

Nominate Samuel for the Nobel Prize for Sustainable Development



'This place has become too dry,' says Samuel Conde Colque. 'If we wouldn't have our irrigation project, we wouldn't be able to live here.' His words sharply contrast the terraced fields that look like fresh green patchwork stretching across the mountain landscape as far as the eye can reach. We only met this thoughtful man, his wife Gregoria and their seven children yesterday. Today he and his brother Erasmo (picture) show us the fields, both the ones on the hills and the ones that are located in the valley 700 meters below.

'Without irrigation we cannot live here.'

It's the beginning of April, the harvesting season on the Bolivian Altiplano. Soon the dry season that lasts for seven months will start again. The breathtaking views of green fields will have to make way for the rough beauty of the Bolivian winter, and the small, freezing houses will lean against the flanks of the hills that are ruled by frost and wind. 'We have been lucky the past year,' adds Erasmo. 'It has been an exceptional year with abundant rainfall. Even in places without irrigation, we can harvest.' This is not a matter of course, even not during a good rainy year such as this. We visited a few non-irrigated fields together with them where lean, small corn plants fight for survival. What a huge difference compared to the lush, deep green and man-sized corn plants on the irrigated fields.

There's no life without water

Samuel and Erasmo take us to their cemented water basin. 'This is the beating heart of our family's irrigation system', explains Samuel. 'Our family of 24 persons will have a better assurance of food security. We are three

brothers and we all have a family and children. Our parents set up this system, and they still use it today. Including my eldest children, we are twelve workers in total. But even the smallest children contribute. Even if they just carry away some rocks, they are still able to help us.' 'Water from a small source upstream fills the basin,' so the brothers say. 'First of all, we lead the water to the basin through a little canal that we dug out of the earth. But this system was too vulnerable. It was destroyed by heavy rainfall. Consequently, we decided to cut a canal out of the rocks. And this system functions perfectly.' PVC tubes direct the water to the fields. 'We don't let it just flow through the fields but spread and distribute the water by means of sprinklers. This way we avoid erosion due to water flowing down the fields.'

According to the brothers, the chances of survival of their families have increased considerably thanks to the irrigation system. 'In earlier times, we all depended on rainfall for survival. Recently, we've had more and more bad years, with droughts and disappointing harvests. We harvested only once a year. Now, we can sow earlier, in August, and harvest for the first time in December. Right now, we are expecting a second harvest. Furthermore, we are now able to produce a much wider variety of crops, among others vegetables and fruit. We even have a small surplus which we can sell on the market. We also grow alfalfa (a kind of clover) which we use as feed for animals. It allows us to keep a dairy cow and supplement our diet with milk and cheese.'

Irrigation for all

The three Conde Colque brothers and their families live in the Chucarasi community, one of the eighteen indigenous communities in the Chayanta community, in the Northern Potosí region. It is a very isolated territory. Once you've arrived in the little town Llallagua and leave the main road, it will take you – even by jeep - another three hours on small, narrow mountain roads before you reach Chucarasi. Almost everybody depends on agriculture for survival and 97% of the population is poor. The irrigation system developed by the Conde Colque family was the first of its kind in Chucarasi. It was set up thanks to the support of Equipo Kallpa, a partner organisation of BD. The family provided labour and Equipo Kallpa provided material and knowhow.

Valerio, a collaborator of Equipo Kallpa, says: 'This small-scale irrigation system is part of the plan 'irrigation for all' which we have developed in collaboration with the community and other organisations. It is a sustainable investment, as the family itself is responsible for its functioning. Since it helps the family in providing for itself, it is a contagious example for other families in the community and for other communities. We installed about 70 small irrigation systems in 2008. In addition, we have made an inventory of 428 sources in Chayanta that can be used for projects on family and community irrigation, and we have put small dams in mountain streams and rivers, in order that small reservoirs can be created for irrigation purposes.'



Climate chaos on the Altiplano

Just as all other mountain ranges, the Andes have a timber line. Above this timber line climate circumstances are such that no trees can live there. No trees at all? Well, not exactly, the keñua is able to survive in these conditions. This indigenous tree of the family Rosaceae, an evergreen, that can cope with extreme weather conditions and takes up more space underneath the surface than above it. The presence of this tree indicates that a subterranean water table can be found, as the tree's roots have reached it.

The tree is of vital importance to the indigenous farmers' population in the Andes. It's the tree that 'calls the water'. At its base, rituals related to water are performed. Agriculture at a height of 3 to 4000 meters is not a piece of cake as droughts, frost and hail are severe threats. People have been able to produce food thanks to an ancient system of knowledge and an intimate relation with Pachamama (Mother Earth). Pachamama lets us know through a variety of symbols – such as the presence of the keñua tree, cloud formation or the time of the year certain plants bloom – when agriculture is possible, when the rainy season starts, which crops can be grown at what height, when it's time to work the field, to sow, etc. Out of thankful reciprocity Pachamama is honoured through rituals, sacrifices, dances and respect. The indigenous way of life is based on harmony between man and nature. But the past few decades, nature has been out of sorts. The weather has become unpredictable. The Altiplano is suffering droughts. Even a strong plant like the keñua tree has a hard time, a proof the groundwater table levels are diminishing. Global warming is not an image of a distant future in the Altiplano. Just



as in the polar areas, global warming strikes harder in the high mountains than in more temperate climate zones. It's a concrete, tangible daily reality. Samuel's mother, the seventy-year-old Filoberta, has the same experience. She tells us they didn't use to live on top of the hill but on the river banks: 'It was easy to endure the heat then, but now it's become intolerable.' Gregoria, Samuel's wife, agrees: 'At the river side, we cannot even carry our children on our backs. It's too hot and they cannot stand it. Even the rains are not the same as they used to be. We have a lot of hailstorms. They start around sowing time and last throughout the rain season. The rains are very irregular as well. They are often full-scale rainstorms that wash away the earth from the hills, leaving behind nothing but rocks and making it impossible for us to cultivate the land.'

'When these phenomena occur during the sowing time, we lose everything, even the seeds', adds Samuel. 'Fortunately we are able to buy new seeds. However, if a hailstorm or frosty period strikes during the growing season, we lose the entire harvest. It's clear the environment is warming. During the day it's too hot and at night it's too cold. Including the harvests change. Down at the riverside we produce scarcely anything. For crops such as corn and wheat it's too hot down there and we have to flee to higher ground. Other crops, such as broad beans, are cultivated at heights that were impossible before.'

Climate change leads to poverty

'Since the disaster year 1983, people have become more aware of climate change,' says Equipo Kallpa's Valerio. 'It didn't rain that year and the seeds for sowing dried out. There was no food. People had to migrate to the east to the cities and the mines. This caused a massive depopulation of the indigenous communities of Northern Potosí. Since then, the yearly droughts have constantly increased. The indigenous communities live under a constant threat of a food crisis.' But the people look for methods to tackle the crisis. That's how Equipo Kallpa

came into existence in 1992. When they expanded their activities to a new working area in 2006, they conducted research among 12 indigenous communities on the effects of climate change on the food crops. This study showed how bad the situation really was. All important vegetables such as potatoes, beans or peas yielded a much lighter crop (a decrease by 25 to 80%). The wheat harvest fell by 80 to 100%.

Forced adaptation

Continuously, the ticking and scraping of metal on rock can be heard. A large group of men is busy digging into the rocky earth using pick axes, mattocks and shovels. Samuel's family's water basin is small beer, compared to the basin Chucarasi's community is constructing. When it's finished, it will contain 600 cubic meter of water, and it will irrigate eight hectares of fields. Once upon a time Equipo Kallpa had to convince people to participate in pilot projects, but those days are long gone. Everybody is convinced now that a lack of rain has to be compensated for by means of irrigation. People have to use all their creativity to adapt their sustainable agricultural methods and survival strategies to the changing climate. This basin will serve the whole community. Work is done by hand. Machines are prohibitive – supposing you would be able to get them here. 'We work just as our ancestors used to, through community labour', says Erasmo. 'Before we start out, we chew coca and bring offerings to Pachamama. We are part of a community and cannot shirk work when it's needed.' Samuel nuances. 'It's also a condition for getting project support. Some time ago we did not do this sort of community work anymore. But now we cooperate again, because it's necessary.'



Sustainable development

It's obvious Equipo Kallpa and the indigenous communities do not look for temporary solutions. Their irrigation projects are part of a broader plan to bring a halt to destruction of nature and to promote sustainable development. Protecting the hills from erosion is of vital importance. Samuel already showed us how using sprinklers prevents erosion due to irrigation water flowing down. Even more important, however, are the plantings of green barriers on the contour lines of the hills. Plants, shrubs and trees with firm roots retain the earth and impede the thin upper layer from washing away down the slopes. In addition, there are two extra advantages, according to Samuel. 'These green barriers supply food for cows, donkeys, sheep and other animals, just as the alfalfa we grow as feed for animals. Furthermore, they are a worthy alternative for stone terraces. Sometimes, we

construct these, but there are not enough rocks for them.’ Restoring the ground water level is our main priority. If it continues to decrease further, desertification will be lurking around the corner and sources will dry out. Through green barriers, but also through reforestation of hill tops, the community assures that rain water flows away more slowly and penetrates the soil. ‘There are three fundamental conditions for sustainable production’, says Valerio. ‘Improving and protecting the soil, the water supplies and sources, and covering the soil with plants.’

Wherever a project succeeds, communities are no longer forced to suffer the consequences of climate change as mere victims. This is proven by communities in the region where Equipo Kallpa started up similar activities in the nineties and where work is almost completely finished now. People there managed to improve their situation despite deteriorating circumstances. Through plantings and reforestation, they extract greenhouse gasses from the air instead of producing them. Through their own sustainable techniques, they provide solutions and they become the architects of a development model breaking out of the vicious cycle of destruction.

People’s own plans: managing one’s own development

Processes of change, however necessary and urgent, can never be imposed from the outside. Only one’s own plans can lead to sustainable change, because these are rooted in their own culture and are developed from their own insights and expertise. The belief disadvantaged people can start up a self-selected development through cooperation, has been BD’s core business for years. It’s also Equipo Kallpa’s method in eighteen indigenous communities. ‘We support initiatives taken by the community members themselves’, according to Valerio, ‘We support modernisation at their request. We provide support, training and encouragement.’

Any other method would clash with the way indigenous communities are traditionally organised. They decide on important issues as a community. This happens at monthly gatherings of all members of the communities. Decisions are taken unanimously, not through a majority. Since time immemorial communities have been grouped in larger territories: ayllus. Communities living in the mountains work together and make sure everybody has access to the products that are produced on different heights in the Andes Mountains. The ayllu is a traditional political, economic and social system. Decisions are made unanimously. This means that all responsibility for new projects is shared. It’s a cast-iron guarantee for a lasting result.

Politicians have to cooperate...



If you make choices and decisions together, you have an important lever for change. That’s why Equipo Kallpa has been investing in the political role of the ayllu as a traditional indigenous structure for over fifteen years. Up to a few years ago, the ayllus had a weak position vis-à-vis the official political structures, such as the municipality and the state. Municipal policy was reserved for the city’s elite. It was unthinkable that indigenous people would offer to stand as a candidate. Today, the Chayanta municipality has an indigenous mayor. Euloterio Coyo Pare originates from the Quinta Pampa community, which is a part of the Phanacachi ayllu just like Samuel’s community. The fact that indigenous communities are able to obtain political power is a new lever for change. The municipality’s policy is no longer focused on Chayanta’s centre but also on improving life within the communities. The mayor confirms: ‘We, people of the ayllus used to be neglected, barred and discriminated against. But now, we have made a conscious choice for local development together with the municipal council. We want to prevent people from migrating as a consequence of poverty. Emigration is connected to bad agricultural production, education, health and basic facilities. That’s why we make plans for local development in cooperation with the

indigenous authorities in the two ayllus of our municipality. We manage our own natural resources and biodiversity. We have the capacity to govern. We do this by cooperating fully with expert organisations such as Equipo Kallpa. As such we fully support the 'irrigation for all' programme.

Worldwide allies

Although the result is nice, the communities in the ayllus in Northern Potosí cannot combat the threats of the greenhouse effect by themselves. Rain clouds are brought to them by the wind from the Amazon basin, where they originate out of evaporation in the mighty rainforest. The diminishing rain fall in the Altiplano is a sign that the waning forest is no longer able to play its vital role in the water cycle. Well-known weather phenomena such as El Niño and La Niña caused by changing sea currents occur more often and disturb rain fall patterns. Climate change is a trans-border problem and requires a global approach.

Communities on the Altiplano and partner organisations such as Equipo Kallpa can only win their battle for a sustainable future, if the world succeeds in bringing a halt to global warming. In order to attain this, the North and the South have to cooperate. In Bolivia, organisations find a strong ally in Fundación Solón, a BD partner organisation. This organisation is specialised in lobbying for the benefit of farmers, and has been putting the climate theme high on the agenda for years. Director Elisabeth Peredo: 'In 2008, we co-founded the Bolivian Platform for Climate Change, a cooperation of social organisations. There are about 180 members, among them are several of BD's partner organisations. We strive for a thorough approach of the climate problem, in Bolivia and outside Bolivia. As a consequence, we demand the founding of a real international tribunal for climate crimes. In the meantime, we will summon rich countries to appear in our own "climate tribunal" in Copenhagen.' BD's Bolivian partner organisations support BD's and the international network CIDSE's demands for a new and just climate agreement (see page 26). Negotiations at the UN climate summit in 2009 in Copenhagen should not only be limited to making agreements on emission of greenhouse gasses per country. Poverty that is already caused by climate change must be the focus of discussions. Sustainable development started by the indigenous communities of the Altiplano is an indispensable contribution to a solution to the climate problem. They have to receive support and green technology from the rich countries which, after all, have the biggest share in the climate problem.

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'I'm thinking about sowing more alfalfa,' says Samuel, 'so that I'll be able to keep four cows. The money I'll be earning will enable me to send my children to school. They will not be forced to look for work in other places, and I too will be able to stay and work here.' He is not dreaming of a life in luxury, but of 'buen vivir' (a good life) in a tight knit community that can live off the things offered by the Pachamama, and that offers her respect and utmost care in exchange. As so many people in the South, Samuel and the indigenous communities are putting their own plans for saving their environment, food production and habitat into action. That's why we, and all our partner organisations, nominate Samuel for a prize still missing in the world: the Nobel Prize for Sustainable Development. Out of respect for their colossal job. And as support for their and our demand for a new, just climate agreement.

Call the water, for 40 days!

At a gathering of our Bolivian partner organisations, there was a comprehensive discussion on the BD's next campaign. Our partners use the image of the keñua as a symbol for the solidarity movement, in Flanders and in the South. Our movement also survives as an evergreen plant, even beyond the limit of what is liveable, in places where a fierce battle is fought against hunger, poverty and injustice. It can cope with severe circumstances: Disinterest, opposition or the crude fight for power and money. It takes up a bigger space beneath the soil than above it, as its roots have to dig deep to reach the life-giving water. But that's exactly why its presence shows the world the existence of a subterranean reservoir of spirituality, motivation and the power to keep on going. Our campaign, as a part of the Christian Lent, is a ritual we perform at its base. We take up our task as stewards of Creation. We call the water. We proclaim a fruitful era for our world. We irrigate the dry fields. It's time to plant seeds, and believe in the upcoming harvest.