



THE FUTURE EARTH ASIA NETWORK

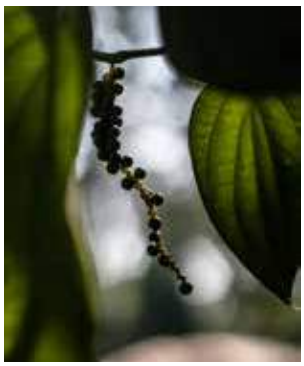
PROJECTS, PROGRAMS AND PRIORITIES FOR THE FUTURE













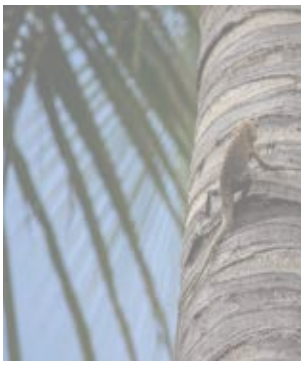


FRAMTIDSJORDEN

FUTURE EARTH • TIERRA DEL FUTURO • TERRA DO FUTURO






The Future Earth Asia Network - Projects, Programs and Priorities for the Future

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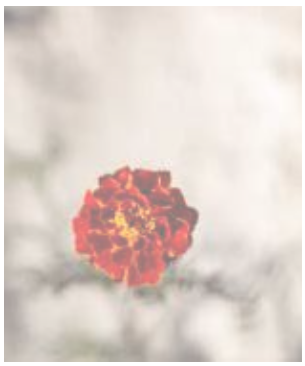
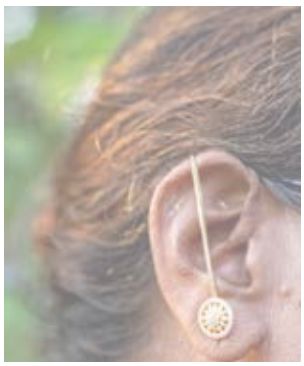
People in photos:.
Mr. K. Karuppiah (farmer at CIRHEP, Veelinayakenpatti village), Elvira Skoglund (Future Earth intern at CIRHEP, Sweden), Feroz Ahmad Chulichan (College student at SECMOL), K. Vijayalakshmi (biology teacher at Evergreen Mt. Hr. Sc School, Kelambakkam), Rigzin Angmo Skampuk & Sonam Chuskit from Chuschul (students at SECMOL, Nubra Valley & Chuschul), participants at Serga Festival 2018, Deenjdhayalan (farmer at TEDE Trust, Kelambakkam district), Aditi Bhatnagar (volunteer at Secmol, Hyderabad), Punchok Dolma (Women's Alliance representative).







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Introduction and History of the Future Earth Network

In the 1980, Friends of the Earth and the Future in our Hands had begun to cooperate with environmental organizations in South America, Africa and Asia. Together, all these organizations laid the foundation for an international environmental network. At that time many organizations experienced that the understanding of ecology and nature was inadequate. There were problems with Greenlands hybrid seed and farmland, and felt that rural development based on organic farming was the right way to reverse the negative development. The organizations working in cities believed in people's own ability to map environmental problems and find solutions, as well as the importance of organizing themselves locally and internationally to strengthen each other and together learn from each other.

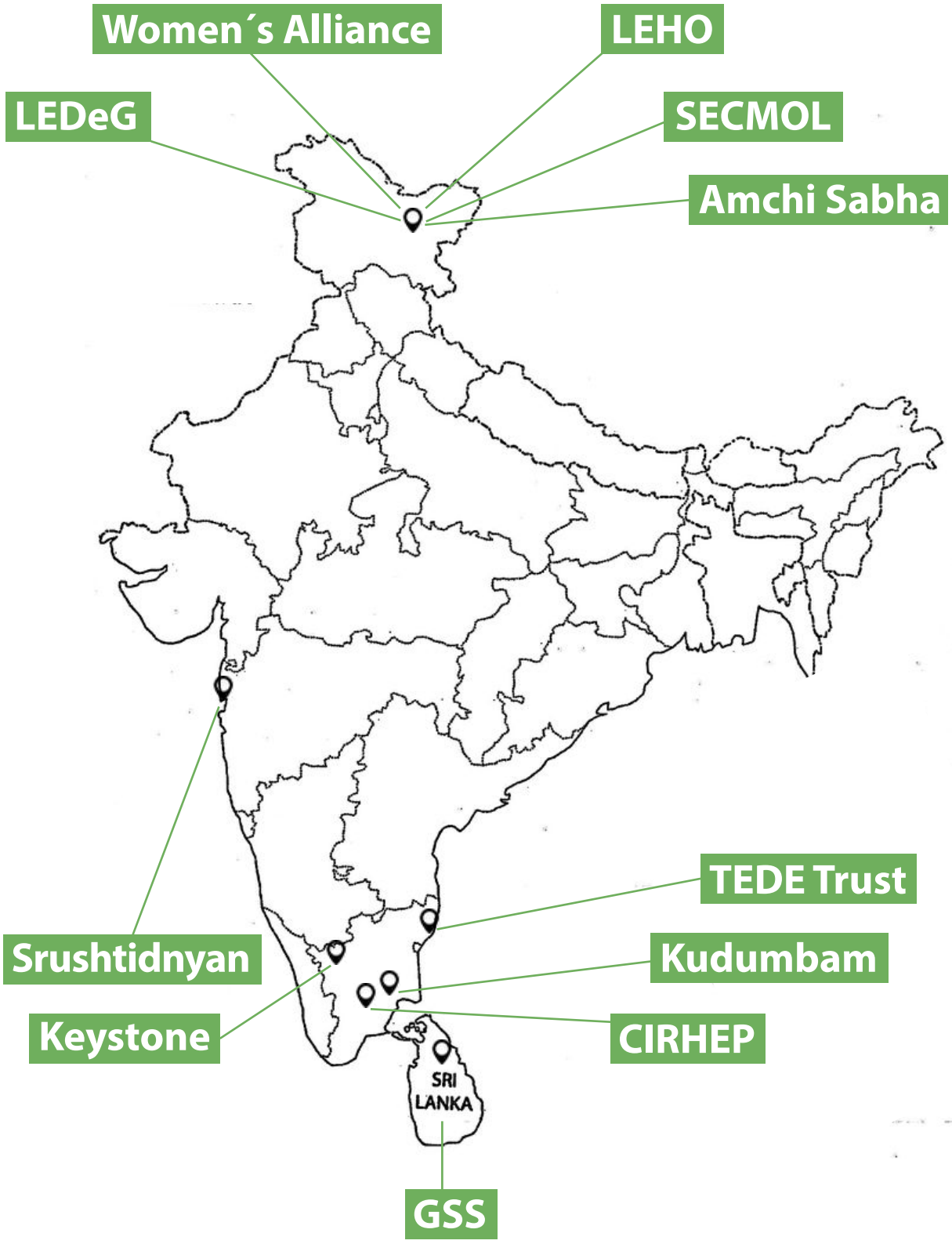
In the above context, the Future Earth Network was established in the year 1988 as an international network with member organizations in Asia, Sweden and South America. The network was named Framtidsjorden - Future Earth - Tierra del Futuro - Tierra do Futuro. It was decided that the network should rest on three legs: environmental development through local pilot projects, education and networking. The network would work according to three basic principles: ecology, self-reliance and cooperation.

From 1988-2008, the Swedish organizations had the opportunity to receive funding from the Swedish International Development Cooperation Agency (Sida) to support projects run by the organizations in the South. Together, the problems of aid were discussed and how those who have the money get more power. Project activities were developed together to counter this. Cooperation in projects would therefore be based on friendly relations and it was decided that each project would have a Swedish friend group. Another principle they came up with was that it is the local organization who has the best insight into the problems and knowledge of which methods work. At the same time the organizations in the South explained that they needed training and wanted to get acquainted with ideas and knowledge developed in other parts of the world.

From 2012, each region of the network develops their own program goal through a consultative process of program planning workshops. Thus, there are also common program goals. The first one was evolved in 2012. In the end of 2016, the network evolved the current program goal: "Strengthening people centric climate resilient practices for sustainable and equitable livelihood". The program goal is valid for five years.

All projects within the Future Earth Asia network are evolved in relation to the program goals. The projects have two components. The first one is common activities, in which all partner organizations participate. The other component consist of projects supported by friend groups. The aim is that the organizations have their own friend group in Sweden who in turn mobilize a small portion of economic support, which attracts a major portion of support to their projects from Sida.

Suresh Kanna
Facilitator for the Regional Coordination Group of the Future Asia Network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TEDE Trust
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GSS

Organizations in the Future Earth Asia Network

In Asia, the Future Earth network works with eleven network organizations in India and Sri Lanka. In India the of the organizations are spread out in three regions: Tamil Nadu, Maharashtra and Ladakh. In Sri Lanka there is one organization in the Kandy district.

Kandy Disrict, Sri Lanka

GSS

Gami Seva Sevana (GSS) was founded in 1977 and is located south of Kandy in Sri Lanka. The aim with their activities is to promote the advantages of organic farming and to help farmers sell their products. GSS therefore organizes trainings for farmer groups about cash cropping, organic manure, seed banks, biogas and water management. At their training centre they also receive visits from students and organizes conferences about organic farming.

Ladakh, North India

LEDeG

Ladakh Ecological Development and Environmental Group (LEDeG) was founded in 1983 and is based in Leh in Ladakh. The organization works with ecological development in Ladakh and over the years they have pioneered in solar energy and building of passive solar houses. The main work is conducted in rural areas such as Nubra Valley and Sham, but has lately also focused on sustainable development of Leh. LEDeG has about 40 employees and works with promotion of solar heated buildings, solar power, waste management, organic farming, youth empowerment, farmer groups, awareness raising and water conservation.

LEHO

Ladakh Environment and Health organization (LEHO) was founded in 1991 in Leh. LEHO focuses on the issues of sustainable development, ecology, and health in Ladakh. This is in response to the changes in agriculture, farming, food habits, social values and culture of the Ladakhi societies. Today LEHO works with six villages in Ladakh, where they promote organic farming, eco tourism and water conservation projects. Over the years they have promoted the use of passive solar heated buildings, conservation of biodiversity and traditional handicraft.

Women's Alliance

The Women's Alliance of Ladakh was founded in 1991 with the twin goals of raising the status of rural women and strengthening local culture and agriculture. Membership grew to over 5000 women from more than 100 villages from all over Ladakh. Their main work consists of annual exhibitions, cleaning campaigns and training programmes in organic farming in villages.

SECMOL

The Students' Educational and Cultural Movement of Ladakh (SECMOL) was founded in 1988 by a group of young Ladakhis with the aim to reform the educational system of Ladakh. The SECMOL campus has over the years grown to be known nationwide for its particular way of teaching with the aim to give the students learning for life. Today it has a foundation programme for students who need to retake their 10th grade exam and a college programme. The eco-friendly campus is located next to the Indus river and combine theoretical teaching with practical learnings with a main focus to strengthen the self-esteem of the students and their knowledge in the English language.

Ladakh Amchi Sabha

Ladakh Amchi Sabha was founded in 1960 and is a network for traditional doctors, called amchis, who practise the art of traditional Tibetan medicine in Ladakh. This medicinal tradition is also called Sowa Rigpa and is a ancient way of healing which has been practised for

decades in Ladakh. Despite being a very old practice, it was only recognised as a Indian official medicine in 2010. The organization is based in Leh and has four employees, who give medicinal advice and run a small pharmacy. As part of their activities they also purchase plants and herbs from regional Amchis and produce their own medicinal pills, in total between 60-70 variations. The organization organize annual trainings and workshops for their members about organic farming and sustainability, often in collaboration with other organizations of the Future Earth Asia network.

Maharashtra, West India

Srushtidnyan

Shrustidnyan is a Mumbai based organization working within the fields of environment and youth education. The focus is on students, women's groups and farmer communities in Mumbai and in the region of Devrukh, south of Mumbai. Srushtidnyan is running programmes in six schools and one college in Mumbai and in Devrukh, targeting 250 children, 15 teachers and 60 college students. As part of their environmental activities Shrustidnyan has initiated a mangrove restoration programme in the region of Sindhudurg. They also run their own organic farm in Devrukh.

Tamil Nadu, South India

CIRHEP

Centre for Improved Rural Health and Environment Protection (CIRHEP) was established in 1994 and works in the districts of Dindigul, Theni and Madurai of Tamil Nadu. CIRHEP is active in about 55 villages to improve the relationship between human and nature. Their work focuses on four aspects: watershed development, organic farming, women empowerment and youth education. The main focus is on water management and soil conservation.

Kudumbam

Kudumbam was founded in 1982 and has since then worked with communities in the Pudukottai district. Due to the tsunami 2004, they also initiated work in Nagapattinam district. Kudumbam aims to ensure a sustainable livelihood for vulnerable communities through preserving and regenerating native flora and fauna. In order to achieve this, Kudumbam has different projects like Sustainable Biodiversity Conservation, Natural Resource Management, Campaign and Advocacy and Empowerment of Women and Children.

TEDE Trust

TEDE Trust (Training Education Development Extension Trust) works to improve the life for farmers around Tamil Nadu. TEDE Trust works to encourage farmers to shift to organic farming. They also work in order to strengthen farmers and for them to gain more control over their own crops and incomes. The main centre for the organisations activity is in their organic farm, close to Kumbakonam, in central Tamil Nadu. It is a model farm and is used for education, but also for different experiments and provides a steady income for the organization. They also run a indigenous seed bank for farmers. TEDE Trust also support women in small scale savings in order to help them invest in future farms. In addition to these activities TEDE Trust also run a school for children between the age of 6-15 years.

Keystone

Keystone was founded in 1994 in the Nilgri mountains. The organization works with improving the quality of life for the indigenous people living in the area as well as in the surrounding areas. When founded the organization cooperated with wild honey gatherers and held workshops in bee cultivation. Today their work also contain selling of organic products in their own shops, organic farming, preserving traditional seeds in seed banks, watering projects and replanting forests. Keystone is as of 2019 a passive member of the Future Earth Asia network and therefore it will not be included in this report. However, being a capacity builder and with the will of being part of the network it should still be mentioned here when presenting the network.

REGIONAL ORGANIZED ORGANIC FARMER GROUPS AND PGS

"You can see and feel the difference between organic and non-organic crops."

Deenadhayalan, organic farmer with TEDE Trust, holding his own paddy crops in Kelambakkam.

Introduction

The Future Earth Asia network aims to mainstream organic farming in North and South India and in Sri Lanka. With the tools of education and local empowerment, the organizations within the network create organic farmer groups and engage farmers in Participatory Guarantee System (PGS) certifications within their respective areas. Seeing that the Green Revolution in India in the 1960s erased the knowledge of traditional seeds and farming, another ambition of the network is to make more farmers aware of the former practices in India. By organizing farmers into organic farmer groups in villages, the network strives towards reintroducing the application of organic manure and retrieving and conserving traditional seeds, such as millets and barley.

The problems farmers in India face varies depending on their geographical location. Inhabitants of Ladakh are expressing fear over losing agricultural traditional identity as the young generation are moving to cities. Meanwhile in Tamil Nadu local farmers give up their profession in the wake of urbanization, leading to water scarcity and less cultivable land. The methods of going back to organic farming is however the same, where the main thing to do is to give up on pesticides and to use and create organic manure and local seed banks. As of 2019, the network organizations work with more than 50 PGS groups and almost 9000 organic farmers spread out in the Ladakh region of North India and Tamil Nadu region of South India and Sri Lanka.

PGS Certification

PGS in Tamil Nadu and Sri Lanka

The use of PGS certification in Tamil Nadu and Sri Lanka has shown good results in giving farmers control over their own crops, as well as regional benefits. The certification, where farmer groups together decide on how to produce organic products based on the basic organic standards, enables the local farming community to do peer appraisal to certify their own products in order to sell it in markets or to bigger companies. The majority of all PGS groups are in Tamil Nadu where 51 PGS groups exist on the initiative of the organizations in the region.

At GSS in Sri Lanka, the usage of PGS certification is being changed to the international organic certification of Lanka Organic Agriculture Movement (LOAM). Mr Niroshan, Director at GSS, explains that the new development is done in order to open up for international commercial export for organic farmers in Sri Lanka. As the PGS certification is only valid within the country, the LOAM certificate gives the farmer international standard.

PGS in Ladakh

Both LEHO and LEDeG are actively working with the PGS certification system. LEDeG is since of 2015 member of the Participatory Guarantee Systems Organic Council (PGSOC) and works with 181 farmers in their areas. Whereas the work in LEHO focuses on one of their organic villages, namely in Takmachik village. Here the work with PGS has not been as successful as in the southern parts of India. The main reason for this difference lies in the heavy paperwork that is required within the PGS system requires. According to Mohammed Deen, director at LEHO, the paper work can be very time consuming - especially so if the farmer is illiterate. Still, the work with PGS in Ladakh goes hand in hand with the rest of India, with the goal of the distric in question organic.

Ms Chandra, co-founder of CIRHEP.

Organizing and Strengthening Farmers

ORGANIC FARMER GROUPS

A farmer group is an organized group of local farmers, initiated by the organization in order to learn more about organic farming and the PGS certifying procedure. A farmer group consists of 10-30 members and together they participate in trainings held by the organizations. The trainings can for example focus on homemade produced organic manure, learning the technique of promoting biodiversity based ecological agriculture practices with intercrops, mixed- and multi cropping and to gain more knowledge in traditional seeds and creation of seed banks. As the adaptation of organic farming methods has proven to be more profitable than the chemical one, many farmers has expressed satisfaction with the change. This is due to two main reasons. The first one is the reality that chemical fertilizers are expensive and the second is that organic manure results in an increase in quantity as well as quality in the harvest. Many farmers witness a clear change in their crops after switching to organic manure.

In the village of Deltota in rural Sri Lanka, GSS has supported marginalized Tamil farmers for about twenty years. The organization created a model farm in the village where they organize trainings for local farmers.

INDIGENOUS SEED BANK PROJECT

The idea behind the indigenous seed banks is to enable local farmers to have access and control over qualitative seeds that are drought resistant and water efficient. This method is practised in all of the regions where the organizations of the network are working. The seed banks provide the local farmers with access to indigenous seeds instead of crossbreed seeds which are common in India. As seeds can be expensive, or as in Sri Lanka; all imported, this solution is more environmental friendly and cheaper.

CASH CROPPING

The idea of cash cropping is a knowledge based method which aims to increase the knowledge about efficient and profitable crops. The method is used by all organizations and teaches local farmers about new seeds at their trainings and encourages them to share the information with other farmers, in order to make more local farmers self-sufficient. Examples of cash crops are cashew nut, watermelon, potato, banana, coconut, groundnut and mangoes.

Regional examples in Ladakh

RAISING AWARENESS

Much of the work with organic farming starts with raising awareness. This is done before a farmer group is created and take different amount of time depending on the reception with the farmers. When the farmers decide to change to organic farming the farmer group can be created and further work be planned. LEDeG is currently reaching out to more than 6000 farmers in the Ladakh with their organic awareness campaigns and in the beginning of 2019 they are working with 195 organic farmers. In early 2019 LEHO worked together with Amchi Sabha on a two day awareness camp on organic farming and a free medical camp at Changa, Merseylang, Nang and Stakna. During the camp they held speeches regarding organic farming, manure and the effects of using chemical fertilizers.

FARMING IN LADAKH

Since opening up for tourism in 1974, Ladakh has seen major changes in its landscape and social life. From being one of the most secluded societies in the world, it is today attracting hundreds of thousands of visitors each year. Along with the tourism, the region is facing severe water scarcity. Due to climate change, the region is experiencing a decrease in snowfall, which results in smaller glaciers and with that, less groundwater throughout the region. In the spring, there are floods instead of a steady flow of water from the glaciers which are destroying agricultural land and infrastructure. The

In Tackmachik village, LEHO is working with two organic farmer groups and two PGS groups. During the last year, they have helped the village with improving their apricot production. By handing out apricot dryers in the village, the quality of the dried apricots have improved and the quantity has increased. Tsering Yangdol (picture) is now able to sell her organic products for a better price than before. In 2018, she made a profit of 180 000 rupies for approximately 600 kg apricots.

use of pesticides has also been practised since the opening and local NGOs are working to restore the agriculture to what it was before the tourists.

Due to a military presence by the borders of Kashmir, Pakistan and China combined with the tourism, the region's infrastructure is gradually increasing. More and more of Ladakh's 112 remote villages can now be reached by car and therefore exposed to more tourism, chemicals and waste. LEHO and LEDeG are working with assisting the inhabitants in villages to embrace the possibilities that these changes bring with them. In the village Charasa in Nubra Valley LEDeG has introduced watermelon seeds, which has proved to grow very well and generate an extra income for the villagers. LEHO is currently working with 12 villages in southwestern Ladakh, where they have introduced PGS certification, apricot drying methods and eco tourism. A main focus is to contain the Ladakhi culture and to make the village life more attractive for the young generation. Both LEDeG and LEHO work with making the agriculture profitable

Women's Alliance play a significant role in promoting female representation in farmer groups and in the local government. They organize trainings in traditional handicrafts, cooking and clothing for women as a mean for a income.

Regional examples in Tami Nadu

ASSISTING FARMERS

The region of Tamil Nadu has faced severe water scarcity and one of the worst droughts in over 140 years. This has lead to a vulnerability because of extreme weather, like cyclones and heavy rains and has resulted in an increase of farmers committing suicide. The need for well-functioning water conservation systems, social security and welfare amongst the farmers in Tamil Nadu is big.

In order to assist and empower farmers in the state, the three organizations active there have worked for decades with organising organic farmer trainings, self-help groups, micro loans to marginalised farmers and women's groups. The main mission throughout the state is to make each individual farmer self-sustainable by their organic agriculture. In that way they can regain power over their own lives and build up enough security in order to face the future. TEDE Trust, Kudumbam and CIRHEP works with about 6800 farmers around Tamil Nadu.

DAIRY COLLECTIVE

Kudumbam has for five years supported a self-help group of female milk farmers in the village of Nallathangalpatti in Tamil Nadu. This dairy collective consists of 15 members who collect cow milk twice a day for selling it to a regional milk company. The group has proved to be a good example on how a collective initiatives like this can prevent the exploitation of a middlehand and enhance the income from milk. It is also a example on how to support female entrepreneurs in rural areas, at the same time as sustainability and local organic products are being promoted. This has given female farmers hope for income generation and self-confidence to challenge their male counterparts. The female farmers know that they are no way inferior in business management, handling machineries and tools as well as keeping a high quality on the product.

LOCAL NEWS FOR FARMERS

At CIRHEP, they have started with a newscall twice a day for the farmers. Staff at CIRHEP record a one minute long voice message about relevant news for local farmers in the area. It tells the latest weather reports, current information and advice. The voice message reaches out to 700 local farmers every day.

QUALITY SEED PRODUCTION

In the village of Nallathangalpatti Kudumbam has been conducting a training programme for a group of female farmers. Mrs. Palaniyammal Govindaraj is one of the farmers in the group and she is playing a proactive role in the seed production. She has been selling paddy seeds to the Indian government for 12 years and today she is self-sufficient. By using a multi cropping system she also cultivates millets and onions along with paddy, which increase the quality of the fields. In one year she can get as much as 6000 kg of paddy seeds. Today she is often called in to give lectures on the training programmes for new farmers organized by Kudumbam.

Mrs. Palaniyammal Govindaraj.

FUTURE VISIONS AND CHALLENGES

Farming should be a job that pays off, and the risks related to it concerning the changing climate minimized. The work by the Future Earth Asia network has set out a good foundation for strengthening the role of the farmers by uniting them and educating them about ways to adapt to the changing climate. Not only is the changing climate a threat for farmers and their crops, but also big companies who compete with selling their products for prices that farmers cannot compete with. Farmlands turning into residential areas is another threat.

With farmers becoming more self-sufficient and independent and the farmer groups can stand on their own feet the focus of the organizations can shift towards new challenges, such as the threats of urbanization and big companies.

WATER MANAGEMENT

Introduction

The water situation differs in the regions through which the Future Earth Asia network stretch, but the problems related to water can be derived from the same cause: rising temperatures threatening the access to water. In North India there is less snowfall and the glaciers are melting faster and causing floods, which in turn are destroying the crops. While in the southern part of the country the rainfall gets more irregular and the amount of rain decreases each year. The overall aim to prevent the effects of climate change, rising temperatures and combat water shortage can be seen in all of the organizations in the Future Earth Asia network, adapted to their regional needs.

Mr. R. Karuppiah directing the water into his his farmland in Nilakottai.

Watersheds and Water Conservation

In Tamil Nadu there has been less rainfall for the past years compared to earlier years. Only in Nilakottai the rainfall has decreased with half during the last four years. The area is more drought prone and it is getting more difficult for farmers to rely on water from rainfall when the rain becomes more irregular. This has been taken into consideration in the work done by all organizations in the area. In promoting watersheds and ponds the organizations in the south have found a way to preserve the rainwater for agricultural purposes, as irregular the rainfall may be.

Similarly, the focus is not solely on conserving the rainwater at the organizations in the region. In addition to conserving the rainwater, activities are conducted in order to conserving the soil and keeping the groundwater clean, which is another advantage of watersheds.

Watersheds have proved to be a efficient way to benefit the surrounding areas and to make them more lush. Not only is the rainwater conserved, but there is a natural filtering of water through slay and soil. The effects are seen after a couple of years when the areas surrounding the watersheds have become more green and lush, while the microclimate has been improved. However, since watersheds are dependent on rainwater the benefits of watersheds are threatened by the decrease of rainfall. In other words, less rainfall makes the watershed programmes less effective.

The main work with watersheds is trainings in how the watersheds should be maintained and different ways to gather the rainwater. During the trainings it is also discussed why the rainwater is important and how it gains the farmers in the best way. Trainings are held by CIRHEP, Kudumbam and TEDE Trust for people living in the surrounding areas where they work.

In the north there is not the same need for watersheds, but there are techniques of conserving water, especially water from the glaciers. In LEHOs eco-village Takmachik a water dam can be found with the purpose to preserve glaciers water for agricultural purposes.

A deep well like this is to be found all over Tamil Nadu.

From one crop to another

A way of saving water is to replace rice with alternatives which demand less water to cultivate. In Ladakh the use of barley is promoted, which has traditionally been used in the region. In the other parts of India the use of millets are promoted as a alternative to rice. Also a traditional crop which was used before rice became the main staple ware in the Indian kitchen. However, the problem in India is that the Indian government distributes subsidized rice and wheat and the consumption of these two are high in India, irrespectively of the negative impact on the environment and health.

Tamil Nadu: Customized conservation

The organizations working in the south have customized their work to the reality of less, but more irregular, rainfall. At CIRHEP they promote different watersheds, wells, ponds and pits, at Kudumbam they promote completing watersheds with field bunds and farm ponds to capture the rainwater and lead the water to the nearby fields, while at TEDE Trust they promote that all farmers should have their own pond, where they can grow fish as a extra income.

The Importance of Sanitation

Even though the problem with sinking levels of groundwater and contamination of it are the same around India, the situation is a bit different in Ladakh compared to the rest of the country. Areas in high altitudes are more sensitive to climate change and climate change is more rapid on high altitudes. This is why Ladakh faces severe threats regarding rising temperatures and water shortage.

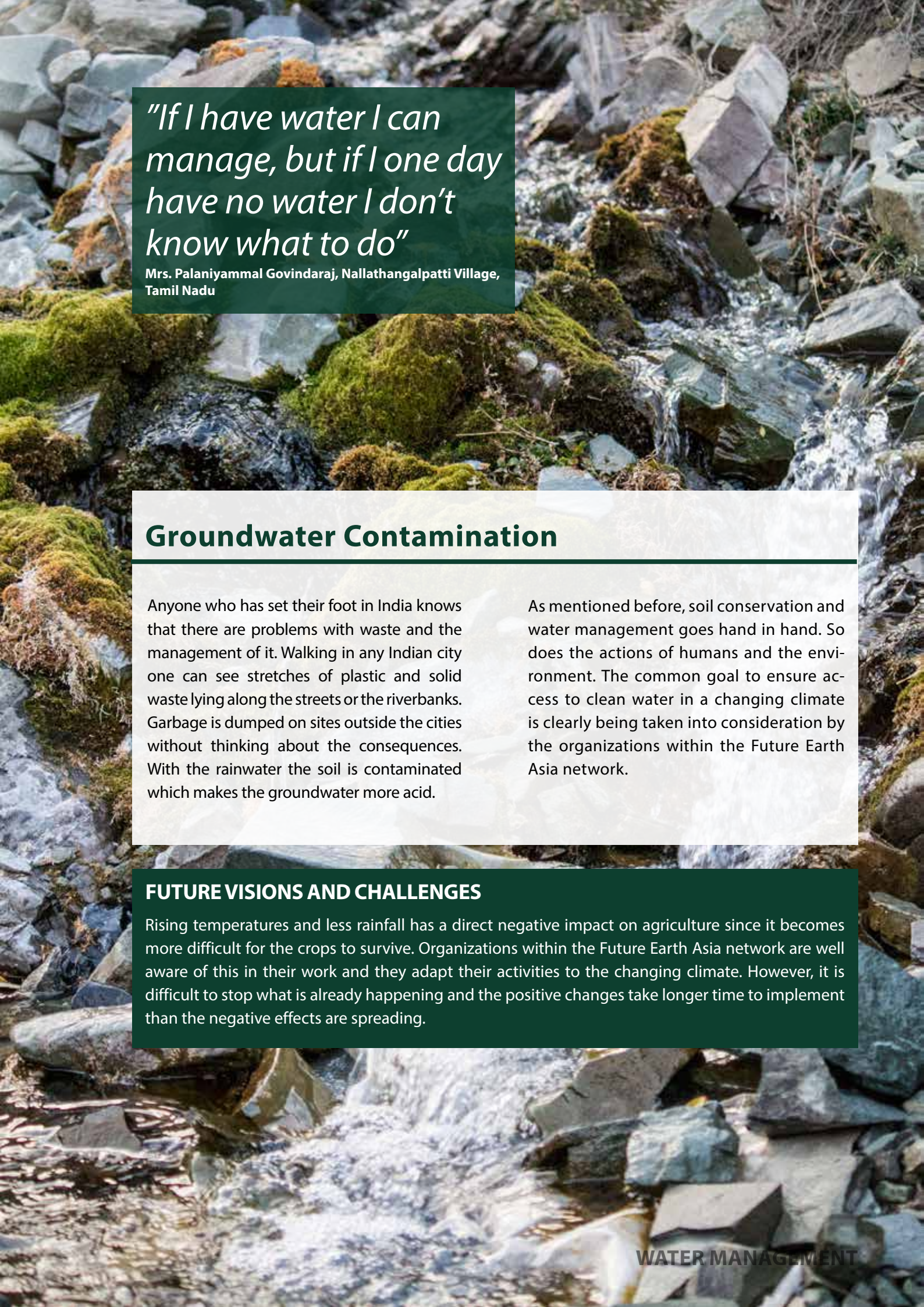
All farmers in the region are dependent on glacier water, but the rising temperatures which impacts on the size of the glaciers has a direct negative impact on the farmers access to water. SECMOL, LEHO and LEDeG build artificial glaciers and ice-stupas in the surrounding villages in order to compensate for the shrinking glaciers.

It is not only the shrinking glaciers which have a negative impact on access to water and the ground water level in Ladakh, but also the rising amount of hotels which are buillt with western toilets. Contrary to the traditional Ladakhi toilets the western toilets demand a lot of water and they require sanitation system in order not to contaminate the groundwater.

A mudtoilet at Secmol campus in Ladakh. Instead of using water, one uses organic products like leaves and grass for flushing. The waste is later turned into organic manure and reused on the local gardens.

Ladakh: A shitty method

With the rising number of western toilets built in hotels and guesthouses, it is easier to gather the facial waste and wastewater from septic tanks. These tanks are emptied and brought to the Faecial Sludge Treatment plant outside Leh. Not only is this a way of preventing groundwater contamination, but also a way to reuse the waste as a soil conditioner after it has been composted.



"If I have water I can manage, but if I one day have no water I don't know what to do"

Mrs. Palaniyammal Govindaraj, Nallathangalpatti Village, Tamil Nadu

Groundwater Contamination

Anyone who has set their foot in India knows that there are problems with waste and the management of it. Walking in any Indian city one can see stretches of plastic and solid waste lying along the streets or the riverbanks. Garbage is dumped on sites outside the cities without thinking about the consequences. With the rainwater the soil is contaminated which makes the groundwater more acid.

As mentioned before, soil conservation and water management goes hand in hand. So does the actions of humans and the environment. The common goal to ensure access to clean water in a changing climate is clearly being taken into consideration by the organizations within the Future Earth Asia network.

FUTURE VISIONS AND CHALLENGES

Rising temperatures and less rainfall has a direct negative impact on agriculture since it becomes more difficult for the crops to survive. Organizations within the Future Earth Asia network are well aware of this in their work and they adapt their activities to the changing climate. However, it is difficult to stop what is already happening and the positive changes take longer time to implement than the negative effects are spreading.

YOUTH EMPOWERMENT

Introduction

When working for a secure and sustainable future, the Future Earth Asia network focuses on integrating and working with young people in their projects. The importance of involving young people in organic farming and to spread awareness about the consequences caused by climate change, goes hand in hand with a greener future. The organizations addresses this in different ways; be it a bicycle club in a Devrukh or a school visit to an organic farm in Nilakottai. They all work for the common goal to make the future generation aware and to care about taking care of the environment.

Thinias Zangmo heading for her project hour at Secmol campus.

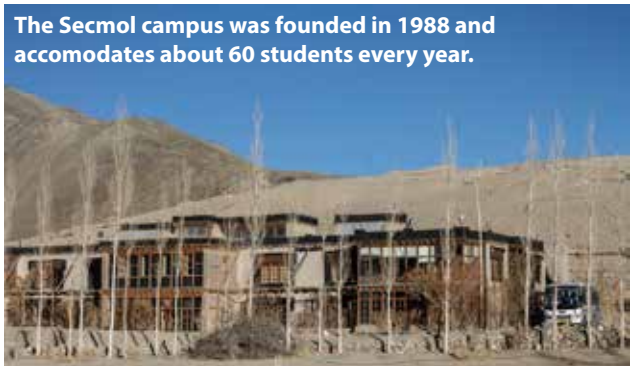
Involving Young People for a Green Future

THE SECMOL CAMPUS IN LADAKH

The Secmol campus is known for its humanistic approach and particular way of combining practical training with regular studies. In addition to studies, there are conversation classes, outdoor activity and physical work. Students come to the campus to study for a year if they fail their 10th grade exam or to complete their college degree. The students live at the campus and they also study the practice of organic manure, green houses, cooking, water management, solar energy and recycling. The teachers combine the traditions of Ladakhi culture with modern technology and in that way the skills are directly applicable to the students' everyday life.

The campus also focuses on making their students comfortable in speaking English and to improve their interpersonal skills. This is encouraged through daily conversation classes and public speeches.

Feroz Ahmad Chulichan (Samrah), foundation student, enjoying the sun during a school trip in Ladakh.



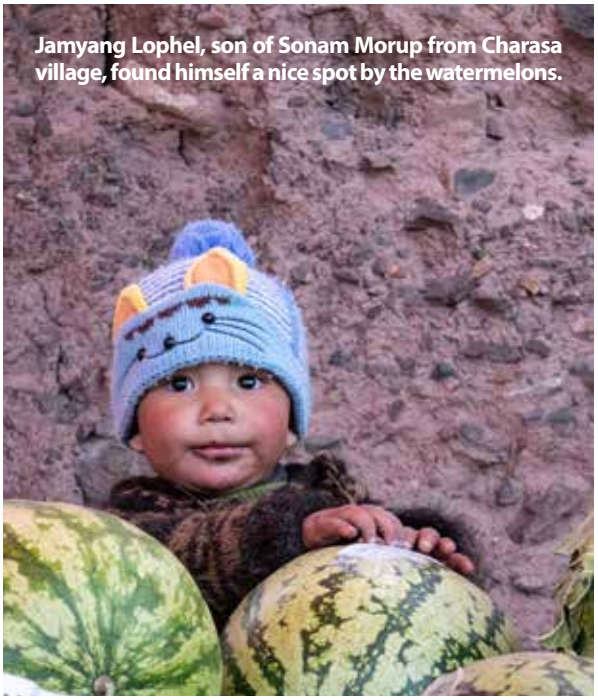
The Secmol campus was founded in 1988 and accomodates about 60 students every year.

Rigzin Angmo Skampuk & Sonam Chuskit from Chuschul

Konchok Norgay, director at Secmol campus, holding a workshop on recycling in the main hall, October 2018.

THE SERGA CLAY FESTIVAL IN LADAKH

The youth migration is seen as one of the major problems in Ladakh. The younger generation miss out on traditional knowledge on agriculture and cooking when they migrate from villages to Leh. In Charasa village in Nubra Valley there are not many work opportunities for young people, which has led to the older generation being left with a heavy workload on the fields. LEDeG is working with various projects in Nubra Valley. The most recent one is organizing a festival together with the villagers. The festival was organized for the first time in October 2018 and brought together people from all ages and parts of Ladakh in Charasa for two days. The festival showed and inspired young people that it is possible to make money in the village. Another aim with the festival was to strengthen the people in the villages in Nubra Valley. Therefore the profit made from the festival went straight into the pockets of the people of Charasa Village. A youth organization was also created for future events and local youth empowerment.



Jamyang Lophel, son of Sonam Morup from Charasa village, found himself a nice spot by the watermelons.

TRAINING FOR STUDENTS

Both CIRHEP and GSS invite students to take part of the organization's activities. At CIRHEP the students come to live at their training center for about a week. During the week they are introduced to local farming and watershed management. They also get to participate in the making of organic manure, learn about the importance of traditional seed preservation and issues related to climate change in the area. GSS is also receiving groups of students who stay at their training centre for a week. During that time the students visit local farms and the garden at GSS. The students who participate in the trainings both at CIRHEP and GSS are coming from bigger cities.

Most of the organizations in the network receive interns from universities to take part in their expertise. For example LEDeG receives students to investigate closer on Ladakhi culture. The students are placed in different villages around Nubra Valley in order to take part of everyday life in the villages. At Kolunji farm, the model farm run by Kudumbam, university students studying environmental science, social works and agriculture stay at the camp for two-three days each week as part of their studies.

10th grade students during their chemistry lecture at Evergreen Mature Higher Secondary school in Kelambakkam. The school was founded by TEDE Trust in 1987 in order to educate marginalied children from villages in the region. Today 1300 students study here. From left: Keerthana V, Kaviayanjali R, Caroline Juliah G, Hariri H and Sameera N.

Aditi Nate, 20 years, Science student at R.J College, Ghatkopar

"Once a climate ambassador, always a climate ambassador."

The Climate Ambassador Programme

In order to make more young people in the city of Mumbai aware of climate related issues, Shrushtidnyan has been working with a climate ambassador programme since 2009. The programme aims to educate students about climate change and to find sustainable solutions. Two students from each class are selected to be climate ambassadors and they are responsible for spreading their knowledge to the students in their class. The climate ambassador programme is a two-year programme after which the ambassadors are replaced with new ones. The programme is implemented in five schools and one college in Mumbai and one school in Devrukh. With the programme and the related activities 250 schoolchildren and 60 college students are reached. They learn more about organic food, water management, e-waste, recycling and re-usage of waste like plastic and glass.

At Pragnya Bodhiri High School Goregaon in Mumbai, there are five climate ambassador groups. The students presented recent installations regarding climate change which they had been working with. The installations were informative and educative about topics such as rain conservation, weather mapping, urban gardening and reusing plastic bottles. The students also receive practical trainings on how to survive catastrophes, like floods or cyclones. But also learned how to build bird feeders.

One of the student ambassadors, Mahek Solanki, 13 years, has been a climate ambassador for one year. She is happy to be part of the programme, as for her the choice of being a climate ambassador is personal.

"I want to give back to nature. I want to change the future."
Mahek Solanki

The climate ambassador programme is not only educating the students, but also affects the families. As the students bring their knowledge back home and to their friends, issues related to climate change are spread.

Shrustidnyan is also working directly with the mothers of students of the schools were they run climate ambassador's programmes. By uniting the mothers, they teach them about the cultivation of millets and other sustainable crops. Now, these women's group sell healthy organic food at the schools and participate in food festivals and awareness campaigns. This has provided them with an extra income.

Aditi Nate, 20, is a science student at R.J College, Ghatkopar. She explains how the programme has changed how she lives her everyday life is the reason why she is now trying to turn her entire neighbourhood green.

"I stop my neighbours in the hallway and ask them why they are using, for example, plastic bags or bottles and try to talk to more about these issues."

Aditi Nate also points towards the problematic situations with some of the governments banning on certain plastic items, like plastic bags, as they don't provide the citizens with a sustainable option. The students have therefore come up with alternative bags made of newspaper, just to exemplify how you can reuse and not favour the plastic industry.

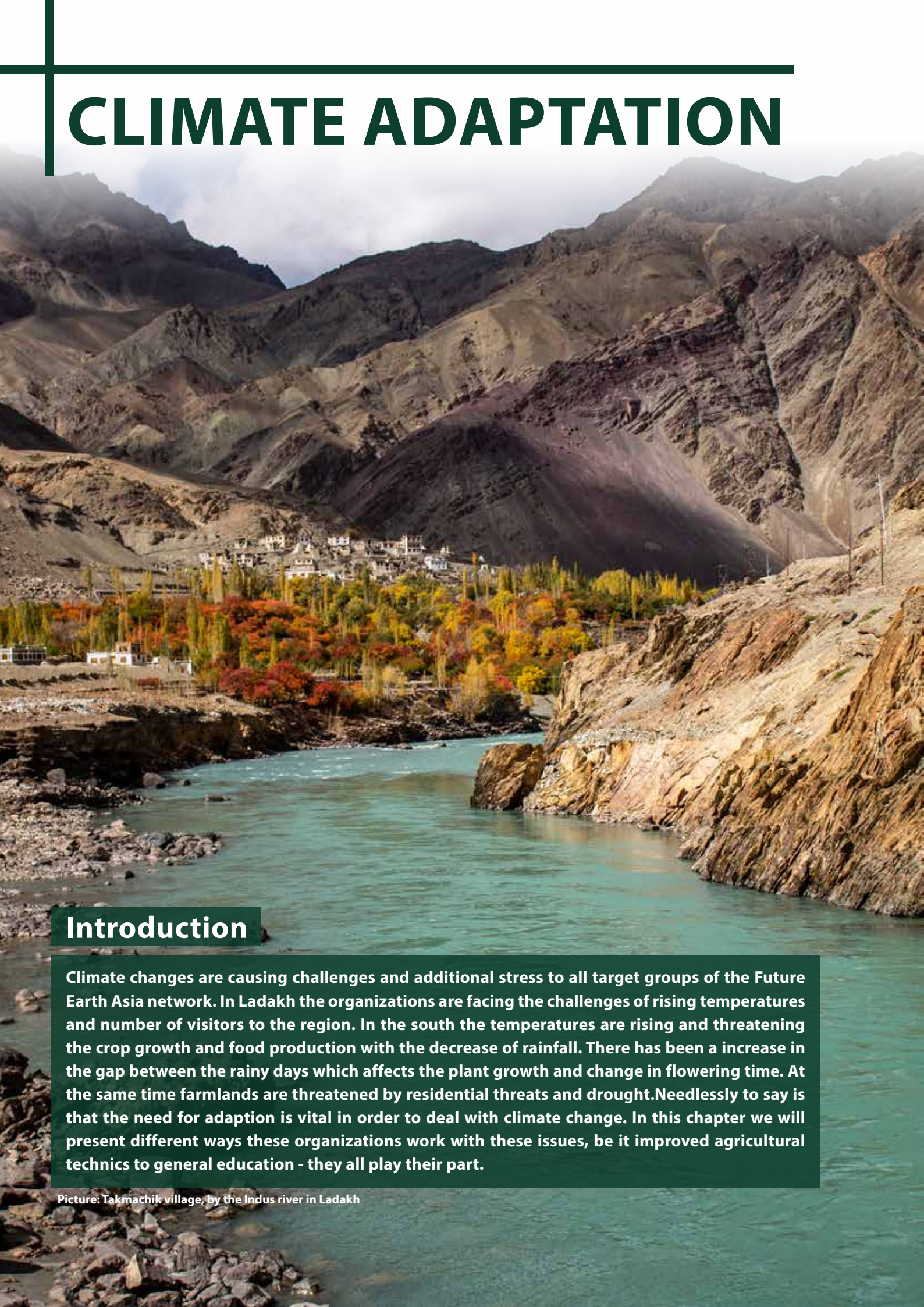

Aditi Nate with her classmate Abhijeet A Avchare, also a climate ambassador.

FUTURE VISIONS AND CHALLENGES

By reaching out to children at a young age the organizations can have a impact on the future generation and how they behave as future citizens and decision makers. Long-time habits are difficult to change, therefore it is better to prevent bad habits from emerging. To make the young people understand that the current way of living is not sustainable, and foremost why it isn't so, is a step in the right direction for a cleaner world. Education is the right way to go, and the earlier the better.

Learning young people about the importance of agriculture is a way to strengthen agriculture. Putting it into a broader perspective and pointing out the advantages of it might not stop everyone from moving from the countryside to the cities, but if it makes a few stay it is a step in the right direction. A step that with time might become a giant leap.

CLIMATE ADAPTATION



Introduction

Climate changes are causing challenges and additional stress to all target groups of the Future Earth Asia network. In Ladakh the organizations are facing the challenges of rising temperatures and number of visitors to the region. In the south the temperatures are rising and threatening the crop growth and food production with the decrease of rainfall. There has been a increase in the gap between the rainy days which affects the plant growth and change in flowering time. At the same time farmlands are threatened by residential threats and drought.Needlessly to say is that the need for adaption is vital in order to deal with climate change. In this chapter we will present different ways these organizations work with these issues, be it improved agricultural technics to general education - they all play their part.

Picture: Takmachik village, by the Indus river in Ladakh

Human Mobility and Urbanization

Tourism doesn't always have to be something negative, but with the stream of tourists which come to Ladakh there is a high pressure on the environment. Roughly 270 000 tourists annually visit Ladakh and in the summer when the season is peaking 14 ton solid waste is generated per day. This is a big challenge for the environment and for the organizations in the region.To meet with the rising amount of tourists LEHO is working to make tourism more sustainable. Their main effort is the project with organic villages which they have initiated. In the end of 2018 there were six organic villages, with a seventh being planned. The organic villages are started with the aim to make them suitable for eco-tourism. Homestays and restaurants makes a source of income for the people living in the villages further away from the main tourist attractions.

One example is the Takmachik Village. The first eco village of its kind initiated by LEHO. Mohammed Deen, president of LEHO, says that the village went all organic eight years ago and became a eco-model village and later an eco tourist destination. A change that strengthened the economy of the village. Mohammed Deen further explains that LEHO has no other involvement with the village after it has become an eco-tourism destination.

Another challenge related to tourism in Ladakh is traffic. Even without tourists there is a lot of traffic jams in Leh and with tourism there comes even more. Public transports to touristic destinations are not available by the end of 2018. With the roads and the infrastructure not being suitable for big buses this leads to everyone having their own vehicle, be it a car or a motorbike.

Together with the local government LEDeG is working with a EU-funded projects stretching over three years called "Liveable Leh". Part of this program is to redirect the traffic in central Leh to make the city more clean and livable.

Another way in which human mobility and the problems it brings along are recognized by the Future Earth Asia network is by raising awareness about the way in which farmlands are brought up by housing companies in Tamil Nadu. Also, when more people move to one area this stresses the surrounding environment. Not only does the environment get more polluted, but the surrounding areas are also damaged. This is harmful for the farmlands which leads to a decline in the amount of products and in their quality, according to Poorna Chandra at TEDE Trust.

Poorna Chandra in TEDE Trust´s own organic store in Kelambakkam.

A paddyfield surrounded by estates. In Kelambakkam, south of Chennai in Tamil Nadu, many farmlands are pushed out by the wake of urbanization.

Meeting New Challenges

On the trainings being held by the organizations within the Future Earth Asia network the aim is to strengthen the capacities of the farmers in order for them to meet climate threats in a successful way. Organizing farmers into groups with participatory processes strengthens the ecosystems of farmlands. Adaptation techniques are learnt to the farmers in order to adapt to changing climate conditions. The role of the farmer is strengthened and the farmers are given control over their own income. In order to have control over their own income they need to know what they are planting and how.

With the soil getting more dry for each year, the same crop which was grown on the same land 20 years ago might not grow today. Therefore drought resilient crops which require less water are being introduced to the farmers. In the long run everyone wins on this. The farmer, the consumer and the planet.

Not only are new crops introduced because of the soil, but crops are also introduced which are more suitable to mix with already growing crops. It is not only about which crop, but also how it is grown and the quality of the crop. Drought reliant crops, such as millet and traditional paddy, are being promoted because they demand less water than the so-called hybrid paddy variaties. Indigenous seeds from seed banks are being provided to farmers in order for them to get the best crop possible.

Paddy seeds, Tamil Nadu

Seed bank at Takmachik Village, Ladakh

"I am just doing what is necessary for the groundnut, the rest is advantage"

Kalaiselvan of Kovilveerakudi Village

Kalaiselvan of Kovilveerakudi Village is an organic farmer and works with Kudumbam. His main crop is groundnut which provides him with a good and stable income. "I am just doing what is necessary for the groundnut, the rest is advantage", Kalaiselvan says. He also explain that this method requires less pest control, brings diversified and sustained income and nutritous food for his family.

The organizations are not solely working for farmers to get control over their crops. Other forms of income are also introduced in order for farmers not having farming as the sole and primary source of income. In that way farmers are less dependent on external events, such as weather and climate, for their livelihood. One way of reducing the risks of failed harvest is by mixing and combining the crops. In that way, one crop can fail, while another can survive.

Greenhouses

In the north greenhouses have been introduced to extend the farming season from four or five month to twelve months. This is a effective way to gain from the rising temperatures in the area. The greenhouses does not only have economical benefits, but also benefits for health when it is possible for people in Ladakh to get vegetables around the year. "If done right, the greenhouses pay back themselves in three years", according to Mohammed Deen at LEHO. To extend the life of greenhouses LEHO has compiled manuals on how to take care of greenhouses and how to best benefit from them.

LEHO has been promoting the usage of greenhouses since 1998 and so far about 1500 greenhouses have been built. They have also supported the establishment of a greenhouse at Lamdon School in Leh (picture), which provides the students living in the hostel with fresh and nutritious vegetables all year round. The waste production goes directly to the school's organic compost which in turn is used for fertilizing the greenhouse.

All organizations recognize the importance of trees when it comes to climate and environment, especially in the drought prone areas. Nurseries are managed by organizations and plant seedlings are handed out to farmers. Kudumbam organizes plant schools in order to give farmers access to different tree plants which gains the soil. "Some trees are better to stop soil erosion, some to provide shade or to keep the moisture in the soil", says Suresh Kanna at Kudumbam.

Greenhouse at Lamdon school in Ladakh.

New Habits

In a changing world with a changing climate people must adapt their behavior accordingly. It is not only the consumers who have to change their food habits because of the changing climate, farmers also have to look at which crops they are cultivating. Further, it is not only about which crop, but also how it is grown and the quality of the crop. Drought reliant crops, such as millet and paddy, are being promoted because they demand less water than rice.

This is something that all organizations within the Future Earth Asia network have taken into consideration in their work. By promoting environmentally friendly food as a source of nutrition as well as income for farmers, the organizations are hoping to see a change in food habits and health in general. The organizations are doing it in different ways, Srushtidnyan are working with women's groups to inspire the members to use more millets in cooking while TEDE Trust informs about the chemicals used in the food chain and how these can be harmful for human health. Even at the SECMOL school where local traditional values and agriculture are taught, they are trying to find new sources of nutrition. For example, in 2018 they started a mushroom farm. In Ladakh, LEHO also promotes alternative sources of nutrition in the winter by introducing so-called kitchen herbs and winter crops.

Regional examples in Ladakh

Amchi Sahba and Preservation of Medicinal Plants

For the organization Amchi Sahba in Ladakh, it is of utter importance to conserve traditional medicinal plants. Today much of their work goes to preserving endangered species and and mapping medicinal plants around 150 villages. In the end of 2018 they also planned to build a greenhouse where they could grow the medicinal plants which are endangered.

"During the last five to ten years medicinal plants are rapidly disappearing, since they are dependent on the water from the glaciers. Less glaciers means less water and the higher the altitude, the more severe is the impact", says Dr. Padma Gurmet president of Ladakh Amchi Sabha.

Regional examples in Maharashtra

Srushtidnyan and Mangrove Restoration

India has lost 40 % of their mangrove forests during the last decade. They are being devastated in order to build hotels, scampi farms, to cultivate salt and water systems. Mangroves play an essential part in providing food for local fishing communities as well as stabilizing coastlines and prevents erosion. In 2017, Srushtidnyan started a three year long project with the aim of replanting 30 000 mangroves on the coastline north of Mumbai. So far they are the only organization within the Future Earth Asia Network who works with mangrove forests.

Kudumbam´s Jayalakshmi carrying grass for the cattle at Kolunji Farm, Pudukottai.

FUTURE VISIONS AND CHALLENGES

The work done by the Future Earth Asia network connects people together. With the capacity building activities and training they remind of how we as humans are connected with the earth and the environment. In order for us to feel good and get good, nutritious food, the environment must be well-maintained. Both on a micro- and macro level.

Being part of a international network when working with the challenges related to a changing climate is a great experience for exchanging experiences and knowledge. Examples from Sweden or Colombia can be of great importance when working with environmental issues in India. No matter if it is how the organizations work, which crops the farmers use or which food is eaten, everything can be of importance. Be it big or small. Everyone must adapt to the changing climate which is a reality everywhere. In that way we are all interconnected and interdependent on each other when fighting climate change. Plastic which is thrown in the nature in India or pollution from the Indian traffic has consequences everywhere in the world. This is a challenge which won't solve itself and therefore a stronger approach should be put on waste management and pollution by the organizations in India.

About the Authors and the Work

This report is part of a internship funded by Future Earth and Sida. The purpose of the internship has been to compile a report on the common activities and projects run by the organizations in the Future Earth Asia network. This has been done by visiting all of the organizations in the network between October 2018 to February 2019.

The authors and photographers of this report are Charlotte Winberg and Sandra Jakobsson. Both have a background in journalism and human rights. Before taking on this internship, Sandra worked within communications at a human rights institute in Lund and Charlotte worked as a reporter and editor at a local newspaper in Uppsala.

Charlotte Winberg Sandra Jakobsson

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Thank you! Jullay! Nandri! Namaskar! Namaste!

Sandra Jakobsson & Charlotte Winberg

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