

Economic Development Plan

Perales, Biobío, Chile

SUP-607M Community Recovery: Rebuilding Disaster Damaged Communities in Chile

January 2012

Contents

Introduction	3
Overview of Perales	4
Needs assessment of Perales	5
Economic development vision & development strategy for Perales	6
Plan of Action: by Economic Sector	
○ Agriculture + Livestock	7
○ Fishing, Seaweed & Shellfish	11
○ Small Business Development	12
○ Gastronomy & Tourism	14
○ Sewing Project – Women’s Entrepreneurship	16
○ Adult Education Center	16
Conclusion	17

Introduction

In January 2012, The Harvard Kennedy School, in conjunction with the David Rockefeller Center for Latin American Studies and Harvard University, sent a team of 20 students and supporting staff and faculty to spend a week in three communities in the Biobío region of Chile.

The three communities, Dichato, Cobquecura and Perales were each severely impacted by the earthquake of February 27th 2010 and the tsunami wave that followed it. The earthquake and tsunami destroyed 370,000 homes across Chile, caused \$30billion worth of damage and claimed 562 lives.

The course, SUP-607M *Community Recovery: Rebuilding Disaster Damaged Communities in Chile* provided students with an experiential learning experience, where they were engaged in community recovery and economic development work on behalf of the three communities. The student's visit was the first step of a multi-year engagement by Harvard in the economic recovery and development of these communities. This report details the economic action plan developed by the Perales team.



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Overview of Perales

Perales is a small community of approximately 522 people located in northern Biobío. The economy is traditionally built around the use of the two major natural resources in the area – the land and the ocean. Today, most residents earn their living by trading goods between the community and other parts of the region, but farming, fishing, shellfish and collecting algae from the shore remain major economic drivers.



Panoramic overview of Perales, as seen from the hill of Alto Perales.

On February 27th 2010 an earthquake, and the tsunami that followed it, struck the town. Upwards of 60% of buildings in the community were destroyed including 50 permanent homes and 45 second homes, along with local businesses and capital stock. Many families lost their home, all their belongings and their livelihoods. The Harvard team that spent a week in the community heard many stories of loss and suffering, but the incredible resilience, hopefulness and determination of the people to better themselves and their families touched us all deeply.

Perales was never a wealthy community, per-capita income is in the \$500-\$1200 per annum range – around 6% of the Chilean average (nominal). In some sense the disaster of February 27th presented an opportunity for change. The Government of Chile has now committed to delivering new housing, roads and other infrastructure to the community so we stand today at the cusp of a new beginning for the village and its people.

Needs Assessment for Perales

Perales sits on a 5km long stretch of beach facing the Pacific Ocean. Though the town itself sits on a plain it is surrounded by wooded hillsides, atop one of which sits the sister community of Alto Perales. During our week in the village we had the opportunity to observe first-hand its unique combination of strengths – the fabulously rugged coast with its sharp rocks and pacific surf, the delicious strawberries of Alto Perales and the superbly equipped new school built innovatively from shipping-containers after the tsunami.

However we also encountered its many problems - the soil washed by the tsunami that is now so salty that little grows there anymore, the unpaved roads whose surfaces are so bad our van had two flat tires in the space of a week, the power outages and water shortages, the lack of basic service provision and the near total absence of established enterprise and the job opportunities that go with it. The table below details the SWOT analysis we undertook on the community.



The spectacular coastline near Perales

STRENGTHS

Beautiful natural landscape
Commercial Spirit
Education & ICT Infrastructures
Community spirit/kindness/generosity
Peaceful
Open spaces
Affordability
Health Center
Low crime
Art & craft facilities

WEAKNESSES

Small local market
Individualism
Low human capital
Physical isolation
Lack of water
Little public transport
No apparel or hardware shops

THREATS

Competition from larger & more mature markets
Salinity of the soil possibly caused by the tsunami
Youth leaving town
Recurring tsunamis/earthquakes
Lack of job opportunities
Low water supply

OPPORTUNITIES

Demand from tourists
Development aid from the government
Demand driven by the reconstruction process
Work opportunities through internet
Making use of school facilities
Fishing Industry
Algae processing

Economic Development Vision & Strategy for Perales

During our week in the community we had the opportunity to meet with local residents and discuss their situation at length. We held a town meeting where 35 people attended and a workshop where we interviewed over 100 people. We also engaged members of the local municipality (Comuna de Coelemu, SECPLA and PRODESAL) and the Fundación para la Superación de la Pobreza, Servicio País.



Local residents collecting seaweed

Our work constituted the most detailed and expansive survey of life in Perales ever conducted. From listening to the people's many stories, we put together the following vision statement. We believe it captures broadly the ambitions of the community and that it should guide Harvard's work in its ongoing commitment to them.

We aim to help Perales become a thriving village that takes advantage of its natural resources and entrepreneurial spirit in order to provide high-quality goods and services to local, regional and global markets. A place where there is opportunity for socioeconomic advancement and to earn a meaningful standard of living for a Chilean family.

We have much work to do since, as mentioned, the current per-capita income of Perales is only around 6% of the Chilean national level. So how to get there? The action plan that follows is broken out by economic sector, each supported by a number of actionable projects for which funding applications have been submitted. Projects were selected with two broad aims that are best seen in the context of time. Along with specific projects by economic sector we are proposing a cross-sectorial project aimed at raising human capital generally – establishing an adult education center at the Perales School. Projects were assigned priority based on our assessment of their impact on the family and the community along with the potential and sustainability of the activity and our assessment of the risk. A special effort was made with the community to select projects that would foster social cohesion and teamwork.

For the short term, we were looking for projects that would help to:

1. Alleviate poverty and expand economic activity by restoring livelihoods, enhancing current professions or by helping people as they transition to new sectors of employment.
2. Support businesses by filling small and quick-win infrastructure gaps.

At the same time we were looking for projects that would contribute to the long-term economic development of the community. The selection criteria here were:

1. Supporting entrepreneurialism and small business development as a key engine of growth
2. Improving human capital by investing in education for both children and adults
3. Fostering a sense of community and encouraging teamwork.
4. Encouraging government to expedite infrastructure projects

The following economic sectors are explored:

- Agriculture & Livestock
- Fishing, Seaweed & Shellfish
- Small Business
- Gastronomy & Tourism
- Women's Entrepreneurship – Sewing Project
- Adult Education Center

Agriculture & Livestock

The agriculture sector currently accounts for 15% of Perales' economy and is ripe for expansion. The Harvard team was approached by many entrepreneurial subsistence farmers who wish to expand the scale of their farms, as well as many established farmers who wish to introduce new crops and technologies into their existing businesses. Together with these community members we have developed business plans in an effort to aid the expansion of the agriculture industry. The short-term strategy for Perales, as identified by community members and technical experts, is agricultural product diversification and market access.

The overexploitation of small pieces of land with the same traditional products (mainly potatoes) has led to decreasing productivity of the land over time. The successful introduction of new species with higher value in the market, such as the strawberries in Alto Perales, could be extended to other areas of the village aiming to create mini-clusters in the sector.

The majority of small farmers are currently selling their products door to door in Coelemu and the surrounding vicinity. Applying for a business permit will allow these farmers to access markets in Coelemu and surrounding cities and allow them to sell their goods legally.

There are two longer-term goals that the farmers of Perales and Alto Perales wish to reach. The first is finding a stable water source both for drinking water and irrigation. The second goal is to find solutions for the possible salinization problems in lower Perales that has affected at least 10 farms and many families.

Product Diversification

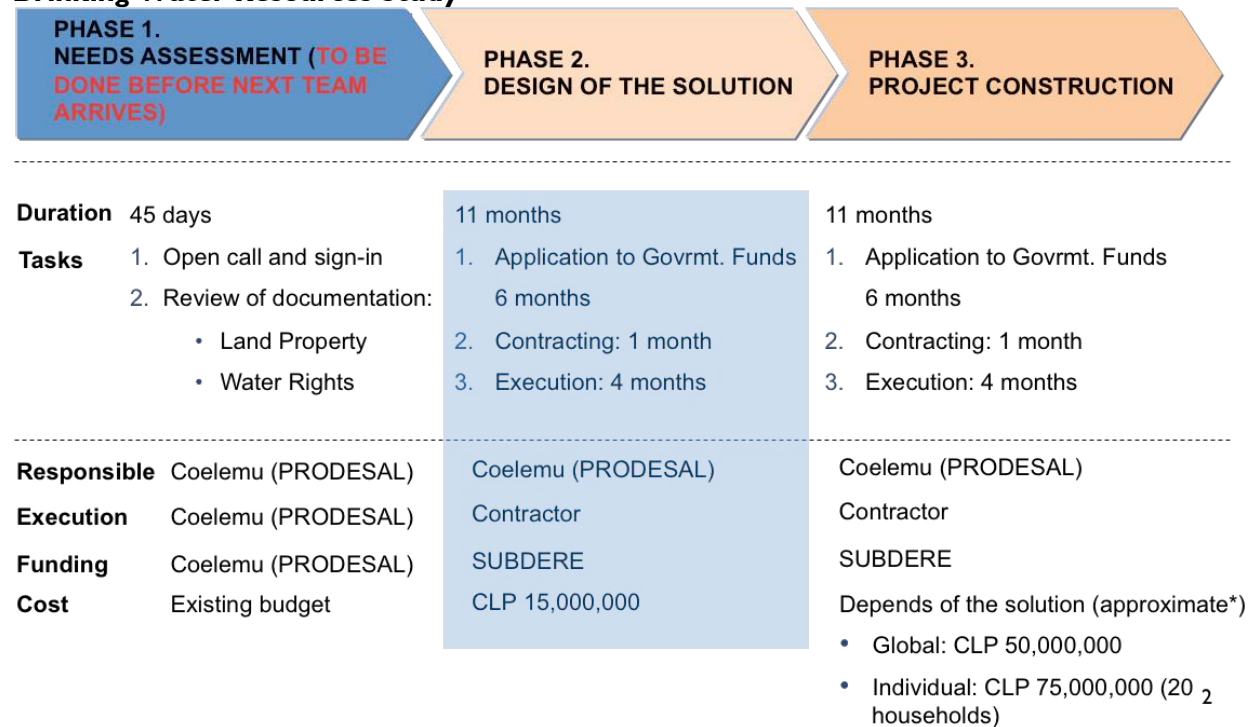
In an effort to help the towns of Perales and Alto Perales diversify their crops and expand to higher profit plants and flowers we recommend funding green houses for seven individuals. These seven greenhouses will impact a total of 30 people at a cost of CLP 612,240. Greenhouses allow the growing season to expand from 5 months to 12 months a year, which will allow farmers to grow crops year round despite seasonal disparities. The funding will include the plastic for the greenhouses, which is the most expensive material used in constructing a green house. The wooden frames can be easily constructed out of materials gathered in the woods surrounding Perales and PREDOSAL will provide the training on construction and sustainment of a greenhouse for these individuals. We have also included requests for bulbs for flower production, which is a high profit crop that the people of Perales wish to introduce into their economy. In addition we are requesting funds for plants and hoses for those individuals who wish to expand their agriculture businesses and hire labor from the community.

Water Shortage

It is integral that the community of Alto Perales find a long-term solution for its water shortage problems. Alto Perales is draining its shallow water resources and is coming dangerously close to permanently depleting its entire water supply. Currently the agriculture community is free riding off of the drinking water supply to water its crops, which negatively affects 100-150 people living in Alto Perales.

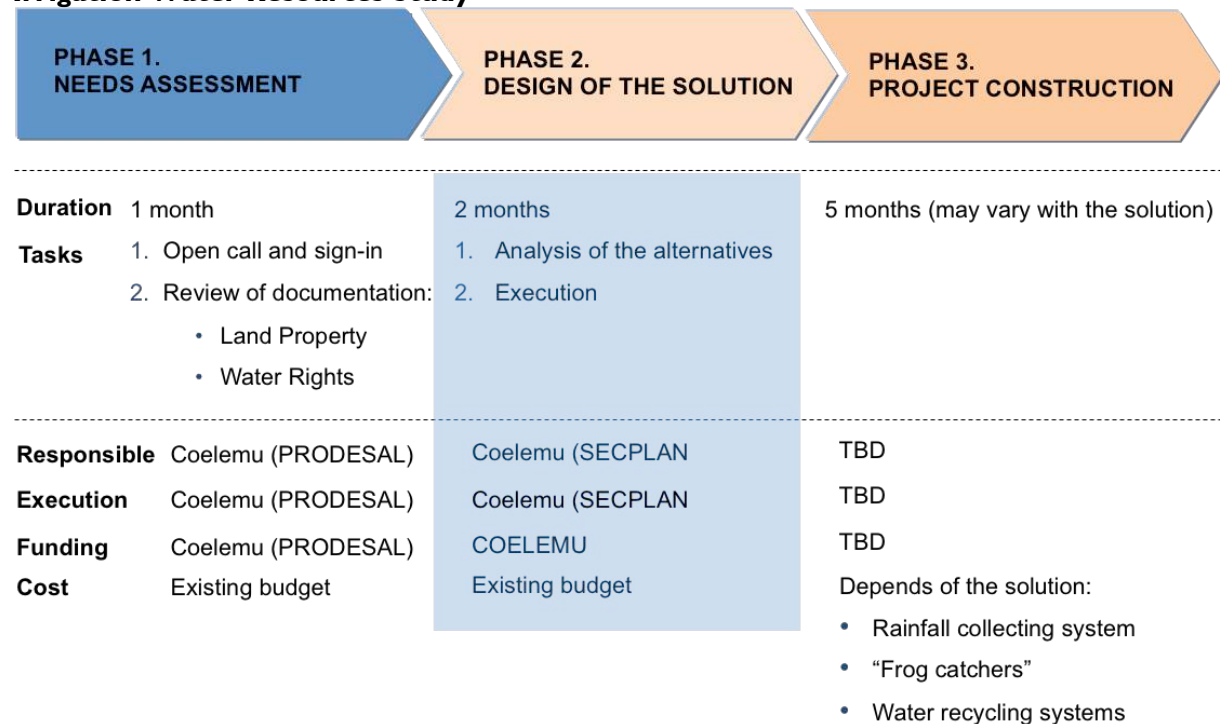
Together with the Coelemu City Municipality, water experts and the citizens of Perales, we have developed a feasible water study plan for this problem that includes the following:

Drinking Water Resources Study



As the figure above shows, the overall duration of the project is highly conditioned by the time required to apply to the existing funds of the Government of Chile (SUBDERE) for this type of interventions. However, finding an alternative source of funding – for the Phase 2, 3 or both- would shorten this duration significantly and thus should be analyzed by future Harvard teams.

Irrigation Water Resources Study



The municipality of Coelemu (SECPLA) has expressed to the Harvard Team its willingness to carry out this project on its own. However, once the demand has been correctly assessed, the project Recupera Chile could support the local experts with further technical advisory on the different technologies, their applicability and cost. This type of support could be implemented using the Internet and therefore its cost will be limited.

Salinization of the Soil

Both farmers and representatives from PRODESAL, have stated that a large portion of the once fertile farmlands in Perales are now barren after the tsunami. The tsunami flooded these farms and left large salt deposits in its wake. This problem has affected at least 10 farmers, affecting their crop yield for the last two years. In further investigation of one farmers plot, we could visually see the affects that sea water have had on the part of the land that was flooded and the large crop yield on the parts that were unaffected. We recommend that a soil study be completed by the City of Coelemu for the ten farmers affected to identify the source of the problem and identify possible solutions. Examples of solutions that we've heard from farmers include bringing in large bulldozers to till the land to mix the salt deposits with deeper soil creating less salinization density and/or finding crops that thrive in soil that has been salinated.



Exhibit 1: piece of land that was flooded by the tsunami with salt water. Photo taken January 10, 2012



Exhibit 2: salt deposits left on land that was flooded from the tsunami. Photo taken January 13, 2012



Exhibit 3: A plot of farmland that has been cultivated the same way for years. You can see the drastic difference in the lentil crop on the left side of the divide than from the right side. The same number of plants and farming techniques were used for both sides of the land. The left side of the plot was flooded by seawater from the tsunami while the right side of the plot was unaffected.

Regarding the execution of the soil test, it could probably be extended to the underground water and pants. The municipality could take advantage of the resources and expertise in this area of the INIA (Instituto Nacional de Investigaciones Agropecuarias). The Harvard team has contacted the expert of INIA in the center of Chillén as a first step in the project. The next steps should include the definition of the scope, the identification of the responsible / executor and the raising of funds for the study.

Livestock

Generally, the size of the farms in Perales –typically, small pieces of land surrounding the houses and used for a self-consumption purpose- impede the existence of extensive livestock farming units. However, many households have traditionally owned cows for milk production, selling the surpluses among the neighbors and in the local market. Some of the livestock was lost as a consequence of the Tsunami and other farmers have been forced to sell their cows in order to obtain a one-off income to alleviate the household's economic situation.

A milking cow is an essential asset in rural families since it provides a stable source of nutrition and money. The Harvard team has been approached by a number of requests for cows and horses. Some of them have been evaluated positively, especially those applications from those who were affected by the tsunami. One of the projects involves three women who are planning to restart their dairy business, selling milk, cheese and other dairy products.

Fishing, Seaweed & Shellfish

Fishing is one of the major sectors for the economy of Perales. Some 20 families engage in fishing activity while several others earn a living from seaweed and shellfish collection. That said, the disaster of February 2010 took a heavy toll on the seafood industry in Perales. The tsunami destroyed boats, motors, fishing nets, diving suits, and related fishing equipment. Many of the fishermen of Perales and Alto Perales have fishing licenses but no longer have the means to fish. Many amongst the affected have switched



occupations. For the families that continue to fish, some saw their incomes decline 50%. Fishermen in the area make on, on average, 800,000 pesos per year.

Erum Jilani & Prof. Judith Palfrey discuss fishing with two Perales fishermen, Jose Orrego and Jose Diego (Inc. Waldo Chaparro, Interpreter)

We propose the creation of a small fishing fleet by investing in fishing equipment that would restore income levels, generate new jobs and improve safety at sea. The fishermen are enthusiastic to work together and to pool their resources. We support the acquisition of two new boats and nets, the provision of a GPS & Fish Sonar device and some diving suits. This new equipment will help the fishermen in a number of ways. First, it will create a small fishing fleet of motorboats, which could share the GPS, allowing the fishermen to avoid dangerous seas and navigate rocky channels. The sonar would allow them to locate shoals of fish, saving time and increasing income (See Annex I for the fishermen part of fleet). Second, it will greatly enhance the capabilities of shell fishers and seaweed collectors. Currently, people engaged in these tasks do so mostly on the shore. Without any proper diving equipment they can't reach the waters where the quality shellfish and seaweed are located. The total cost of the equipment, which can be bought in the Concepcion, comes to around \$2000.

Currently fishermen lose 15-20 days in the fishing season, 10% of the total time available for fishing, due to fog and water conditions. Sometimes, they can't go to water for five days in row. Having a fishing fleet with basic, modern navigation equipment will improve the income as well as lower the day-to-day variability in their income. By providing boats, nets and wetsuits, the proposed intervention will bring lifelong fishermen back to the water. Moreover, in the aftermath of Tsunami, the Perales community has disintegrated a little as many work selling goods in neighboring towns, and are away for up to six months. Working together as fleet will help restore and build the social capital in Perales.

Small Business Development

Small businesses form the backbone of all developed economies. They are the biggest innovators, job creators and wealth generators. One of the biggest problems in Perales is the almost complete absence of formally established businesses – there is only 1 such business in the community. Aiding the establishment of new businesses and supporting entrepreneurs as they grow is critical to the economic development of the community. Some of the problems we observed include:

- The community currently has no permanent accommodation available to visitors, nor does it have a campsite, though some tenacious tourists pitch their tents on the beach.
- Observations made during our week-long visit in January suggest approximately 400 people visit the beach per-month
- The community also lacks a facility for visitors to eat, though some residents report selling small food items to tourists on the beach
- The community has 1 small store that sells candies, soft drinks, alcohol and food.
- The bulk of trade that occurs in the town happens informally, between neighbors and friends.
- The town lacks provision of a number of basic private-sector services such as stores, food kiosks, car-mechanics, hairdressers, clothing retailers etc.



The town has a beautiful 5km long beach that could be used for surfing, sea-dos or other watersports. It is a great location for fly-fishing from the shore, and the government's master plan includes a project to develop that – "Pesca de Orilla de Perales", but the two faces major obstacles in developing such attractions. The biggest obstacle to the development of tourism in Perales right now is the lack of paved road into the village. The next biggest obstacle is that the residents lack the means to invest in their development. The Government's master plan for the area includes the paving of the road, but without some further investment in the people a major development opportunity will be missed. With the new road coming in the near future, the time to invest is now. We believe tourism is a major part of Perales' future and that the village should position itself as a hub for tourist services along the nearby coast, both for Perales beach itself and other nearby beaches. Such development will anchor the local community and provide opportunity for the nomadic portion of the population to settle.

Our week in Perales and our business development workshop has allowed us to identify a number of residents who are interested in developing viable businesses that will contribute to their family's welfare and to the development of the community, these are summarized below. We have selected projects aimed both at restoring economic activity destroyed by the tsunami and also some projects aimed at developing the economy beyond its pre-tsunami state.

- **Village Store**

Gladys Ulloa and her husband used to earn a living collecting shellfish on the shore, but after her home was destroyed by the tsunami, she is now too afraid to work on the shore. In the two years since then she has since established a small store in one of the camps, selling candy and empanadas. She already has a microwave, stove and set of scales. With her new home soon to be constructed, she'd like to expand her business, opening a store to serve the new housing area. She has requested a fridge, meat-slicer and some shop-fittings (shelving etc.) She intends to sell soft drinks, sliced cold-meats and chicken along with the candies and empanadas.

- **Car Repair Business**

Edgardo Jonathan Muñoz is a young man from the village who has skills with repairing vehicles. He is married and has one child. He studied auto mechanics for a year and worked in a repair shop for a further year, but is currently working as an algae collector because he lacks the capital needed to start his business. He came to us proposing to open a vehicle repair shop in the village; he's willing to contribute

up to \$200,000 pesos of his own money toward the project. We support this project for a number of reasons:

- For the time being, the roads into Perales are unpaved, vehicle damage is common – our own vehicle had tire problems twice in the week we were there. Once the roads are improved, we expect more tourists will visit, so the potential for business will change but not diminish over time.
 - The town doesn't currently offer any vehicle repair services, so Edgardo would not only be offering a valuable service but there'd be no local competition, we believe the chances for success are high.
 - Edgardo is interested in hiring and training employees for his shop, he's also interested in more training himself. We'd like to support him with further education in mechanics.
- **Clothing Retailer**
For 10 years before the tsunami Yolanda Mireya Henriquez earned a living to support her family (2-children) by buying clothes in large markets and selling them locally. She maintained an inventory of items at her home, which was in the tsunami zone. She lost her home and her entire stock on February 27th 2010 and has been unemployed since. She approached us to ask for support to buy new stock so she can restart her business. This is a stable and profitable business that would support her family and provide the community a valuable service. It requires no capital beyond the clothing inventory since she stores the clothes at home and sells them door-to-door.
 - **Launderette**
Rosa Alarcon currently lives on a small government pension with her mother. She would like the resources to open a small launderette service in the community. This would provide an immediate boost to her household income, improving the lives of herself and her mother, and making them economically active. It would also provide the community, with its budding tourism industry, an important service. Rosa has requested a washing machine, iron, iron board and some startup capital to buy detergent and engage in some local marketing of her new business.

Gastronomy & Tourism

Gastronomy

When the tsunami hit Perales in 2010 it destroyed almost all the enterprise in the area. As the community rebuilds and tourists slowly return to the area, opportunities for microenterprise are beginning to reemerge. Tourists are slowly coming back not just to Perales, but also to the surrounding beaches. This provides a close market for the selling of goods.

Many women we spoke with are still without basic cooking utensils – pots, pans, ect. We have heard from many women in the community that they prefer the woodstoves that they had in their old kitchens, to the new gas ovens that have been provided – bottled gas is very expensive.

Most households in the community have a single income stream. The majority of women stay home with children. We've heard from these women that they'd like to work if they could, from their homes. This would not only produce a second income stream but also begin the culture of women working. Many women we've spoken with believe that a simple woodstove and basic cooking items would allow them to produce an extra \$100,000 pesos annually for their families.

It is proposed to provide these women some basic kitchen items so they can sell food items to tourists and to the adjoining communities. These items include basic woodstoves, pots and pans, and in some cases small refrigerators. Some of the women already have small enterprises so this would enhance their existing capacity. For others, this would provide the opportunity earn a small income. Along with these items there should be some basic training on how to use their equipment and also advising basic business operations.

There is some urgency on the timing of implementation. First, it is already summer, the peak season for tourists. Also, the government construction of new homes is about to begin and there will be plenty of opportunities to sell goods to the workers while construction is ongoing.



Maria Angelica Reyes Toledo, with the stove she borrows to cook for her family.

Tourism

Though Perales never had the economic activity of neighboring Dichato, it had over 40 tourist homes, a handful of restaurants and cabanas and a number of small vendors on the beach. Tourism was and hopefully one day will be the epicenter of economic activity for Perales.

Tourism has begun to trickle back to the area, for example a small number of day vacationers and fishermen are coming to Perales and the surrounding beaches. As we witnessed and heard from residents there is no infrastructure to support tourists. We have broken down the needs to attract and sustain tourism into two categories: large scale projects and support projects.

Large Scale:

Access Road – Currently there are no paved roads leading into the community. Access from Coelemu & Dichato is difficult and becomes close to impossible when it rains. Plans are in the works from the government to pave both roads, but these projects are years away.

Infrastructure - Before the tsunami, Perales had streetlights and public bathrooms. The Coelemu municipal plan includes the rebuilding of both of these public utilities.

Marketing – Once infrastructure projects have been completed and enterprise returns, we recommend a concerted marketing effort to attract tourism to the area. Currently, Perales cannot be found on Google maps. There has also been talk of a large, once-a-year festival in Perales to attract people to the community.

Support Projects:

Restaurants – Perales currently has no places to eat and there is only one small store where one can purchase drinks and snacks.

Cabanas/Hotels – Before the tsunami there were over 40 tourist homes and a handful of cabanas or small hotels. All of these were lost. Perales currently has nowhere for tourists/travelers to stay.

Vendors – Many of the residents of Perales earned their livelihood selling goods to tourists. This ranged from fruit to handmade jewelry and baked goods. Currently, some of this microenterprise has returned but its limited.

Proposed Intervention:

There should be continued pressure put on the local and federal government to keep moving on the bigger infrastructure projects. Simply put, a paved road into the community will have the most significant impact on Perales's economy. The community members have proposed a number of microenterprise projects to begin to capitalize on the tourists who have returned. These range from cooking equipment to start up materials for a restaurant and funding for cabanas. We helped members of the community apply for grants to FOSIS and SERCOTEC.

The road coming to Perales in the next few years will dramatically change the community. Tourism to the community both as a destination and as a transportation pass-through will provide a significant jolt to the economy. The major question is: Will residents of Perales be able to capitalize on this or will outside developers reap all the economic benefit? Either way Perales will be better off, but ideally citizens of Perales will be able to reap the majority of the benefit.

Women's Entrepreneurship - Sewing Project

Perales' women communicated a need for formal business opportunities that give them the flexibility to work from their homes. Together, we created a business opportunity that will provide them with wages, increase their cultural standing in the home, and improve their health status.



In Perales, employment opportunities are limited. Women marry early and bear the main responsibility of caring for children and cooking meals for the family. The community does not yet have the infrastructure or cultural understanding to support women as full-time professionals in the economy; however there are opportunities for women to work part-time. Prior to the tsunami, women were able to collect a small income from algae and shellfish collection, and meal preparation for tourists. The status of the coastal road and the damage from the tsunami harmed these employment opportunities.

During interviews, women have proposed two areas for enterprise: sewing and cooking. Sewing offers a timely opportunity for collaboration. Prior to our arrival in Chile, twenty-nine women

organized themselves into a recreational sewing group. Working with this group of women, we created a plan that will transform this sewing group into a formal business enterprise. Women will create products in their homes, which can be sold in local and regional markets.

The program will be implemented in three steps. The first step of the intervention involves the delivery of the equipment and the implementation of training. Each household will receive one portable sewing machine, start-up supplies, and training. The town clinician, Eugenia Alarcon Saavedra has offered to oversee the operation. While working with the women, Saavedra will advise on important medical topics including childcare, hygiene, domestic violence, and nutrition. The second step of the intervention requires hiring a business development professional. This individual will provide training sessions on budgeting and marketing, determine the availability of unique Chilean materials, and locate accessible markets. The third step of the intervention utilizes a multidisciplinary group of Harvard graduate students to work in conjunction with the business development professional to create a unique Chilean product that can be marketed regionally.

This program is an important step in fostering entrepreneurship in the women of Perales. Women explained that they currently receive little to no wages, and are heavily dependent on their husbands' income. Even a small increase in their annual income would have a big effect on their quality of life. This sewing program will give women the tools to branch out to other entrepreneurial opportunities. The long-term plan will involve establishing a day care center, so that future women can acquire professions outside the home.

Adult Education Center

The proposed Adult Education Center is a central part of our overall strategy to support the long-term economic development of Perales. The computer classroom is a valuable asset for this community that is currently very under-utilized. A couple of straightforward investments would allow a thriving adult education center. We envision this center fostering a greater spirit of entrepreneurship in this community and empowering local business owners to formally establish their businesses and seek more opportunities for growth. We may want to consider DRCLAS or a private supporting the first year of the director's salary, while we work with the local municipality to find long-term funding for this position.



The Perales School computer lab, home of the proposed Adult Education Center. It is equipped with broadband internet.

Conclusion

The events of February 27th 2010 destroyed much of the old Perales, in doing so they have caused dozens of families' years of extreme hardship and uncertainty. Today, many residents of the village are still without a livelihood, having lost the required tools and equipment to the sea. But February 27th also gave Perales an opportunity for renewal and put a long-neglected and extremely impoverished community in the spotlight for the first time. Harvard's engagement in Perales, in partnership with local, regional and national government in Chile can, for relatively little money, transform lives and support the people of this community as they work to build a new future for themselves and their families.



Project List and Priority

Proyecto		Cantidad solicitada	Coste total	PRIORIDAD		
				Alta	Med	Baja
SERCOTEC						
Taller mecánico	Maquinaria y herramientas	CLP 2,000,000	CLP 2,200,000	X		
Restaurante Maranata	Horno industrial, instrumentos de cocina, utensilios, gastos de adaptación	CLP 2,000,000	CLP 2,200,000	X		
SERCOTEC Total		CLP 4,000,000	CLP 4,400,000			
FOSIS						
Almacén	Electrodomésticos y equipos	CLP 231,550	CLP 231,550			X
Lavandería	Lavadora, plancha y marketing	CLP 300,000	CLP 300,000	X		
Gastronomía	Cocina de leña, vajilla, pequeño refrigerador, etc	CLP 250,000	CLP 250,000			X
Máquinas de coser		CLP 98,000	CLP 98,000	X		
Invernaderos (x4)	Plástico para invernadero	CLP 80,000	CLP 80,000			X
Plantas de frutilla	Plantas de frutilla e invernadero	CLP 200,000	CLP 200,000			X
Invernadero con materiales	Plástico para invernadero, fertilizante, malla metálica, grapas, plantas	CLP 118,400	CLP 118,400			X
Invernadero para flores	Plástico para invernadero, fungicida, fumigador de 15l, manguera (25m), fertilizante, malla metálica, grapas, flores	CLP 206,920	CLP 206,920			X
Invernadero para flores	Plástico para invernadero, fungicida, fumigador de 15l, manguera (25m), fertilizante, malla metálica, grapas, flores	CLP 206,920	CLP 206,920			X
Manguera	Manguera (350m)	CLP 280,000	CLP 280,000	X		
Depósito de agua y cámara refrigeradora	Depósito de agua y cámara refrigeradora	CLP 280,000	CLP 280,000			X
Equipo de pesca	Bote y 5 redes	CLP 300,000	CLP 400,000	X		
Traje de neopreno	Traje de neopreno	CLP 150,000	CLP 150,000			X
Cobertizo para algas	Cobertizo para almacenamiento de algas	CLP 300,000	CLP 300,000			X
Recolector de algas	5 redes, cajones de poliestireno y cubos de aluminio	CLP 300,000	CLP 300,000	X		
Equipo de buceo	Traje de neopreno, equipo de buceo	CLP 300,000	CLP 350,000	X		
FOSIS Total		CLP 3,601,790	CLP 3,751,790			
TOTAL todos programas		CLP 7,601,790	CLP 8,151,790			