

Can we talk about climate change?

Words and pictures by Hannah Mornement



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Irrigation waterway Lalibela region, Ethiopia

After an intense two weeks of negotiations at the climate change summit in Paris a historic agreement was reached - to limit the global rise in temperatures to below 2 degrees - but this year for the people of Northern Ethiopia it is too late. El Niño a global climate phenomenon caused by high sea surface temperatures in the equatorial Pacific has already driven up global temperatures. Experts say that 2016 will leave 10's of millions hungry and cause water shortages and disease outbreaks. Within Ethiopia's spectacular landscape hides a country that is no stranger to climate variability. So in addition to their usual struggles Ethiopians already living in poverty are experiencing the additional affects of global warming. A country where its economy depends heavily on agriculture, with over 80% of it's 93 million population small scale farmers and pastoralists, it is now bearing the brunt of this negative impact leading to increased poverty, water scarcity and food insecurity. By January 2016 the United Nations have predicted that 15 million people will need food aid. With the enormity of this emergency the Ethiopian government has re-vised up its emergency funding appeal from US \$237m in August to US \$600m to the end of 2015. However this current drought is set to be the worst in 30 years.



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Chickpea harvest, Meket, Ethiopia

"This is the worst I have seen it" said Woday Gelaye, 75, who has been farming in this area for over 60 years. "Because of the recurrent drought and the heavy, short rainy season even this chickpea crop has been put back." Extending his hand he shows me just a few small chickpea pulses. After the failure of his crops earlier in the season the Lutheran World Federation (LWF) provided Woday with 31kgs of seeds, but this crop too is meagre. Having had to sell his ox to buy additional food for his wife, 8 children and 4 grandchildren he no longer has the help needed to plough his other 2 small fields - and now has nothing left to sell. His situation is sadly not remarkable. It is estimated that 73,000 in this region

of Ethiopia have been affected by the failed crops due to the unpredictable climate, and will need emergency food aid to tide them over before the next harvest in a few months time. There are currently only 768 people benefiting from the LWF Emergency Seed Program.

Woday, however is one of the lucky beneficiaries. Just 2 hours down the dusty road from Meket to Lalibela, blending into the thirsty landscape a brother and sister live on a small farm with her 3 year old child. Debre, 21 and Baye, 19, are not part of the LWF Food Security Project and are just weeks away from having absolutely nothing left. "The rain started late, we thought we were managing well, but when the crops were at knee level the heavy rain came and destroyed everything. After that to survive we started to sell our goats, sheep and cows. My biggest fear now is that if the government doesn't help soon we will have to leave - migrate to a nearby district or perhaps Sudan." Livestock are the lifeblood of these arid lowlands, but more and more families are having to sell their cattle before they too perish, leaving them even more vulnerable than before. Things have to



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Woday Gelaye, 013 kebele, Meket, Ethiopia



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Debre and Baye's small farm, Lalibela region, Ethiopia



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change if the people are going to survive generation after generation in this region. The LWF, who have been working in Ethiopia for 43 years and in this region for the last 10, are doing just that - with their Food Security Project. Budgeted for 3 years it was started at the end of 2014 and is benefiting around 4,670 people, just 2.7% of the districts 167,429 population. It is comprised of an irrigation scheme, irrigation agronomy and crop production, vegetable production, compost technology, conservation agriculture - introduced by CLWR (Canadian Lutheran World Relief) - water management, seedling production and distribution amongst other agricultural related tasks. All these projects are using tools that are available to the farmers, manure for example and with a team of experts LWF are teaching them how to get the most out of the land.

Shamble, 46, has already profited within the first year. He has been part of LWF's Food Security Project in Midaghe for a year. He has been trained in irrigation agronomy along with crop and vegetable production. "I was also trained in compost production and given an improved variety of drought resistant teff." An integral component of the Ethiopian diet. "I have also benefited from the cash for work scheme, digging the irrigation trench, and working as a guard overnight. My life and my families life has really improved, I have built a new house and been able to buy some sheep and cows."



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Shamble harvesting his teff and outside his new house



Trees are a fundamental component being introduced back into the landscape by LWF. Providing vital shade for crops as well as essential nutrients for the soil. Areas made barren due to felling for houses and firewood, leaving a land desperate for any nourishment and relief from the burning sun, are contributing to the year on year poor soil quality. LWF have recognised this and are marking out land where the water table is dangerously low using GPS mapping devices then using it for conservation and the reintroduction of indigenous species. Free roaming animals also cause huge problems for farmers so with the launch of dedicated conservation areas vital work is being done to increase the parched lands water table and re-establish crucial soil nutrients. Shamsha is one area in particular. Animals are not allowed to graze here and farmers are fined heavily if they do. Conservation agriculture is vital if the land is to endure the perpetual climate change in this region. The basic principle is to minimise soil disturbance in order to stabilise its structure, increase fertility and balance the eco system. The farmers and their families work extremely hard alongside the staff from LWF as they know that these measures are integral to their farming practices. Plants such as Sesbania which help



Conservation agriculture, Shamsha, Lalibela region, Ethiopia

to fix the nitrogen levels in the soil and also provide vital cattle feed are planted along with fast growing Moringa trees with its fantastic medical properties. Vetiver with its strong network of roots provide stability throughout the stone walled terrace structures holding them strong against the heavy rain and landslides. These are just some of the species being grown and systems in place, and results are already showing from



Conservation agriculture, including irrigation construction, tree planting, an applemango fruit, Lalibela region, Ethiopia

just the last 12 months. With the construction of a small dam and 7km of irrigation waterways, built by the local farmers on a cash for work basis, these areas of Medagie and Shumsha are slowly regenerating. A nursery has been introduced at Medagie where farmers learn about soil management, composting and grow cash crops for sale at the local markets. Crops are being harvested 3 times a year instead of once.





Women make up a large part of the work force, often back breaking in nature.

Here farmers and their families are able to make enough money to send their children to school, to feed them a better more nutritious diet. They are also encouraged to reach out to farmers who are not lucky enough to be part of this project by creating farmer to farmer extensions.

Compost technology and the introduction of cattle dung for fertiliser are also a huge part of this Food Security Project. The soil badly needs nutrients, and with the help of LWF team members they have created a program that is easy to understand and even easier to implement.



**(Left) Mesella, 55 and his compost.
(Above) Cattle dung fertiliser**

Climate phenomena like El Niño are not new occurrences, but scientists say that global warming has contributed to making them larger and more damaging. Without projects like LWFs Food Security Program the people of Ethiopia face a bleak future. This is a country that has suffered for decades but is desperately trying to help itself. We can not afford turn a blind eye. Millions of peoples lives and livelihoods are at stake. Development projects like these that are teaching farmers better practices and helping them become more self-sufficient are crucial if the future generations are to survive. Over the years Ethiopia has become synonymous with 'famine and drought' however the government have been working hard along with NGO's to extinguish this image. Roads are being built in order to facilitate the movement of supplies to the most isolated regions, funding of various institutions and programs for the improvement of crop yields and the re-establishment of the DPPC (Disaster Prevention Preparedness Commission) are all helping to work towards this goal.



**(From left to right) LWF team
Tefera Hailu - Natural Resource Conservation Supervisor
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Gezahegn Mamo - Agricultural Extension Officer
Asrate Deressa - Construction Supervisor**

