

# ACTIVITY REPORT

## 2016

Rain Drop



Rain Drop is a French organization that aims to improve living conditions through the sustainable management of natural resources.

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## Introducing Rain Drop



## Legal Information

**Name:** Rain Drop

**Title:** Association loi 1901  
(Registered in France)



**Objective:** To improve living conditions and the sustainable management of natural resources

### **Registration**

Registered on the 2<sup>nd</sup> March 2010 in Paris

Changed headquarters on the 23<sup>rd</sup> December 2010 to Grasse

### **Board :**

President : Benjamin Gratton  
Secretary : Cyrielle Diaz  
Treasurer: Malek Ouahes

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## Message from the Director

For Rain Drop, 2016 was marked by three major events.

First, the beginning of our new project, the Ayur Project. It takes place in the state of Maharashtra in India, more specifically in five villages around Ambajogai, suffering from drought and poverty. We now act in two of the most needy regions of India: the Bundelkhand region of Uttar Pradesh and now the Marathwada region of Maharashtra. The latter went through four consecutive years of drought. Even the deepest bore wells (200m) were out of water. The situation forced the government to organize a 'water train' to bring water from Bombay to Latur, the closest big city from our project area. However, inhabitants of villages didn't have access to this water. These dire circumstances created great enthusiasm for our project, which received support from villagers and government authorities alike.



The other important event for Rain Drop this year was the start of our new partnership with Shyam Nagar. Created by Ashok Sarwade, who has been working with Rain Drop since 2012, Shyam Nagar is an independent Indian organization which carries the same values and objectives as Rain Drop. This new partnership will facilitate the implementation of projects in India and push the autonomisation of the Indian team and access to national funds.

Finally, there was a radical and brutal change in climate in our two regions of actions. After several years of drought and a disappointing monsoon came excessive amounts of rain. In the Beed district, where Ambajogai is located, it rained the equivalent of 45% of the last four years of rainfall in only 10 days! These intense rains spread over many weeks, transferring the area from 'drought-prone' to 'flood-prone'!

Despite the damages to soya harvests, the rains relieved the inhabitants. The more experienced farmers aren't fooled however. They know they'll need at least a second good rain in 2017 to recharge aquifers to a satisfying level.

## **Some numbers for 2016**

6 years of work in India  
43 members  
4 employees

8 active volunteers  
14 462 trees planted  
15 partner villages in India



## Partners, sponsors, and support

### Public



### Private



SARVODAY SEVA ASHRAM



## OUR PROJECTS



## Follow up of the Spring of Life Project in India

### Project Summary

The Spring of Life Project started in 2013 and ended in December 2015. From January 2016 we entered the follow up phase. In this project, we worked with **263 families in 10 villages**, helping inhabitants better manage their natural resources, especially water, reinforce their capacities and diversify their sources of income. Spring of Life was a major support for the families of Mau.



*Bundelkhand Region, India*

*Source : Wikipedia*

We work mostly with lower castes and villagers from tribal communities, the Kols, and emphasize a close collaboration with the beneficiaries. They are involved in the project's conception, implementation, and follow up. Through this participative approach, the families gain awareness on the topics and adopt the implemented methods and technologies. Rain Drop constantly learns from its efforts, as we develop 'living' projects that evolve and adapt to the needs and specificities of each village and family.

Following the successful implementation of the project (see the 2015 activity report), we are now ensuring a 2 year monitoring and follow up to guarantee the proper appropriation of the activities by the villages.

#### **The Spring of Life Project has 4 main objectives:**

- 1. Improve water management*
- 2. Community capacity building*
- 3. Livelihood diversification*
- 4. Encourage international solidarity and exchange*



## Improve water management

### Implement innovative irrigation systems

Amongst the 80 beneficiaries of irrigation systems, 74 utilized them during 2016. 18 farmers used them to grow vegetables (tomatoes, eggplant and cabbage), 47 used them for wheat, mustard, and peas, and 9 just used the tubes, but not the sprinklers.



*Sprinklers irrigating wheat fields*

The utilization of sprinklers greatly reduced water wastage from the traditional flooding irrigation. It's an important progress in the region that saves water, fuel, and money for the users.

In 2017, we'll continue to accompany these farmers so they can maximize the potential of this technology.

### Construct water harvesting ponds

The 12 ponds built to store rain water can each contain up to 1,4 million liters. During the heavy rains, they were all completely full. Children, buffaloes and other animals also used them for a dip or a drink.

The ponds' main use however is to recharge the underground aquifers. Already last year, they helped many farmers, such as Moonilal from Guruha, have access to water in their wells during the drought period, when their neighbor's ran dry.



*Children have a swim in one of the ponds*

This year, in addition to recharging aquifers, the strong rains of November enabled farmers to enjoy a second harvest, in winter, to grow wheat, chickpeas, lentils, and vegetables.



*Shankarlal feeds his fishes*

The farmers who discovered the concept of fisheries, guided by our advice, have fully integrated the method. The income generated is so important that this year, again, they engaged in the activity.

Shankarlal from Lasahi earned 11 400 Rs in 4 months, 10 times the monthly Indian minimum wage!

## Tree planting

To tackle drought at its source, deforestation, we planted 5 810 tree during the project. This year, from their own endeavor, farmers planted 1 565 trees from the tree nursery created by Rain Drop in 2012.

Suresh Chandra, the owner of the nursery, told us he hoped to have more purchases next year. The poor rains in July and August discouraged many of farmers from planting trees on their land. Every year, he develops new skills and increases his stock of species. He now makes his own mango grafts, better adapted to the specific conditions of the region.

Common name	Scientific name	Number of trees in good condition
Mango tree	Mangifera indica	98
Guava tree	Psidium guajava	1663
Amla tree	Phyllanthus emblica	95
Jackfruit tree	Artocarpus heterophyllus	54
Lemon tree	Citrus limon	264
Carissa tree	Carissa carandas	1358
Pomegranate tree	Punica granatum	74
Custard Apple tree	Annona cherimola	60
Bael tree	Aegle marmelos	19
Jamun tree	Syzygium cumini	1
Papaya tree	Carica papaya	10
<b>Total</b>		<b>3 696</b>



*Trees planted in 2012 start to bear their fruit!*

During our last count in December 2016, there were 3 696 trees in good condition. We were glad to see that drought and heavy rain hadn't damaged more trees.

We also had the pleasure to see the first fruits of the trees we planted in 2012. In total, 8 060 Rain Drop planted trees gave guava and pomegranates.

## Community mobilization

### **SHG empowerment (Self Help Groups)**

In India, SHGs are an efficient way for women to gain more independence, save money and have some time to talk amongst themselves.

In our project area women are particularly marginalized. Empowering SHGs has been challenging due to social and cultural pressures. The groups are fragile and the members don't trust one another. Rare are those who make their monthly contribution and who even show up regularly at the meetings. Non-respected government promises and pressure from other local actors have reinforced the mistrust amongst women.



*Meeting of the Panihai, Kechuat and Dorya Purwa SHGs*

Our objective during the follow up phase was to identify the most dynamic group and set an example of well functioning SHGs. We selected 7 of the most motivated SHGs and worked with them throughout the year.

Village name	Group name	Number of women	Total funds collected (Rs)
Panihaï	Jai Santoshi Mata Self Help Group	12	31 829
Panihaï	Jai Ma Saraswati Self Help Group	12	189 829
Dorya Purwa	Kavita Self Help Group	10	22 768
Dorya Purwa	Mohani SHG Group	10	16 856
Ghuruha	Bajrang Bali Self Help Group	11	28 088
Ghuruha	Arti Self Help Group	12	36 800
Kechuat	Joti Janhit SHG Group	10	14 583

Thanks to the work of Ramesh Chandra, the groups now give their monthly payment and attend every meeting. Whereas they were at first centered on money, they are now starting to talk about other topics such as personal, family, and village issues. More than that, every month several SHGs from different villages meet to share advice and information about new programs.

They are now starting to think about small businesses such as opening a shop or raising goats.

### Leadership training

We organized two trainings, one on the 17<sup>th</sup> of November and the other on the 11<sup>th</sup> of December. Mrs. Kant Devi, coordinator at the Rajiv Gandhi Foundation and Mr. Vinod Kumar, coordinator at the rural livelihood mission of Uttar Pradesh, reminded SHG group members the goal of their endeavor. The first objective of SHGs is mutual help. Once solidarity and trust are established, they can easily ask for support and government grants for their projects. Strengthened by unity, some groups even take action at the village level by sharing concerns and solutions during village meetings.



*Entrepreneur training*

These training sessions reinforced women's motivation and faith in their ability to undertake economic and social endeavors. We will accompany SHGs one more year to facilitate the implementation of their projects.



## Livelihood diversification

### **Agriculture & training**

#### **Workshop in organic farming**

The Kokopelli organization provided us with quality organic, non-genetically modified seeds. They were given to 3 farmers: Buddhiram, Vinod Kumar, and Rajkaran.

Organic farming is one of the only options for farmers to escape the cycle of dependency from genetically modified seeds and their associated chemical products. They destroy the soil, dry up their water sources, and are economically draining.



*Organic and non genetically modified seeds*

To facilitate the integration of organic farming techniques, we organised two training sessions: on October 6<sup>th</sup> and 7<sup>th</sup> with Mr. Yogesh Chandra Shrivastav from Allahabad Agriculture University, and on December 12<sup>th</sup> with Mr. Ramkant Sharm, retired officer from the department of Agriculture of Chitrakoot.



78 farmers came to the 1<sup>st</sup> and 51 to the 2<sup>nd</sup> sessions. During those workshops, farmers were reminded of crop rotation, harvest planning, and of course the importance of organic farming.

They learned how to treat their crops with natural and ancestral remedies such as cow urine and neem leaves.

The farmers made 400 liters of organic products, bringing them back to their farm to use on their crops.

They planted organic cabbage, tomatoes and eggplant !

In exchange for the seeds they received, the 3 organic pioneers in Mau have the responsibility to create organic seed banks. They will be able to sell or give the seeds to other



*Organic tomatoes*

farmers, and slowly propagate patent free, reproducible, and natural seeds. This is a crucial step towards the independence of small farmers.



*Buddhiram dries his seeds for next year*



This year, only 5 farmers followed the system of rice intensification (SRI) technique, and 28 followed the system of wheat intensification (SWI) technique. This difference is explained by the late monsoon. Many farmers had given up the idea of planting rice this year due to lack of water. Those who pushed through and followed the SRI technique were well gratified. In Buddhiram's field, the rice measured 1.5 m high whereas the average elsewhere was 50 to 70 cm.



*By planting fewer seeds per cm<sup>2</sup>, SRI favors a greater growth and productivity per stem*



*New vermicompost tank*

To encourage organic farming, we also constructed vermicomposting tanks on the land of 13 farmers. The worms degrade and enrich the organic matter put in the tanks. It provides a good alternative to chemical fertilizers and at a cheaper cost. If they increase their production, they will also be able to sell some to others.



## Aviculture and training

The 30 families for which we installed chicken coops suffered a setback following the torrential October rains. The violent winds blew away the roof of the chicken coops and the rains inundated the ground, causing many chickens to die.

Following these damages we helped rebuild the 12 most damaged coops and purchase new chicks for 22 famers. In total 735 chicks were purchased, 330 by Rain Drop and 405 by the owners themselves. They realized the importance of aviculture for their quality of life. It helps them get a more diverse diet and increase their revenue. This change has been most noticeable for landless farmers.

We also organized a training on the 14<sup>th</sup> February 2017 with M. Ramsevak. During the last 7 years, he managed one of the biggest chicken coop in the region. He talked about disease prevention, cures for chicken, how to protect chicks from adults and how to foster a proper environment to increase egg production. The 25 farmers attending the training took this opportunity to ask him many questions on problems they had faced. M. Ramsevak also gave them personal advise on how to make their own chicken food with local products, at a cheaper price.



*Amrit with her chickens*



*Chicken coop of Ashok and Shivani from the village of Lasahi after the october rains (above) and after reconstruction (below)*



## Activities in France

In France our activities also continued. We intervened in several elementary schools, high schools, and colleges to project our documentary: “the Adventures of Droplet” and talk about Rain Drop and our cause. We also took part in public events and in a photography competition.

Our interventions in 2016:

Date	Type of structure	Institution	Location	Number of participants
18/4/16	Not for profit	APEGO	Pégomas	10
21/4/16	SDIS	SDIS06	Villeneuve loubet	100
22/4/16	High school	Fénelon	Grasse	40
29/4/16	Not for profit	Association parents d'élèves pégomas	la roquette sur siagne	150
21/5/16	Public	Pôle Azur Provence	cabris	200
21/5/15	Public	Pôle Azur Provence	cabris	15
30/5/16	School	La Verville	Mennecy	80
16/6/16	High school	Fénelon	Grasse	10
9/9/16	University	Ecole National de Commerce de Paris	Paris	60
10/9/16	Public	Pôle Azur Provence	Grasse	200
11/11/2016 12/11/2016 13/11/2016	Not for profit	Explorimage	Nice	1 000
<b>Total</b>				<b>1 865</b>



# Ayur Project

## Context

The Ayur (« life » in Sanskrit) Project started in January 2016 in the Marathwada region, more specifically in Ambajogai, Beed District. We are now working with five villages: Dongra Pimpla, Rajewadi, Bhautana, Sonawala and Dhavadi.



Marathwada region

## Decline of underground water & absence of latrines



Buckets waiting to be filled at one of the rare remaining water point

The villages we work in have been declared « Drought Prone Area » by the Indian government. The decrease in rainfall (as low as 431 mm in 2012) combined with excessive irrigation has led to the depletion of underground aquifers. Many villages are forced to reserve the scarce water resources only for domestic use and cannot irrigate their fields. Sanitation is another worrisome problem, as 97% of the population does not have access to latrines.

## Agricultural transition & lack of economic opportunities

Families depend on agriculture for their livelihood. The harvest of sugarcane and cotton is no longer a viable option due to the lack of water. The absence of economic alternatives forces many families into migration to find work in the cities.



Dried out sugarcane field

## Isolated rural populations and gender discrimination



SHG from Bhautana

Dhangars and Lambanis tribes as well as lower castes are the main inhabitants of this area. At the bottom of the economic and social ladder, they have limited access to government programs and poor economic alternatives. Within these groups, women suffer even more discrimination. Although they legally have equal rights, they are often subservient to their husbands. They have no economic or political power and are confined to household chores. Nevertheless, our conversations revealed a genuine concern for the development of their community.

## Activities implemented in 2016

The main objective of 2016 in our 5 project villages was to build strong bonds with the villagers and other local actors, and create enthusiasm for the project.

To do so, we led awareness campaigns and many meetings with farmers, women, and governmental authorities. Having identified the key groups, we then initiated specific training sessions. We also planted trees, constructed water harvesting ponds, and (re)introduced organic farming. These concrete actions helped contribute with our project objectives, familiarize ourselves with the region's functioning, and showed farmers there were actions behind our words.

### **Community meetings**

Throughout the year, we led meetings with the communities, specific groups, and other local actors, such as government authorities.

Between January and March 2016, our meetings aimed at introducing our team and presenting the project to the inhabitants of the region. We went into further details with village chiefs (pradhan), women's groups, farmer's groups, and government authorities (block development officers and their associates) of the Ambajogai Block.



*Meeting with the Pradhan (village chief) of Dhavadi*



*Community meeting in Bhautana*

Through these meetings, we identified the key people with whom we will be able to develop organic agriculture, plant trees, motivate other village members, and determine the main beneficiaries for our various activities.

We also met Manovlok, a local NGO working in the region. We discussed the possibility to work together to reinforce our actions in a mutually beneficial way.

## **Liaising with local authorities**

First, at the village level, we met the Pradhans, to better understand the village's issues, existing solutions, and possible collaborations. We also met the authorities of the Ambajogai block such as the BDO and the assistant BDO to exchange on our projects, understand their plan for the region, and explore partnership opportunities. In 2016, we established strong bonds and built trust. As we get more involved in the region, a stronger collaboration will surely develop.

## **Meetings with women's groups**

The majority of our meetings were with women's groups. They are the main beneficiaries of our project. Komal Pardeshi, the newest member of our team is in charge of coordinating the activities in relation with women. On a daily basis she went to the different villages to meet the 66 self-help groups. She collected information on each one of them and partook in the meetings. Her work allowed us to better understand their specific situations and expectations.



*Meeting with the Bhautana SHGs*



*Komal in action with the Dongra Pimpla SHGs*

In contrast with our experience in Uttar Pradesh, women's groups in these villages are more involved and active. Women express themselves without fear or shyness, and 60 of these groups already had several years of inter-lending (micro-credit) experience. However, we realized only four of them had used the money saved to develop a new source of livelihood. Others used the money to purchase medicine, for weddings or school supplies.

More than 40 meetings were held on themes ranging from health to education, including women's rights, nutrition, child rearing, and entrepreneurship. We gradually put forward the idea that they could use the saved money to increase their revenue.



## Awareness campaigns

### Schools

From February to march 2016, Vincent Abalain, biology teacher at the Lycée Français of New Delhi, joined us to raise children's awareness of environmental preservation and hygiene. Everyday during two months, he visited 7 schools to share with children the importance of sanitation and toilets, the need for tree planting, and the emergency of water management and climate change. He also gave English, anatomy, and biology classes.



*Vincent makes students think about the causes and consequences of drought, as well as potential solutions*



*Students of Sonawala discover France with Cedric, volunteer with Rain Drop*

Finally, he presented Rain Drop and our activities, and explained how improving the management of natural resources will contribute to the wellbeing of their families.

Vincent's interventions marked the children's spirits. During our last mission in Ambajogai, in October, children were eager to know when he would return!

Village	Number of schools	Number of children
Sonawala	1	109
Dhawadi	1	89
Rajewadi	1	46
Bhautana	2	145
Dongar Pimpla	2	135
Total	7	524



## Causes of drought and solutions

In April, during the drought, the Rain Drop team explained to 388 villagers the functioning of underground aquifers, by means of drawings and images. We put into light the causal relationship between aquifer overexploitation due to irrigation of water hungry crops such as sugar cane and cotton, and the increasing number of bore wells going dry.



*Educational material made by Rain Drop to explain the links between trees and water*

We also discussed deforestation and water wastage. Ironically, though people suffer from drought, water castles, pipes, and taps all leak when the little water available travels through them! We encouraged villagers to take action and ask their representatives to fix the leaks.

## Tree planting and kitchen garden



*Movie projections are always a great success in the villages*

During the month of June, to prepare for the monsoon's arrival and ensure a good start for the new agricultural year, we led awareness campaigns for women's groups (SHGs). In total 185 women attended our interventions. We presented the documentary "Anganwatika", produced by Dr. Arak Kate, expert in family agriculture.

This movie helped us introduce the importance of kitchen gardening to fight malnutrition, encourage food diversity and security, and also provide a source of income for women.

Some women questioned the feasibility of these techniques when faced with drought. They were told, that through an intelligent and integrated use of their water, they could manage to irrigate their garden directly with domestic water. Banana trees for example, can be watered with shower water! Women were moved by the movie and left motivated for this new activity.

## Social and technical surveys

### Social survey

During the month of March, Komal Pardeshi led a social study. Amongst the 66 SHG of the project's 5 villages, she collected data on the number of women in each group, the quantity of money they have in the bank, the amount of their monthly contribution, and whether they had already initiated micro-credit or small enterprise activities. She also asked if they wished to develop small businesses, and if so, which type. The objective was to have a first idea of SHG's perception about their current situation.

In June, another study was conducted by students from Manavlok aimed at gathering information about current agricultural practices and their planned strategy in case the drought continues.

### Technical survey

We received a team of experts from the NGO Aquassistance, specialized in water management and sanitation. Pierre Chaou, Olivier Chataigner, and Nicolas Defay came to Ambajogai in February 2016 to help us better understand the water situation and help us implement the solutions to fight drought and open defecation, as well as to promote water purification for drinking purposes.



*The Aquassistance team takes measures from Bhautana's well*

During their stay, we organized meetings in each of the five villages. We analyzed the water quality and studied village contours to identify the best water harvesting strategy.



*Observation of water contamination near a hand pump*

The conclusions they came to are the object of the Ayur project's 2<sup>nd</sup> phase, from January 2017 to December 2018.

## Training

We also organized several training sessions to prepare villagers for project's activities.

### Leadership and entrepreneurial training

Two 2-day training sessions were organized on leadership and entrepreneurship.

On the first one, held on September 12<sup>th</sup> and 13<sup>th</sup>, 29 women listened to Rahul Patil, trainer on SHG groups & livelihood. He started by placing the creation of SHGs in their historical context. He then specified their goals, which are not just to save money, but also work towards women empowerment, by encouraging them to get out of the village, manage a bank account, credits and loans, and create small enterprises. Moreover, these groups served as support between women and strengthen them in the face of challenges with their husbands or in the village.



*Presentation of Rahul Patil, in Rain Drop, Shyam Nagar Latur's office*



*Educational game on social pressures*

The second session, held on October 20<sup>th</sup> and 21<sup>st</sup>, led by Dr. Rama Pande, professor at Manavlok University, expert on health, social work and women rights, welcomed 26 women. We asked her to intervene because in addition to her extensive knowledge, she comes from this region and is familiar with the culture and local habits. She also speaks the local dialect, facilitating communication.

During this training, women thought about the qualities of a leader: the importance not to impose one's ideas but to listen to others, to be supportive, and to know how to motivate others. She gave case studies of SHGs that have known great success in manufacturing jams, spices, or through crafts. She then underlined the importance of joining into a federation to have greater leverage during negotiations with the government or Panchayat (village committee). They also enacted the idea of creating a "women Gram Sabah" to decide the village's projects amongst themselves and then share it to the village's Gram Sabah.



## Training on hygiene and sanitation practices

On September 17<sup>th</sup> and 18<sup>th</sup>, 30 women (around 6 from each village) came to listen to Rama Pande on personal hygiene. Most women care for their husband and children before themselves. They don't eat or wash until all the members of the family have. They also don't wash when they have their periods. Mrs. Pande, advised them to take special care of themselves especially when they have their period, and to eat at regular hours and in sufficient quantity, irrespective of when other family members come to eat. They will only be able to support others if they are healthy themselves!



*Group work*



*Women present the habits they wish to change*

She then tackled an important issue for local families: anemia. She told them that eating clean, healthy, and diversified food would greatly reduce risk of disease. Finally, she talked about toilets and open defecation. She advised women to talk to their husbands, because they do not face the same

issues and therefore might not be aware of the problems and risks of open defecation for women who have to go during dark hours: assault, snake bites, contamination... They sometimes have to hold their needs all day creating stomach aches. This is aggravated during rainy seasons.

Women were at ease during this training. They talked freely and had a lot of fun during games and group work. They realized they didn't place enough attention to themselves and their needs.

They also saw they were repeating the pattern with their son's wife, pushing them to work hard



*Documentary on kitchen gardening to encourage food diversity*



even during pregnancy and repeating the social pressures they had suffered from themselves.

The training was such a success, that for the second day, some of the women brought their friends!

### **Ayurvedic training**



*Marble game to encourage women's entrepreneurship, make them see opportunities and grab them*

To prepare women for ayurvedic and spice manufacturing, we organized a workshop on the principles of Ayurveda, the traditional Indian medicine. From November 10<sup>th</sup> to 11<sup>th</sup>, Mr. Karmver Awatade presented the history of Ayurveda and its use in everyday life to 22 women. The trainees shared with Karmver the plants that grow in their village: tulsi, amla, ashwagandha, and many others which have therapeutic qualities. The Ayurveda expert explained the use and preparation of each of these plants. He also gave them the principles to make some very efficient medicines: triphala churn, neem oil, chawanprash, gulkand, and ayurvedic tea.

Though many women already used some of these plants to heal themselves, the potential of Ayurveda was unknown to them. They left the training with new ideas and perspectives.

### **Water management training**

24 farmers came to this training on November 15<sup>th</sup> and 16<sup>th</sup>. M. Dipak Yadav, agriculture expert from the Ganga Sagar Gram Sudhar organisation, talked about land management, crop rotation, mulching, and organic agriculture to reduce water consumption. He emphasised the paradox between growing cotton and sugar cane, when these crops require three times more water than the annual average rainfall in the region !



*Training center*

Supported by documentaries and case studies, he showed farmers alternatives such as custard apple or pomegranate, two native trees which can be combined with more profitable and less water intensive crops such as letnils (aarahar, masur, mung) or chick

peas. Finally, he put in place an exercise allowing farmers to calculate their harvest's consumption relative to available water. The gap between the two helped farmers understand the need for appropriate crop planning. The trainer talked about some villages which even decided during the Gram Sabah which crops to grow depending on the rainfall. As such the entire village's water supply was managed.

### **Organic farming training**



*Organic farming model plot*

On November 25<sup>th</sup>, 20 farmers went to Digolamba's Center for Agrarian Sciences near Ambajogai to listen to Mr. Narendra Joshie, expert in sustainable agriculture, and Mr. Ankush Butte, specialised in animal husbandry.

During this training, M. Narendra Joshi showed the correlation between traditional agricultural practices that maintained soil quality and modern agriculture, which is more productive on the short term, but then damages the soil, causing drought and loss of fertility. To maintain equal productivity, farmers then have to buy more chemical fertilizer until the land is completely dead. The trainees confirmed this trend on their land.

The trainers showed the importance of animal dung to fertilise the soil and the use of agricultural waste to feed animals, thus creating a virtuous cycle. Understanding farm's conditions, they advised them to continue with intensive agriculture to sell on markets, but at least, for their own consumption, switch to organic. So their families can have good nutrients and remain in good health.

The training also went into the specifics of the region. The high potential of custard apples, the need to avoid cotton and sugar cane to preserve water resources, and the importance of planting trees. They emphasised water management so that the good rains of the previous month didn't make farmers forget the four years of drought.

These explanations were supported by documentaries and success stories from local farmers. Through an intelligent management of their land and their crops, they were able to maintain healthy profits despite water scarcity.

## Concrete implementation

### Water harvesting ponds

Unpredictable climatic events pushed back the construction of the water harvesting ponds. However, beginning 2017 the four water harvesting ponds initially planned were done.

The construction was not easy. Some terrains were gorged with water due to the strong October rains and had to be emptied with a pump. Others had large boulders for which we had to use dynamite.

Once we overcame these obstacles and we reached a good depth, farmers were delighted. Water was found in 3 ponds allowing them to irrigate their fields during the dry season. Moreover, during the coming monsoon, the ponds will fill with water and store more than 4,6 million liters.

This will help recharge aquifers and provide drinking water in wells and bore wells !

	Beneficiary name	Village	Pond size (m)	Total pond size (m3)
1	Shendge	Bhauthana	18,3 x 18,3 x 3,7	1239
2	Kendre	Dhavadi	21,3 x 15,8 x 3,6	1211,5
3	Ghorpade	Dongar Pimpla	21 x 18 x 3,3	1247,4
4	Maske	Sonawala	15 x 21 x 3	945
<b>Total</b>		4		4642,9



*Dattatre Kendre (left) and Kavita Ghorpade (right) in front of their ponds, already filled with water !*



## Kitchen gardening

In July 2016, we accompanied 72 women from 10 women's group to set up a kitchen garden. Women planted ladyfingers (*Abelmoschus esculentus*), cucumbers (*Cucumis sativus*), corn (*Zea mays*), eggplant (*Solanum melongena*), chili (*Capsicum annuum*), spinach (*Spinacia oleracea*), coriander (*Coriandrum sativum*), green beans (*Phaseolus vulgaris*), and various types of squash.



*Maruti and Kavirabi of Rajewari in front of their corn*



*Koshaly Gadkar in her kitchen garden*

Thanks to this knowledge women harvested crops on previously unused land. The diversity of crops planted ensured food security, nutritional diversity for home meals and the excess was sold on markets for an extra profit.

Women planted vegetables and spices in their gardens, next to their homes.

We followed the principles of organic farming to maximize yields in a small area. Eggplants for example consume a lot of nitrates. We therefore encouraged women to plant beans that are nitrogen fixers. Similarly, corn grows well with cucumber or peas, but not with tomatoes.



*First cucumber harvest !*



## Tree planting

In August, we started our tree planting campaign. 4 559 trees were planted by 170 people. We focused on multi-purpose trees such as moringa trees (*Moringa oleifera*) of which leaves, branch, and fruits can be used as goods and/or therapeutic uses, mango trees (*Mangifera indica*), lemon trees (*Citrus limon*), and amla (*Phyllanthus emblica*) whose fruits can be eaten or transformed into condiments. We also planted black berries (*Morus nigra*) and curry trees (*Murraya koenigii*), whose leaves are used to flavor dishes.

We distributed only 20 to 100 trees per family to maximize their chances of survival. Many farmers were concerned by the lack of water (the monsoon arrived very late), threatening tree survival. We advised them to plant fewer trees but to make sure they could take care of them. The most careful families took measures to protect the trees from animals or accidents.



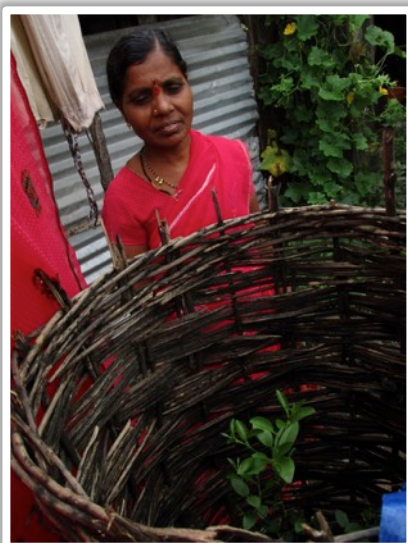
*Mango protection*



*Tree distribution to women's groups*

## Tree planting chart by village

Village	Moringa	Lemon	Mango	Amla	Black berries	Curry tree	Total
Sonawala	741	149	162	32	16	12	<b>1 112</b>
Bhautana	672	127	139	32	16	12	<b>998</b>
Dhavadi	507	72	84	32	16	12	<b>723</b>
Dongar Pimpla	474	61	73	32	16	12	<b>668</b>
Rajewadi	708	139	151	32	16	12	<b>1 058</b>
<b>Total</b>	<b>3 102</b>	<b>548</b>	<b>609</b>	<b>160</b>	<b>80</b>	<b>60</b>	<b>4 559</b>



*Lakshmi Kendre from Dhavadi  
taking care of her lemon tree*

Vegetables, spices, and trees such as moringa will help in the activity of 2017 when we will work with women to develop new livelihood opportunities.

To ensure our action's sustainability we created organic seed banks, so farmers won't have to depend on commercial seeds, which are often non-reproducible, require chemical inputs, and a lot of water.



## Conclusion

In addition to the positive development of all our projects, we are also very glad that Rain Drop India, managed by Ashok, is gaining more autonomy. Rain Drop India received their first Indian funds to develop a project in water management and sustainable agriculture in Tuljapur, 100 km from Ambajogai.

The Rain Drop Team thanks you for your support !

