

Land for Life Award Semi-Finalists

Alan Savory, Zimbabwe

Alan Savory, a Zimbabwean biologist, rancher and farmer, has dedicated his life to healing grasslands around the world. After years spent researching the root causes of desertification, he developed the concept of Holistic Management, a decision-making framework which helps land managers and others understand the relationship between large herds of wild herbivores and the grasslands, and manage herds of domestic livestock to restore balance to the land. Holistic management increases land productivity, livestock stocking rates and profits for landowners, without compromising the long term viability of the land. More than 10,000 people have been trained in Holistic Management and its associated land and grazing procedures, and as a result an estimated 40 million acres are managed holistically worldwide. Mr. Savory donated his ranch in Zimbabwe to create the Africa Center for Holistic Management, a learning site for community and emerging commercial farmers. He also co-founded the Savory Institute, an organization dedicated to promoting large-scale restoration of the world's grasslands.

<http://holisticmanagement.org/>

Chifeng Muncipal Government, China

Sixty years ago in the arid lands of Inner Mongolia, one-third of the land was desertified, forest cover was only five percent, and drought was frequent. Animal husbandry was difficult, crop returns low and the people lived in poverty. But today, forest covers nearly 35 percent of land and the sand is retreating. Through scientific policy planning and mass mobilization, the government of Chifeng has rehabilitated three-quarters of a million hectares of degraded land, and on average each hectare of shelterbelt forest prevents 10 tons of soil loss each year. The area of desertified land is now reducing at a rate of 150,000 hectares per year. The government and the people have worked together to make Chifeng into a model for desertification control. County governments sign a 'responsibility contract' with local municipalities, not only making the job of combatting desertification a priority across all levels of government, but ensuring it is integrated into local development planning. Every year, the peoples' congress holds a debriefing on desertification, where the government reports on their progress and people have the chance to provide feedback. The government of Chifeng has prioritized improving policies and encouraging innovation for sustainable land management. A bottom-up approach is emphasized, with afforestation efforts led by companies, households and professional teams. The government has invested in strengthening their scientific approach, by training 65,000 technicians and 50,000 local farmers over the last six years, with priority given to ecologically sensitive areas. To learn from and track these efforts, Chifeng has documented over 100 afforestation technologies. As a result of these efforts, the forestry industry, animal husbandry and agriculture have all experienced economic growth, and the surrounding environment has improved.

Conservation Effort for Community Development (CECOD), Uganda

Eighty-five percent of Ugandans live in rural areas and depend on agriculture for their livelihoods. But over the years, Uganda's education system has become more theoretical and academically oriented, failing to equip students with skills and knowledge about the land. At the same time, many youth living in the rural areas drop out of school to work in agriculture. Concerned with spreading knowledge for sustainable development, CECOD promotes action-based learning in primary schools, turning children into agents of change in rural communities. The organization has created a network of eco-schools, training of 7,500 teachers in 161 primary

schools on how to teach sustainable land management. Nearly 35,000 children have been involved in hands-on micro projects, including organic farming and water harvesting. CECOD has led campaigns to stop bush burning and littering, and offered courses on topics such as increasing yields of banana trees, agroforestry and organic farming. Collectively, CECOD students have planted 37,333 trees. CECOD efforts are community wide, directly involving parents in eco-school activities, as well as encouraging community participation in local land planning councils. CECOD also advocates for increased education for sustainable development with parliamentarians and policy makers in Uganda.

<http://cecodug.org/>

DeCo! – Sustainable Farming, Ghana

In the savanna region of northern Ghana, soils are poor and crop yields are low. Chemical fertilizers offer only a temporary solution. If not used properly, chemical fertilizers can be dangerous to farmer's health, and a large share of the nutrients are eventually washed away due to the low content of organic matter. There is no official supply of organic fertilizer, and various initiatives to encourage farmers to compost have failed. DeCo!, a social enterprise, collects local waste, fruit, vegetables and other biomass in partnership with a local waste management company. It then composts the waste, creating a ready-to-use organic fertilizer that is rich in humus. The fertilizer potentially doubles crop yields by improving the water and nutrient holding capacity of the soil. The waste treatment plants are located close to villages so transport costs are minimized, reducing costs. The plants are run by highly-educated graduates from around the world, but DeCo! also offers many positions for unskilled labour, providing employment opportunities that are especially crucial during the farming off-season. The goal of DeCo! is to become financially sustainable social business. DeCo! has partnered with myclimate, a Swiss company offering carbon offsets, and is the first organization to use carbon credits for compost in Africa. The credits could lower the price of organic fertilizer by 20 percent, making it more competitive with chemical fertilizer, which is currently subsidized by the government in Ghana. When compared to using chemical fertilizer and dumping organic waste into landfills, DeCo! organic fertilizer amounts to an annual emission reduction of approximately 1500 kg CO₂eq. In a later stage, DeCo! will introduce a franchising system to scale-up and encourage local entrepreneurship.

<http://www.deco-farming.com/>

DESIRE-WOCAT, The Netherlands

A research network that focuses on building a learning community among scientists and practitioners, the DESIRE-WOCAT project offers fresh thinking and practical solutions to the problems of land degradation, soil and water conservation. DESIRE is short for 'Desertification mitigation and remediation of land – a global approach to local solutions.' It is a partnership between Alterra Wageningen University in the Netherlands and the World Overview of Conservation Approaches and Technologies (WOCAT). The collaboration has become *the* accredited knowledge management hub for sustainable land management and land degradation. Desire works to identify local sustainable land management strategies, provide scientific basis, and assess and develop promising strategies in partnership with stakeholder groups. Desire also offers guidance and accessible tools to support decision making and evaluates sustainable land management activities and disseminates the results. An EU-funded project launched in 2007, Desire has added 450 case studies to its database. The Desire approach was applied in 17 desertification affected areas in 13 countries, where problems ranged from wind and water

erosion to salinization, vegetation degradation, competition for access to water, forest fires, drought and flash floods. Desire also gives priority to integrating gender expertise and analysis. Desire recently published a book about their findings including a compilation of tools called *Desire for Greener Land*.

<http://www.desire-project.eu>

Fight against Desert Encroachment (FADE), Nigeria

As the sand dunes advanced in Kano state of Nigeria, farmers abandoned their land and students dropped out of school. The community had to do something to stop the advancing desert, so in 2000 FADE partnered with the Ministry of Environment to plant a wall of trees in three rows. The outward facing row of trees serves as a windbreak, protecting the inner trees and the village from the encroaching sand. The second row is used as woodlots to chop down for fuel, which ensures that the community does not chop down the windbreak. The final row is comprised of fruit trees for food and income-generating products. After the trees took root, school enrollment tripled, cloud cover improved, and rain increased. The sand retreated and farmers returned home. After two years, FADE replicated the project in other areas, holding a tree planting competition for secondary schools. FADE also organized seminars among farmers, teachers and administrators, and provided advisory services to farmers on what types of trees to plant to prevent desert encroachment. In 2010, FADE produced a reality show, designed to bring young professionals into the cause of combating desertification. Fifteen 'desert warriors' made the journey from Lagos to London, learning about and advocating for environmental protection. FADE has also been part of exchanges with scholars in China, the US and Niger, and succeeded in advocating for greener policies with both the government and companies, including MTN, a cell phone service provider.

<http://www.fadeafrica.org/>

Dr. Goaming Jiang, Institute of Botany, the Chinese Academy of Sciences, China

The grasslands of Inner Mongolia in northern China are seriously degraded as a result of over-grazing and the pressures of a growing population. Herdsman in Hunshandake and their families struggle to make a living on land that has nothing left to give. Native species have disappeared, and the loose topsoil triggers sand storms that blow to Beijing and beyond. Reversing desertification has at times seemed impossible, but Dr. Jiang has found a way. His research has shown that by removing human disturbance on degraded land, land could be restored in a matter of years. To do so, he persuaded herdsman to stop the grazing of large animals like goats, and instead adopt chicken farming, tofu production and eco-tourism, taking the pressure off the land. In an added benefit, chicken droppings help fertilize the soil. Not only has the land improved, but the incomes of the Bayinhushu villagers have nearly doubled. Dr. Jiang also encouraged the community to help youth find educational opportunities in the cities, allowing the land time to rehabilitate and support more farmers in the future. The project has received media attention, spurred changes in China's policy for grassland restoration and management, including compensating farmer losses if grasslands are used for ecosystem restoration.

The Great Green Wall, Republic of Korea & China

The expanding of the Kubuqi Desert in Inner Mongolia, China has caused local people to leave their homes, and triggered dust and sand storms that reach across China to Korea and Japan. But the construction of a Great Green Wall has found success halting desertification and prevented the encroachment of sand dunes. A collaboration between the Korean NGO Future Forest and

the All China Youth Federation, the wall is 16-kilometers long and about one kilometer wide. It counts 5.8 million trees and covers an area of 1,800 hectares. The wall serves as a wind-break, slowing the advance of the yellow sand dunes towards the farms and ranches of the Yellow River basin. The project has demonstrated that a combination of tree-planting and sand fixation methods can slow sand migration and greatly enhances soil natural health and yield capacity. The results are even visible by satellite. The wall offers many benefits for the people and ecosystem. Living conditions for local residents have improved, plants and animals have returned and the amount of soil sediment washed into the Yellow River is decreasing. Much of the work has been achieved by Korean and Chinese students, who have gained valuable experience along the way. The project team remains ambitious: they've recently launched a campaign to plant a billion trees in the region. The cooperation shown by the Great Green Wall has come to symbolize friendship between Korea and China, giving it the nickname 'China-Korea Friendship Great Green Wall.'

<http://www.futureforest.org/>

Grupo Ambiental para el Desarrollo (GADE), Argentina

In 2006 in Colonia El Simbolar, a town 1,150 km northwest of Buenos Aires, farmers struggled to make ends meet, and large amounts of land were abandoned. Farmers who once grew cotton, soybeans, fruit and vegetables now survive on social assistance. Part of the problem was the high salinity in the soil, which has become degraded over time, but producers also lacked schooling and necessary capital for agricultural investments. GADE led the community to plant resilient native trees, called Algarrobo Blanco or the white carob tree, which can be used for wood, flour and honey. Because it is a leguminous plant, it improves the soil's structure, texture, and organic matter content and reduces surface salt. After six years of hard work, nearly 7,000 hectares have been reforested, and nurseries have generated 1,750,000 white carob seedlings. The leadership of local people was given priority at every stage. Nursery construction, preparing and planting seeds, pruning, irrigation and general maintenance has all been done by local people, particularly women, who previously had no knowledge about nurseries. GADE has also mobilized the community, especially youth, to protect the environment. The work has set an important precedent for large-scale native forestation and carbon sequestration, and serves as a prototype for efforts to fight severe desertification in Latin America and the rest of the world. Project organizers estimate it could sequester 324,000 tons of carbon dioxide over 20 years.

More information: <http://www.ipsnews.net/2010/06/argentina-turning-wasteland-into-woodland/>

Dr. Liliya Dimeyeva, Kazakhstan

The shrinking Aral Sea has exposed 60,000 square kilometers of seafloor, creating a giant salt desert. Salt and dust blows across the countryside, causing health problems for the people living nearby. Dedicating her scientific career to creating green seabeds in the desiccated land, Dr. Dimeyeva has pioneered a process of afforestation, planting saplings in the severely degraded land. Her work has not been easy; the saplings she planted the first year were destroyed by frost. But the following Spring the saplings took root – survival rates varied from 33 to 72 percent, no small feat in the heavy and highly saline ground. While the results of her methods are promising, it is impossible to cover the whole area of the dry sea floor with green plantations. Other strategies must be used, such as planting protective forests as windbreaks and forming 'green spots', which are small ecological oases of up to 5 hectares to speed up the natural plant colonization of the dry seabed. Dr. Dimeyeva now faces additional challenges, such as how to

preserve survived saplings, determining which factors most affect survival in the tough seabed conditions, and how the further development of the eco-system will progress. Her studies are the first of their kind, and she has long collaborated with Japanese scientists, participating in joint expeditions, the creation of documentary films and presenting her work at scientific conferences and universities in Japan. She has attracted public attention to the problem of combating desertification, and involved local people in caring for the plants and assessing the results of throughout the stages of the experiment.

Sustainable Organic Integrated Livelihoods (SOIL), Haiti

When you look at the shoreline of Haiti after a rainfall, you can see a brown ring around the island. It's the result of severe erosion and land degradation, and represents a threat to the future of agriculture and reforestation. Once known as the "Pearl of the Antilles" for its incredible productive capacity, Haiti is now a largely deforested landscape where the vast majority of the country's inhabitants live in abject poverty. More than half of Haitians live in rural areas and earn their livelihoods from the land. Most lack access to agricultural inputs like fertilizer, and as a result in recent years food production has stagnated or even declined. At the same time, only 12 percent of Haitians living in rural areas and 29 percent in urban areas have access to sanitation facilities. As soil fertility declines, farmers are forced to leave their land and migrate to the cities. SOIL takes an integrated approach to the issues of inadequate sanitation, declining soil fertility and extensive erosion. SOIL has built EcoSan toilets across the country, now accessed by more than 20,000 people. The waste from the toilets is safely treated and becomes high-grade compost. Every week, SOIL's compost sites generate three tons of compost for agricultural fertilizer and soil regeneration. The fertilizer is sold at low cost to farmers and used in agricultural trials and nurseries testing sustainable land management practices. Outreach and education campaigns have also been key to SOIL's success. SOIL partners with Haitian musicians to mobilize, educate and inspire people for sanitation and restoring soil health. SOIL also trains community organizations on ecological sanitation and works with partners to offer opportunities for youth in urban agricultural entrepreneurship.

<http://www.oursoil.org/>

Mr. Tie Shunliang, Director of Forestry and Environment Protection Bureau, China

Dedicating his career to afforestation and combatting desertification in the tough conditions of western China, the efforts of Mr. Shunliang have restored 25,000 hectares of degraded land, which continues to shrink at a rate of 2.7 percent per year. As the director of the forestry and environmental protection bureau of the Qinghai province, he is responsible for a large region that reaches from the highlands of the Tibetan Plateau to the Gobi Desert. He has overcome many difficulties, such as limited funding and technical staff, as well as lack of resources to conduct surveys and outreach in the Gobi desert. His methods for increasing vegetation for degraded land have become widely adopted in dryland areas, including poplar planting, farming caragana shrubs, and a special trimming technique for wolfberry. Combined with water-saving irrigation technologies, these techniques have increased survival rates and reduced planting costs. He has become well known for his accomplishments, especially the 'Grain for Green' program, which afforested 2,000 hectares of land. He has led people to build several green walls to shield the land from sand and wind. His starting point is always to increase benefits for people at the grassroots level, and he has advanced thinking and research for people-centered sustainable land management. He also pioneered wolfberry cultivation for medicinal use, a sustainable business

that not only provides environmental benefits, but has added to the income of 30,000 people, particularly poor herdsman and women.

Terraprima, Portugal

In the Mediterranean climate of Portugal, the land is particularly susceptible to soil erosion and desertification, and as a result many farmers abandon their land. But the project 'Terraprima – Sown Biodiverse Permanent Pastures Rich in Legumes' has pioneered a biodiversity engineering technique that increases soil organic matter content. Soils richer in organic matter are also richer in nutrients and therefore more fertile, retain more water and are less susceptible to erosion. After adopting the technology, farmer's yields increase, the need for costly fertilizers and concentrated feeds is reduced, and there are less negative environmental impacts. One of the strengths of the project is the direct involvement of farmers who are provided with technical support during frequent field visits, at which consultants advise them about the best management practices. The approach is particularly important in the Montado areas of southern regions in Portugal, where many years of tillage have reduced soil fertility and contribute to an increase of tree mortality, threatening ecologically valuable agro-forest systems. Five hundred farmers are involved in the project, covering an area of 25,000 hectares, with an additional 30,000 hectares to be reached this year. The project represents an estimated annual sequestration of 5 tons of CO₂ha⁻¹ (carbon) over a period of 10 years. Terraprima aims to expanding this type of pastures in a potential area of 1 million hectares in Portugal.

<http://www.terraprima.pt/>

Turkish Foundation for Combating Soil Erosion (TEMA), Turkey

With nearly half a million members and active volunteers, TEMA is the largest movement for conservation, erosion control and habitat restoration in Turkey. Its educational program reaches more than 45,000 young people from primary school to university, with a tailored curriculum that encourages youth leadership for sustainable development. Also a legal advocate, TEMA's team of voluntary lawyers have opened or intervened in dozens of court cases against development in natural areas, saving a total of 70,020 hectares of fertile agricultural land. Two of TEMA's most important legal successes have been the unanimous ratification of the Grazeland Law by the Turkish General assembly in 1998, and the enforcement of the Law on Conservation of Soil and Land Management, for which TEMA volunteers collected one million signatures. This is the first law in Turkish history drafted and ratified by the efforts of an NGO, and as part of this law, local Soil Protection Councils have been created in 59 cities. TEMA also recently drafted green constitution, presented within Turkey's new constitution. In part as a result of TEMA's campaigning, market research has shown that 64 percent of people age 18 and over regard soil erosion as an urgent threat in Turkey. TEMA has led massive tree planting efforts, and promoted sustainable agriculture by leading efforts to cultivate saffron, a high value and low-impact crop. TEMA has collaborated with various branches of the government to train thousands of leaders to combat erosion and protect the environment, including clergy, local district governors, teachers, members of the armed forces and national police. TEMA has also produced documentaries and hosted cultural events and exhibitions on issues of erosion and desertification. TEMA operates one of Turkey's biggest environmental libraries, publishing books on soil erosion, climate change and forests by Turkish scholars, as well as translating books by environmental experts into Turkish.

<http://english.tema.org.tr/>

The Wand Foundation, Philippines

When farmers are poor, the land also suffers. Land requires constant investment, and can quickly become degraded due to a lack of inputs like fertilizer. For poor farmers in the Philippines, the challenges of poverty are far-reaching. They often lack access to sanitation, and as a result are prone to disease. This combination of low incomes, degraded land and poor health creates a downward spiral that leaves farmers vulnerable. Many poor farmers fall prey to usurious lenders and lose their only asset— their land. The Wand Foundation breaks this cycle of powerlessness by helping farmers reclaim their land through micro-loans. The organization also helps farmers improve yields and increase their incomes by introducing agricultural technology and eliminating market middlemen. Wand has trained more than 300 barefoot farm technicians, half of whom are women, to educate small farmers on how to increase their outputs, diversify crops and improve their family's nutrition through growing vegetables. Wand promotes ecological sanitation by providing toilets to those previously without, and then processing the waste into high-grade organic fertilizer. The fertilizer improves the quality of the soil and yields, and reduces greenhouse gas emissions by acting as a carbon sink and replacing the use of synthetic fertilizers. Wand also organizes the community to maintain the watershed and plant trees to prevent erosion. Wand counts over 1,700 farmers as members, and so far has restored more than 1,400 hectares of degraded land by planting trees.

<http://mindaterrapretabiochar.blogspot.de/>

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