



Putting children first

Lamay Area Development Program in Peru



A World Vision Australia Case Study



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What is an Area Development Program?

In the early 1990s, World Vision began employing Area Development Programs (ADPs) as the preferred approach to poverty reduction – as vehicles for child-focused, community-based development.

While it is difficult to define an ADP, they all have certain common characteristics.

They operate in contiguous geographical areas, large enough to have some micro-regional impact, yet small enough to make a major impact on selected communities. Initially implemented in rural areas, ADPs have been adapted to urban settings. Typically, an ADP may encompass a rural municipality or an urban suburb with a population of between 20,000 to 40,000.

ADP activities vary according to the context and the expressed needs of the community. They may focus on clean water, education, agriculture, preparing for natural disasters, health or leadership skills. Activities that enhance the community's ability to advocate for policy change are also often included.

A strength of ADPs is their longevity. Unlike many development programs, ADPs typically run for 10 to 15 years. Before starting an ADP, World Vision staff will

spend some two years working with the community to identify their current capacity and their needs, and then together they will plan the most appropriate intervention. Progress towards meeting the ADP's goals is evaluated every five years, and its design and future is then reassessed.

ADPs are specifically designed to be sustainable. Community organisations, families and individuals share in project leadership and activities from the start. If the program is managed well, communities are equipped and motivated to continue in these roles when World Vision leaves.

Employing diverse funding sources for different ADP activities extends World Vision's ability to fund these longer-term programs. Child sponsorship is the principal funding source. The community selects some 2,000 to 4,000 children to be sponsored, usually from the poorest families. Contributions from the sponsors of these children are pooled to fund activities that are designed to benefit children, families and the community for generations.

This publication documents the experiences in one such ADP to demonstrate World Vision's approach to addressing poverty and its causes.

Message from the National Director of World Vision Peru

Following serious threats on our staff in the late 1980s, World Vision Peru closed its office, suspending programs for several years. On recommencing our work in the mid 1990s, Lamay Area Development Program was our first long-term sponsorship program. It is funded by sponsors from Australia and is now our longest-running ADP.

Lamay ADP has many attributes regarded as successful in the field. The largely indigenous community "owns" the program, being fully involved in all aspects of planning, implementation and monitoring. In fact, the local Ricchary Ayllu Association runs the program.

It also builds on community strengths. Indigenous culture, including communal decision-making, traditional crafts, medicinal plants and organic agriculture, is fostered and incorporated into project activities. Consequently, the community knows where it is heading and how to get there and this path is shared through paintings and drawings.

All aspects of the project are monitored by the community and indicators show that it has achieved significant, positive change, especially in children's health. Moreover, this impact is measured, can be demonstrated, and explained by anyone in the community.

Of course, Lamay ADP is not perfect – no development project can be. Nonetheless, it does have the key features of a successful program, which can and should be shared. For me, the key to success in this ADP is the community's willingness to work together and with others, and their ability to dream of a better future despite their poverty. All the achievements described in this booklet, I believe, are built on this foundation. I should also stress that the ongoing dedication and community focus of our ADP staff, over some 10 years now, should take much of the credit for fostering this community strength and participation.

In marginalised, indigenous communities, it takes years to develop the trust needed to engender strong community organisation. By building on traditional community customs and relationships, Lamay ADP has managed to do just this – through long-term interventions that foster deep and sustainable changes. Fortunately, through child sponsorship, World Vision is blessed with the ability to live and work with communities for many years. And Lamay is a good example of where this approach works well. I hope we can all learn from Lamay's achievements and challenges.

Caleb Meza Arellano
National Director World Vision Peru

“For me, the key to success in this ADP is the community's willingness to work together and with others, and their ability to dream of a better future despite their poverty.”

Lamay – in the Sacred Valley of the Incas

Great respect for Pachamama, or Mother Earth, is widespread, and pride in folklore and crafts... particularly the colourful woven clothing, are outstanding features of this region.

Lamay township is in the Sacred Valley of the Incas, some 45 kilometres from Cusco, Peru's third largest city. It is the capital of Lamay district, which is made up of 13 rural communities where most of the district's 5,633 people live. According to some residents, the name of the district stems from the Quechua words Llamaypampa or Llamaypata, meaning "place of the llamas".

Lamay district was an important settlement area for the Incas. Inhabitants here are from the Quechua ethnic background and still speak this language. Inca ruins are found in the valley, including remains of *andenería* agricultural systems – terraces built on the steep slopes to conserve the soil. Great respect for Pachamama, or Mother Earth, is widespread, and pride in folklore and crafts, in their way of life, particularly the colourful woven clothing, are outstanding features of this region.

Surrounded by mountains

Located in the Andes, in a valley 2,950 metres above sea level, Lamay township is surrounded by mountains, with peaks reaching 4,800 metres. The region has diverse climate conditions and landscapes that shape lifestyles, agriculture and population distribution.

This diversity also explains differences in incomes and wellbeing. The valley itself has lush soils and produces abundant corn and fruit. The "Quechua area", between 2,950 and 3,700 metres above sea level, has variable weather that brings severe frosts in winter and produces primarily potatoes and cereals. The highland area, or "Puna floor", between 3,700 and 4,800 metres, has extremely cold weather all year round, which makes agricultural production

impossible. Llama, alpaca, sheep and cattle breeding are the only viable activities.

These diverse conditions and the scattered locations of the district's rural communities hinder both communications and access to services located in Lamay township. With walking trails and some basic roads as the only means of transport, it can take up to 12 hours to access health and other basic services.

Uneven development

Uneven development is a striking feature in Peru. While the United Nations Development Programme's Human Development Index (a measure on a scale of 0 to 1 of a region's human development status) for Peru is 0.597, Lamay district records only 0.488, one of the lowest in the country. Life expectancy in Lamay district is 63.3 years, while the national average is 71.5 years. The national literacy level is 91.9%, but in Lamay district it is 70.1%. Average family income in Lamay is just US\$60 a month. Based on these clear development needs, World Vision Peru decided to start a program in Lamay.



Participation – the basis of success

“World Vision won’t need to transfer ownership of this ADP because the program is already completely owned by the community.”

Communities in the region have a long and proud history of participating in social programs. Lamay ADP is managed by the local community through the Ricchary Ayllu Association.

The Ricchary Ayllu Association is the only community-based organisation in the region that places the management of such a significant program in the hands of its beneficiaries. It is legally registered with the Ministry of Foreign Affairs as an organisation that can receive project funds from international bodies.

The association plays a central role in the District Development Committee, which oversees all development programs in the district, and includes representatives from all relevant government and non-government bodies. While this committee existed prior to the ADP, it has been strengthened by the ADP’s focus on improving organisational and meeting processes. It is arranged into sub-committees for areas including health, education, farming, tourism, security, and urban-rural development. ADP projects are implemented in coordination with these community-organised sub-committees.

Participatory approach

From the outset, ADP staff have prioritised the participation of beneficiaries in all aspects of the program. For example, farmers involved in a permaculture project participate in running that project. “Mother advisors” largely manage the health program. In fact, the entire planning and budgeting process is community-managed. Annual plans are developed by the Ricchary Ayllu Association General Assembly, made up of two elected representatives from each of the district’s 13 communities.

Community members are then responsible for carrying out agreed plans, with support from ADP staff. The conscious aim of this participatory approach is to empower the community to shape and manage their own development, especially when the ADP comes to an end.

With a clear mandate of transparency and accountability, World Vision and ADP staff place emphasis on building trust in their interactions with community members. Project outcomes, both positive and negative, are widely shared and discussed. Through this open, action-reflection-action cycle, lessons learnt are fed into new projects. One underlying lesson that community leaders regularly refer to is that “*actions without justice, participation and empowerment are not sustainable*”.

Child wellbeing

ADP beneficiaries support the child sponsorship model as it creates links between a child, the family and a sponsor, which contributes to their development and wellbeing. They are, therefore, keen to actively participate in managing the requirements of this model and community members voluntarily monitor the wellbeing of every child in the community.

As one mother advisor says: “*We learn new skills, then participate in the program and teach others. So World Vision won’t need to transfer ownership of this ADP because the program is already completely owned by the community.*”

Community ownership of the project has strengthened the role of the Ricchary Ayllu Association and its prospects for the future. Other donors and development partners recognise its experience and achievements and now see the association as an indispensable partner.



Community vision – planning together

“Now, our priorities are food, health, and affection . . . we know the importance of affection and caring for others. These are the three areas we are focusing on.”

Community development plans are based on the perceived problems and strengths in the community. They help Lamay communities understand, manage and direct their own development, and to present their vision to local government and other donors.

The community of Hanac Chuquibamba's development plan has no written words, but is expressed through pictures and explained by word of mouth.

Leaders from this community describe their development plan as follows:

“Five years ago, our children suffered malnutrition. There were many orphans and sickness and many social problems. Because our children were not healthy, they didn't study well and didn't learn much. Because our education was so poor, we couldn't get work. Some of us drank a lot because of our problems.

With World Vision and Ricchary Ayllu, we have participated in training and bit-by-bit we've learnt to look after our kids and work within our families and community to develop both the girls and the boys. We want them well fed and educated.

Each family has its own development plan – pictures of where they have been in the past, where they are now, and where they hope to be in the future. And both parents are dedicated to achieving this plan. By sticking to our plans, our children will grow up physically and mentally strong – tall, with new ideas, ready to work and face the world.

We used to think “development” meant working the land. We used to look after our animals better than our kids. We now think differently. For us, now, our priorities are food, health and affection – now we know the importance of affection and caring for others. These are the three areas we are focusing on.

We now closely monitor every pregnant mother and every child under three in the community to ensure they have these three basic elements: food, health and affection. Young children, even before they are born, need affection and stimulation.

One day, we hope, one of our children will go to university.

But our community's dreams are more than this. This is a picture of our community in 10, 15 or maybe 20 years' time. We will be even more organised. We will look after our environment. We will live in good houses like they do in the city. We will have an appropriate place to educate our children and a building for our community monitoring team. We will strengthen our organisation so that women and men participate equally. We will talk about our problems. We will have places for small and large animals, including the sheep, cows and guinea pigs. We will eat what we grow and have some to spare. We will grow our food organically.

You know, talk is easy. It won't be easy fulfilling this dream. But we've learnt how to organise ourselves, and we are well on our way. This is our strategic plan.”



Revival of Inca Law

One of the drawings that community leaders use to depict community vision is of an indigenous man carrying the “tools of community leadership”. In one hand he holds the community development plan; in the other, a book of traditional Inca Law. There is a strong belief that these two elements in balance, one representing social stability and solidarity and the other representing vision, are the essential strategic tools.

Traditional Inca Law helps communities determine the most appropriate way to behave and to treat each other. It also

establishes punishments for persistent violations of the law. The ADP has promoted traditional law to address development issues. When alcohol abuse was raised as a serious community issue, traditional law, stipulating three warnings about excessive drinking prior to banishment from the community, was applied. Likewise, mistreatment of children is monitored and punished through traditional community processes. Some of the unplanned ADP outcomes include a significant reduction in alcoholism and domestic violence.

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Focus on children – our future

“We used to think that working the land was the most important thing to do. Now we know it’s looking after our kids.”



Children are at the centre of the community’s vision for the future and this can be seen in all aspects of Lamay ADP. Through the participative planning process, families have determined that ADP activities should focus on the wellbeing of their children and be conducted on their behalf. They say this motivates them to become even more involved, because it is their agenda.

Child sponsorship was introduced using a diagram illustrating the lifecycle of a child, from the womb to adulthood. It emphasised the impact that this generation of children will have on the future of the community.

Such diagrams are now the centrepiece when community members discuss why “*children are our future*”, and how a focus on children benefits the whole community. This process has raised awareness of the importance of childhood development and concepts including child psychosocial stimulation.

In 2000, an assessment indicated that Lamay parents undervalued the importance of spending time with their children and this was demonstrated by the lack of strategies available to foster



an environment conducive to children’s growth and psychosocial development.

As a community leader in Hanac Chuquibamba says: “*We used to think that working the land was the most important thing to do. Now we know it’s looking after our kids*”.

Men, often for the first time, now play with their children, make them toys and closely track their nutritional status. While there is an obligation to focus on the children who are sponsored, ADP staff and the community monitor and treat all children equally.

Older children are also seen as active participants in their own development, some playing the role of “*children’s promoters*”. These youth have been trained in community participation and are now involved in designing and evaluating some projects.



Edgar’s story

Edgar Contreras, 36, is the Lamay ADP Coordinator. He has lived all his life in the region and currently lives in Cusco, 45 minutes’ journey from Lamay. Edgar comes from a poor family that struggled to find the money to cover his university fees. In his second year of an agronomy course, Edgar was at the point of dropping out when a friend at his church told him that World Vision was offering scholarships for good students from poor backgrounds. Edgar secured the US\$50 a month scholarship, was able to complete his studies, and the link with World Vision was made.

On weekends, Edgar completed his course fieldwork with the communities of Lamay ADP. “*Everything I studied at uni,*

I actually learnt in the field – everything about vegetables and fruit, and about people,” says Edgar. At university, he helped form the Students’ Circle for Andean Development. And in 1998, after graduating, Edgar was offered a role as an agricultural extension worker with Salcca River ADP, another World Vision program nearby. Within a year, he was made program coordinator, and in 2003 he transferred to Lamay ADP.

Of Lamay ADP, Edgar says: “*We are taking some important steps that are sustainable and replicable. And we are proud our community is seen as a model for others, especially in the areas of community organisation, child-centred development and nutrition.*”

Building networks – the key to sustainability

World Vision Peru appreciates that successful development programs cannot be achieved by one organisation or group alone. Strategic allies and networks are essential.

Key to the success of this program is the broad cooperation between project staff, the community and their many partners.

In the health sector alone, the ADP works with several partners. Roxana Ramírez, ADP Health Facilitator, says that the local government is an important partner, particularly on issues related to child and maternal health. *“Representatives from Ricchary Ayllu and the local government are the most active players on the health commission of the District Development Committee. And, importantly, the local government and Ricchary Ayllu have the same priorities,”* Roxana explains.

The head of the local Health Department says the association is one of its main allies *“because they support us in everything; their work is very important for us”*.

The municipal council's current health priorities include children's growth and early development, sanitation, preventative health, and ensuring an ongoing supply of fresh water. In the area of economic development, the council prioritises the construction of water and irrigation systems to improve farm production, and the creation of markets for locally produced goods. Improved food security, through an increased focus on livestock production, is another priority. These all fit well with the ADP's *“food, health and affection”* strategy.

Since 2000, the United Nations Children's Fund (UNICEF) has been a vital partner in improving child nutrition in Lamay district. Ricchary Ayllu signed an agreement with UNICEF to carry out the Good Start project, through which UNICEF advisors helped to develop a system to monitor the nutritional status of all children under

three, as well as pregnant women in the community.

Beneficiaries and partners

Partnerships with beneficiary communities are integral to all ADP activities and Ricchary Ayllu has worked to strengthen the role of volunteer health promoters in each community. In the past, health promoters were limited to assisting health department personnel. With technical support from UNICEF and the ADP Health Facilitator, volunteer health promoters have received training and their status and self-esteem has risen.

The network of self-motivated community health promoters, crucial to the sustainability of the health program, is now highly valued by all. As the health promoter from Hanac Chuquibamba community says: *“In the past the community did not appreciate our work. It is different now... the people trust us because we know what is important and what needs to be done”*.

“Mother advisors” add another level to the network of partnerships in the health sector. An initiative of mothers themselves, largely because many community health promoters are men, mother advisors participate in all health activities. They are trained in nutrition, prenatal and children's check-ups, hygiene, exclusive breastfeeding and complementary feeding and they are the most active participants in the ADP's health program.

All the players in the health sector capitalise on each other's strengths. The UNICEF-inspired tool for monitoring children's health and wellbeing has since been adopted by the local government. It has inspired regional government practice in the field and may be applied as the regional approach in the future.



Children's health – a community effort

Back in 2000, some 66% of children under the age of three in Lamay district were suffering chronic malnutrition.

The issue

Peru's Ministry of Women and Social Development estimates that over 19,000 Peruvian children died during 2000. Of these, 8,000 died in the first week of life and 10,500 in the first month. The predominant causes for these deaths were respiratory infections, diarrhoea and malnutrition.

In the same year, the national average for childhood malnutrition was 25.4%. But in the Cusco region it was 43% (Demographic and Family Health Survey, 2000). According to the UNICEF data, 66% of children under the age of three living in the Lamay area were suffering chronic malnutrition. Stunted growth, the prevalence of infectious diseases and retarded motor and cognitive skills were the most apparent manifestations of this poor nutritional status. According to Lamay Health Post data, the average birth weight in the district was 2.7 kilograms, below the ideal weight for Peru of three kilograms.

A study carried out by UNICEF and Ricchary Ayllu Association in 2000 revealed that:

- » Social and cultural patterns in the area were hindering the care of pregnant women. Fathers, as the "heads of households", were given priority in the distribution of food at home, while women, including pregnant women, were last in line. If there were young children in the home, the mother would often share her serving with them. The staple diet consisted of potatoes, beans, boiled corn, and *chuño* (dried and frozen potato), with almost no meat or vegetables.
- » Only 14.4% of pregnant women in the district attended a health check-up in the first quarter of their pregnancy,

and only 29.9% of women gave birth in a clinic or hospital. The norm was for women to give birth at home, assisted by husbands, godmothers or simply on their own.

- » Families did not understand how early stimulation could benefit a child's development. It was considered abnormal and even irrational for mothers to talk to their children inside their wombs. Parents playing with their children was unusual, and for fathers it almost never occurred. As a result, children were often shy and afraid and found it hard to relate to adults.

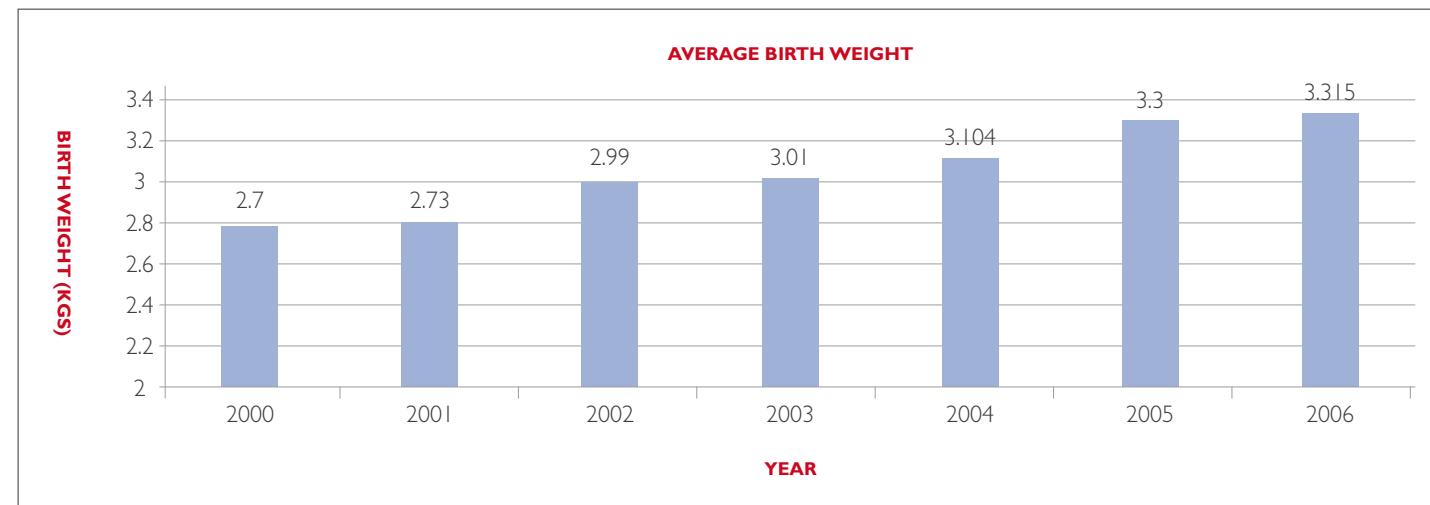
Overall, the UNICEF study showed that the community did not give enough time, attention or food to their children.

The intervention

Based on the findings of the UNICEF study, the Good Start project commenced. This aimed to build the capacity of parents to adopt sound practices for their children's wellbeing at home, and, at the same time, build the capacity of the community to monitor the results. This project relied on strong and effective community organisation.

Community health promoters, mother advisors, community leaders, staff from the local sanitation committees, sponsorship volunteers and other ADP staff all attended training workshops in the first year of the project on topics including child development, monitoring progress, anthropological assessment, psycho-effective stimulation, and participative methods.

One volunteer health promoter or extension worker was chosen from each of the 13 communities to receive additional training in order to build the status and influence of these positions.



Children's health – a community effort

The mother advisors closely monitor the health and nutritional status of every child under three and every pregnant woman in Lamay district.

As their skills and experience grew, the health promoters took on more leadership and facilitation roles.

Mother advisors

Mother advisors work alongside the health promoter in each community. In a community with 60 households, there may be up to 10 active mother advisors and these women form the backbone of the ADP's health program.

With support from the health facilitator and the community health promoter, mother advisors closely monitor the health and nutritional status of every child under three and every pregnant woman in Lamay district.

Health monitoring

Health monitoring centres were established in each community, equipped with weighing scales and height measuring tools, as well as toys, posters, educational materials and medication. These centres form a hub from where health promoters and mother advisors monitor, counsel, educate and stimulate parents and their children.

The nutritional status of each child and pregnant woman is recorded and mapped on a monthly basis. Home visits by mother advisors complement this work and ensure no one is missed. Charts indicating the nutritional status of each child under three and each pregnant woman are displayed in the health monitoring centre. Maps showing the locations of each house in the community are colour coded to show the health status of households. The entire community is fully aware of the nutritional status of each young child and pregnant woman in their village.

Such detailed and accurate information provides the community and health authorities with the information they need to improve their interventions. This health data is reviewed and analysed at

community assemblies and helps with strategies to strengthen what is working well and overcome deficiencies. In addition to monitoring health status, mother advisors run an ongoing public health campaign. Through community gatherings or door-to-door discussions, they advise parents on appropriate nutrition for their children and on how to best use available food. They offer advice and information on food, hygiene, early childhood stimulation, warning signs during pregnancy, and the importance of regular check-ups and of giving birth with the support of trained health workers. Bulletin boards, posters, radio spots and neighbourhood training programs are also employed to impart knowledge and skills to parents.

Learning to play

Childhood mental and physical stimulation is seen as an essential complement to good nutrition and hygiene. With guidance from the project facilitator, parents make toys, primarily from local resources. While attending the health monitoring centre, they learn to play with their children, by "practising" with the health promoter and the mother advisors. Fathers are a particular focus of these activities.

Other ADP activities link in with the health program and clearly contribute to its success. Ricchary Ayllu has promoted better sanitation by installing water and sewage systems, including flush toilets, in many homes and some schools. In many cases, this is the first time these people have had access to clean tap water in their homes.

Intimately related to health is food production and income. Because the Lamay community largely produces all the food they eat, another aim of Lamay ADP is to increase both the quantity and variety of production, and increase family incomes.



Children's health – a community effort

From 2000 to 2006, the percentage of children under three in Lamay district with chronic malnutrition plummeted from 65.9% to 38.7%.

The results

This work has clearly contributed to some remarkable changes in the health of the Lamay community.

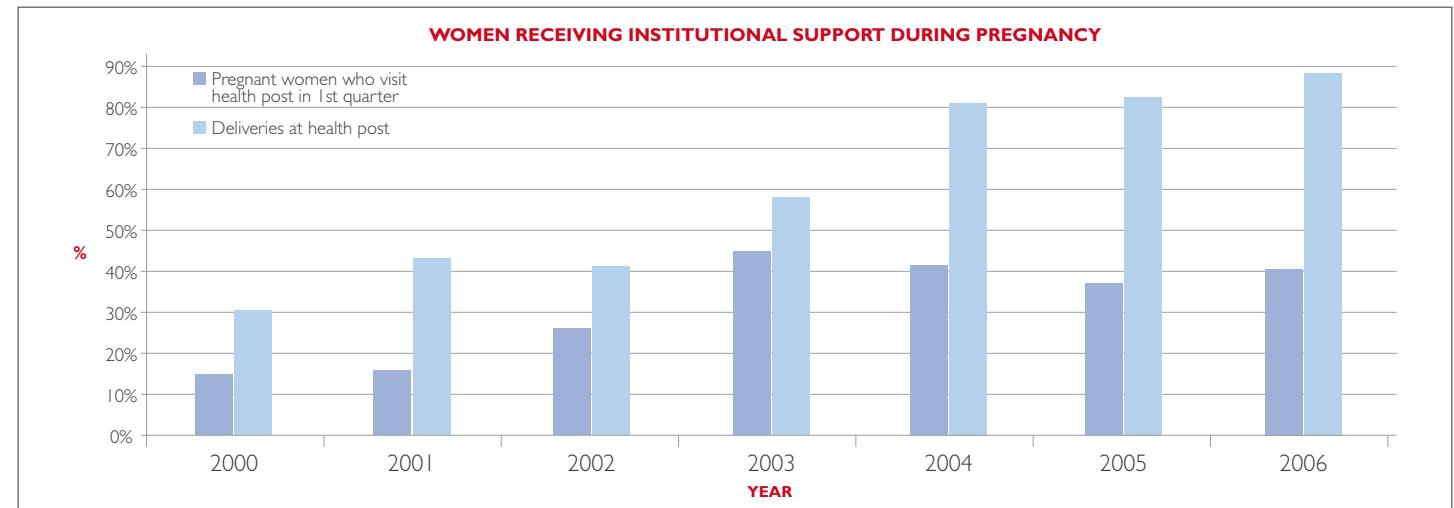
From 2000 to 2006:

- » the percentage of children under three suffering from chronic malnutrition plummeted from 65.9% to 38.7%;
- » the percentage of pregnant women who attended a clinic in the first 10 weeks of their pregnancy rose from 14% to 41%;
- » the percentage of women who gave birth in a health institution (instead of their own home) rose from 30% to 90%;
- » the average birth weight of babies born at the Lamay Health Post rose from 2.7kgs to 3.3kgs.

There have also been positive changes in gender relations. More men now assist with household chores; they are concerned about the nutritional aspects of their families' diets; they attend prenatal check-ups with their wives; many men now look after their children at home and take them for check-ups.

Community members and World Vision staff see many other, less tangible, indicators of success, like an ability to incorporate reflection into their work. ADP staff use a method of reflection-action-reflection and encourage community leaders and local authorities to adopt this approach in community meetings and assemblies. Discussing and reflecting on the nutritional data, for example, has enabled families and authorities to be more directly involved with their children's health issues and has provided a tool for continuous improvement. Also, with greater

knowledge and involvement, comes greater participation and ownership. Health improvements in Lamay have been so significant that the community has been asked to share the secret of its success. Lamay has become a window to observe and learn, especially in the field of community surveillance of children's growth and development. Mother advisors have visited other communities in the region to share the methods they use to monitor child nutrition. For many of these women it is the first time they have left their district. The regional government, motivated by the outcomes of the project, considers this approach as a reference point in the development of a regional Children's Emergency Plan. Likewise, students from Cusco University now regularly visit the health program in Lamay as part of their practical training.



Permaculture – boosting food and income

Many families in these regions only eat potatoes, with very irregular servings of meat.

The issue

Improved agricultural production is another fundamental aspect of the ADP's goal of ensuring the wellbeing of children. Lamay people largely eat what they produce and sell any excess. Better agricultural production can potentially deliver better nutrition for children as well as higher family incomes.

Almost everyone in Lamay lives off the land but only those who live in the valley have conditions that are ideal for agriculture. Middle- and high-altitude areas suffer from the harshest conditions, with steep, eroded slopes, scarce native vegetation and lack of water. In middle altitudes, farmers can only produce crops such as potatoes, quinoa (edible seeds), beans, barley, olluco and oca (tubers) and tarwi (legumes). Extremely cold weather in the high altitudes limits families to the harsh life of grazing sheep, alpacas and some cattle.

Many families in these regions only eat potatoes, with very irregular servings of meat. Fruit and green vegetables are almost non-existent. Meagre incomes restrict their ability to access a greater variety of food.

When the communities were made aware of the dire nutritional levels of their children, increased and varied agricultural production was identified as part of the solution and permaculture was one of the approaches considered.



Permaculture – boosting food and income

“After we received the training in fish farming, we diverted some of the creek water into these ponds and threw in some baby trout.”



The intervention

Lamay has a strong tradition of ecological farming that can be traced back to the Incas. The Andean Permaculture Project, implemented in Lamay ADP from 2001 to 2006, aimed to build on this tradition. This Australian Government-funded project focused on families with young children and aimed to improve food security and children's nutrition.

Permaculture, or permanent agriculture, was introduced as a means to diversify production and foster sustainable and supportive ecosystems. It was one of the first comprehensive applications of permaculture as an aspect of community development in the whole of South America. It involved training, mentoring and support activities for interested families, as well as the development of infrastructure, such as irrigation systems, and markets, to boost incomes.

Over the five-year life of this project:

- » 225 families from 11 communities attended 45 training sessions on topics such as greenhouses, biogas plants, organic compost, home gardening of vegetables, medicinal



plants and flowers, breeding ducks, sheep, guinea pigs, fish and alpacas, recycling, improved kitchens, and solar showers. This training was followed by hundreds of monitoring and support visits to family plots.

- » With significant community participation, irrigation systems were installed and these are now managed and maintained by community-based irrigation committees. Lamay is generally blessed with good water sources, but overhead irrigation had never been employed before.
- » ADP staff worked with participants to foster producer associations and assist them to form legal entities. Key to this was a close liaison with the municipal council, which was the principal partner in establishing the Lamay Sunday Market as an outlet for local produce.



A tour through Idelberto's garden

“We now have medicinal herbs, like oregano, that provide us with the bulk of our income. I can get quite bit for a bunch of oregano at the Sunday Market; much more than I would get for potatoes. With this extra income, I've managed to improve the stove and the whole kitchen, and add a second floor to the house. I now grow flowers that we sell and new vegetables we eat.

You can see I've managed to build a proper shelter for our 300 guinea pigs. I buy a few good breeders and off they go. You know they used to live with us inside the house. Their waste now goes into the biogas plant that the project staff taught us how to make. It's only recently installed, but it's already producing gas that's piped straight into the kitchen for cooking. This will save us cutting down trees.

After we received the training in fish farming, we diverted some of the creek water into these ponds and threw in some baby trout. There are plenty in there now. I'm planning to get more cows, but I want to finish building their home first. Cows give us milk, meat and fertiliser.

We now think more about our kids, especially their nutrition and wellbeing. Not only do we give them more and better food, they now get more attention. The community has many more toys in the health centre, but we've decided to make some here for our kids, like this see-saw.

This painting is our family plan. It shows our dreams and makes sure we know what to do when we get up in the morning.”

- Idelberto, Lamay community member

Permaculture – boosting food and income

Income from guinea pig breeding increased by 400%.

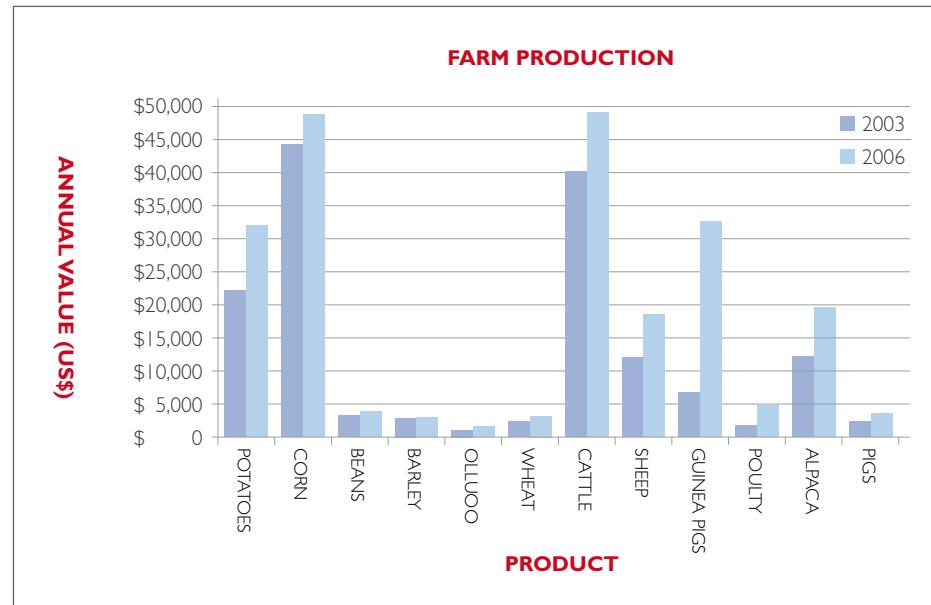
The results

A combination of organic home gardens and increased animal production has demonstrably increased the availability of nutritious foods and animal protein for most of the families involved.

Data collected from seven of Lamay's 13 communities between 2003 and 2006 shows a substantial increase in income from every farm product assessed. Among the highlights were:

- » Income from guinea pig breeding increased by 400%
- » Income from poultry increased by 159%
- » Income from alpaca increased by 61%, pigs by 56% and sheep by 55%
- » Income from potatoes, the staple food, increased by 44%.

This data does not include income figures for newly introduced products, such as medicinal herbs, green vegetables, and fish.



Permaculture – boosting food and income

“Although I have six children, now that we have guinea pigs, none of our children are undernourished.”

Greenhouses

Greenhouses, constructed by 60 families in highland regions, significantly improved food availability. Beneficiaries in one highland community reported that the greenhouses now provide, for the first time ever, a source of vegetables throughout the year, even through the “hungry months” of October and November.

Guinea pigs and trout

More than 100 families boosted their animal production, with almost all households now breeding guinea pigs. One woman reported: “Although I have six children, now that we have guinea pigs, none of our children are undernourished”. A particular success has been the breeding of trout at very high altitudes, adding to people’s protein intake. Increased animal production has also boosted the supply of organic fertiliser made from animal waste, which nourishes soil and improves crop yields.

Sunday Market

Ten legally constituted producer associations, with 225 members, have been established. These associations

collaborate to sell their produce – potatoes, cauliflower, cabbage, carrots, lettuce, chard, beetroot, guinea pigs, medicinal and aromatic plants, and honey. The Textile Producers’ Association, Sunac Ttica, sells woven cloth and knitting made from natural fibres and organic dyes. In addition to more regular access to markets in the nearby towns of Calca, Urubamba and Cusco, a new Sunday Market has been established by the Ricchary Ayllu Association in conjunction with the Lamay municipal council.

An assessment of the income, expenditure and savings of 30 randomly selected families who participated in the permaculture project shows significant improvements. Average family incomes rose from US\$60.29 per month in 2003 to US\$76.10 in 2006, up 26%. During the same period, monthly savings grew by 88%.

Some broader, less obvious impacts on community wellbeing were noted in the project’s final evaluation. These include greater motivation and interest in working the land, the health of their children, family cohesion, the sense of connection with the land and ancestors, and in the freedom to make life choices.



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