certain standard level of quality or safety previously defined by a technical code issued by a competent authority. In the certification case, this authority could be anyone approved by the Instituto Nacional de Normalización (National institute of standardization).

There is also a definition of a touristic seal of quality, which is given by the National Service of Tourism (SERNATUR), and it is given to touristic businesses that meet certain technical standards. Those standards should be approved by the Ministerio de Economía, Turismo y Fomento.

- **Ordenanza General de Urbanismo y Construcciones (General rules for urbanism and construction)**

This rule imposes the minimum requirements for constructions in Chile. There is a chapter that explains the minimum requirements for hotels and host buildings. The rule is very general. The most of the details about touristic buildings are defined by each municipality.

Proposal for rural tourism in Cobquecura

The proposal of this report is the creation of two seals of quality for the municipality of Cobquecura. The two seals would be:

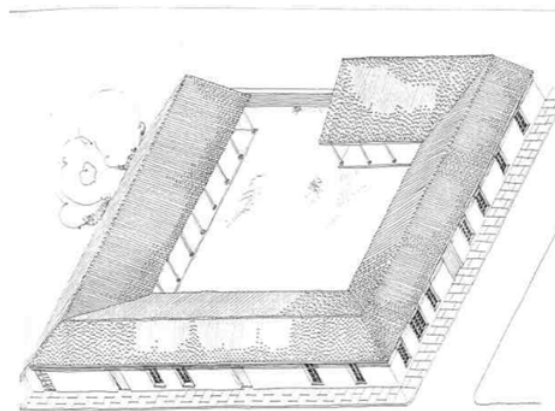
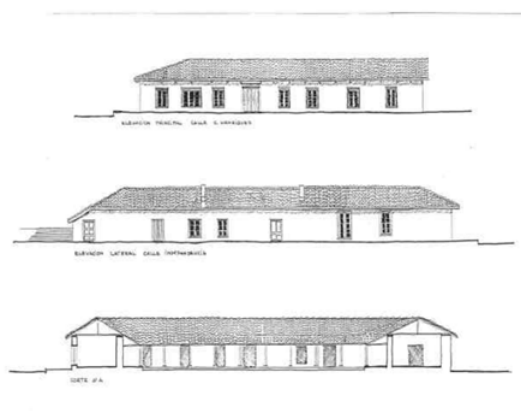
1. Casonas de Cobquecura (Big Houses of Cobquecura):

This seal will be given to the houses that already exist in Cobquecura town or outside:

- Houses can be rebuilt or built ones. In the case of recently built houses, they should have the structure and the shape of a typical house of the Cobquecura historical area.
- Houses considered to be National Monuments would be considered Casonas de Cobquecura if they are conveniently adapted for touristic service.
- They should have the structure and the aspect of a typical house of Cobquecura historical area.
- They should have a minimum surface.
- They should be built in adobe, piedra laja or other materials that preserve the general traditional shape of the house.
- They should have a maximum number of allowed guests, in order to prevent to obtain a certification of Casona de Cobquecura to a common hotel.
- Those houses would be authorized to serve lunch or dinner at request for an extra price, but only to the guests in the house unless the Casona has a restaurant license.
- There should be three categories of Casonas of Cobquecura depending on the ratio of rooms per bathroom (but the highest category will have individual bathrooms on each room). Other services offered could improve the category, such as handicapped adapted rooms, rural or traditional activities offered, availability of lunch or dinner for guests, high fidelity to original construction type and materials.
- These Casonas should have an official license of Guest Houses under Chile Law.



National monuments in the town of Cobquecura



Example of a typical house in Cobquecura downtown that could be certified as Casona de Cobquecura

2. Casas Rurales de Cobquecura (Rural Houses of Cobquecura)

This seal will be given to those houses that are in the greater Cobquecura municipality:

- Houses built with traditional materials such as adobe, piedra laja, but smaller or with a different shape than the Casonas of Cobquecura.
- Or operated by farmers or handicraftsman who do not have touristic industry as their main source of income.
- Those houses should have a maximum guest capacity that should be lower than the capacity of the Casonas, and the owner or operator should live in the same house or at least in Cobquecura municipality. Those houses should offer breakfast to their guests for no extra charge.
- Those houses would be authorized to serve lunch or dinner at request for an extra price, but only to the guests staying in the house.
- There should be three categories of Casas Rurales de Cobquecura depending on the ratio of rooms per bathroom (but the highest category will have individual bathrooms on each room). Other services offered could improve the category, such as handicapped adapted rooms, rural or traditional activities offered, availability of lunch or dinner for guests, high fidelity to original construction type and materials.
- These Casas Rurales should have at least an official license of Guest Houses under Chile Law.



Example of a damaged house that could serve as a rural house in Cobquecura if it is conveniently restored.

Seal of Approval

It is possible to introduce the seal of quality in several ways under Chile Law:

National approach

According to the Chile Law of tourism, SERNATUR could give the Seal of Quality, but previously, Technical standards for the Seal of Quality should be approved by the Ministerio de Economía, Turismo y Fomento. This way of issuing the seal has certain advantages:

- It is a National Seal of Quality, and standards would be approved by the Chilean Government.
- It needs an approval from only one ministry. This means that it would be much easier for rural farmers and small businesses to get a certificate than it would if the certification process required getting several departments involved in the approval process.
- A national approval would give Cobquecura important National prestige and would make the process of marketing rural tourism easier, since SERNATUR would be involved at a high level.

But it has important disadvantages:

- It may be difficult to have access to a ministry just to approve technical rules for a single municipality or region.
- It would be a very slow and bureaucratic process.
- The municipality and the stakeholders (citizens of Cobquecura) could lose control over the process, and people's involvement in the initiative could be lost.

Local approach

The municipality of Cobquecura could approve its own quality seal, put it into local rules for construction, and issue local certificates.

- This system has the advantage of putting the entire control on municipality.
- Very easy to introduce changes, and very flexible.
- Citizens may have good control of the process and input into its design & modifications.

But

- Too local of an initiative. There would be few opportunities of promotion outside the municipality.
- Only local resources to implement the plan that are clearly insufficient.
- Exposition to fraud in seal approvals.

Mixed approach

One of the most important characteristics of this project is the involvement of the Bio Bio region, because involvement of the national and regional levels is key for spreading the model and for turning Cobquecura into a National symbol of a successful disaster recovery.

The ideal situation would be that the Bio Bio region could approve its own technical requirements to issue the seal of quality directly.

The Bio Bio region could be interested in the initiative since a successful experience in Cobquecura would allow expanding the model throughout the entire Bio Bio region, and being let Bio Bio be one of the first regions in Chile that would implement a program of rural tourism like this.

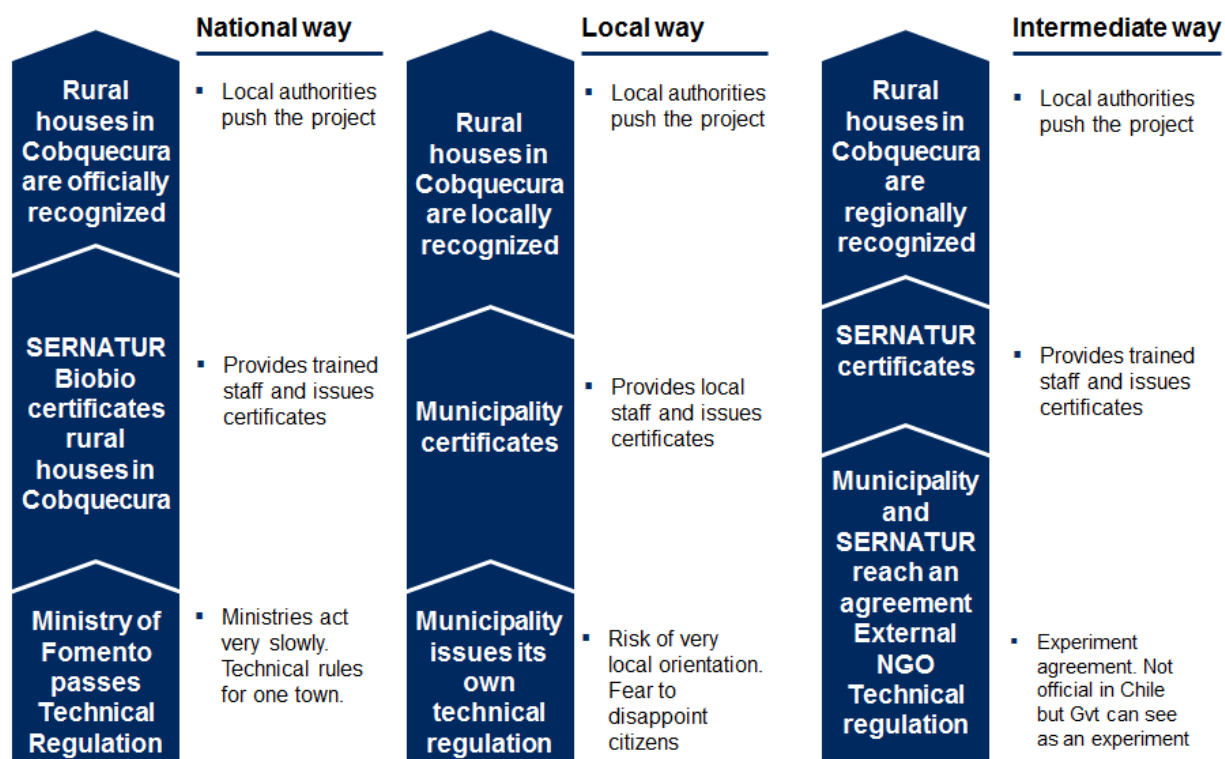
So a combination of the Local and National approaches could be possible:

The Municipality of Cobquecura could adopt technical standards for Casonas de Cobquecura and Casas Rurales de Conquecura, but with a previous agreement with an external institution that would provide the technical and impartial expertise to do so.

Once approved, the Cobquecura municipality could sign an agreement with SERNATUR or other public organization in Bio Bio, to create certificates of Casonas de Cobquecura and Casas Rurales de Conquecura based on the new municipality ordinances and a schedule for inspections and seal renewal that would be performed by SERNATUR staff.

Such certification would not be officially recognized by the Chilean Government, but it would certify that local requirements for rural tourism have been inspected by professional staff that would ensure the participation of the Bio Bio region in some way, and therefore it would ensure the interest and the needed cooperation of Bio Bio to expand the initiative.

Summary of Alternatives



Different approaches for tourism plan implementation

Other actions to be taken

- The experience in Asturias shows that IT technology plays a major role in the knowledge of rural initiatives and information and in the reservation process: Arrangements should be made with telecommunications companies to bring the Internet and telephone to all potential businesses at a rational cost.
- A logo or a symbol should be created by the community as an element that defines Cobquecura's Casonas and rural houses, in order to identify them clearly, as it was done in Spain with the rural tourism houses:

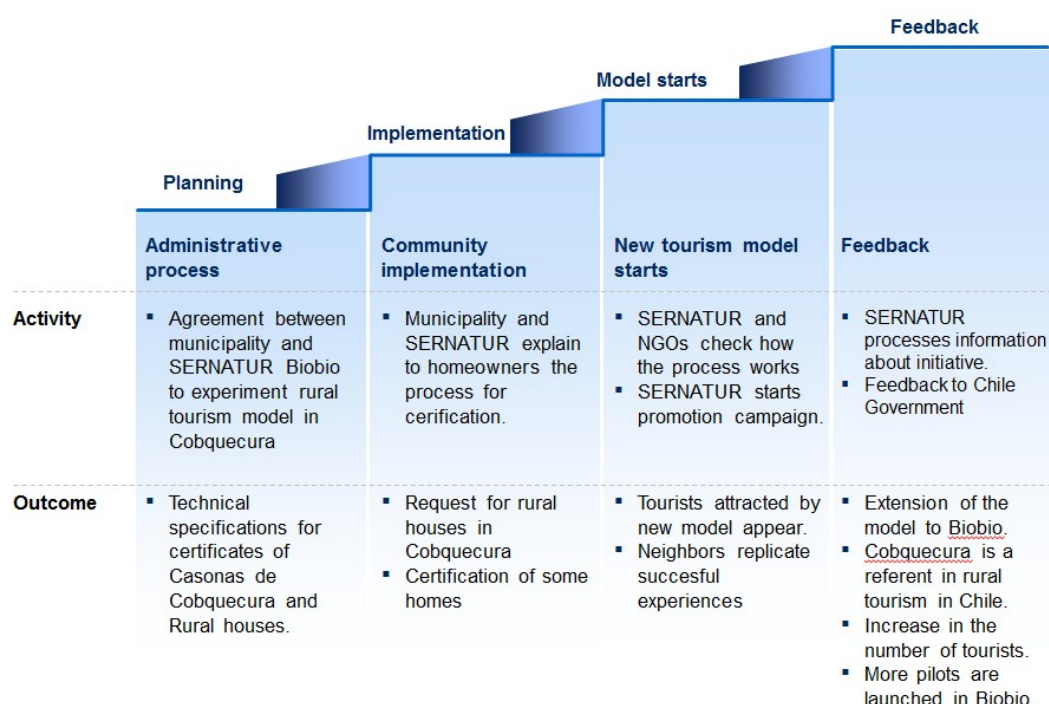


Logos used in Asturias for the two categories of 'Casonas Asturianas' and 'Casas de Aldea'. The second corresponds to a 'Casa de Aldea' with a category of two triskels (the two celtic symbols below the letters CA)

Minimal Disruption of the Natural Environment

Natural areas of Cobquecura as la Iglesia and la Lobería, and the coastal area should have the minimum possible intervention, in order to ensure the preservation of natural space as it is, and to avoid the 'theme park effect' that may seriously affect rural tourism due to the diminishment of natural landscape. Changes in natural landscape should be produced only by building paths or roads absolutely needed to reach certain areas, or to ensure certain level of safety for tourists and residents (such as fences).

Proposed Implementation



Different stages for implementation of rural tourism initiative based on an intermediate administrative approach

According to the diagram above, there are four steps for tourism implementation. The most important is the first one, which corresponds to the planning phase. In this stage, the people of Cobquecura, the Municipality and SERNATUR must work together to reach the desired result, and get a reasonable set of certification specifications that may lead to a high quality and sustainable model of tourism in the area.