

THE IMPACT ASSESSMENT OF EVD PROGRAM AT RANICHAURI



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PROJECT:

Supporting sustainable village development in Sub-Himalayan region of India

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Introduction

The research was conducted in the interiors of Devbhoomi Uttarakhand, to assess the current situation and the impact of Eco Village Development program implemented by WAFD (Women Action for Development). The organization believes in sustainable future through Women Action. The action taken by women leads to development and sustainability of the region.

The major focus area of the conducted research was to assess and observe the effect of EVD program on beneficiary's lives' by WAFD with the technical support of INSEDA. Focusing on how each product is enhancing the livelihood of this region by providing a better and a more sustainable solution to their need as a whole. Since not all the beneficiaries have all the products that EVD has provided, each product has impacted each beneficiary differently from the day they started using it. The objectives of the research were set by keeping these facts in mind and through keeping a sensitive approach. Thus, the objectives of the research were as follows;

- The impact of EVD program on beneficiary's lives
- The impact of each product on the livelihood of women in the area
- To assess the volunteer's participation in enhancing the awareness about the EVD program
- Understanding and assessing the needs and the requirements of beneficiaries
- Assessing livelihood of locals after the implementation of EVD program

The organizations who have been a part of the program are; WAFD, INSEDA, GCDWS and ASDA ry.

Women's Action for Development (WAFD) was formed in 1978 by few socially active individuals who wanted to make a difference in the lives of the women. The core focus has been the empowerment of women and as the need and time changed WAFD also took up new issues related to women. For the past ten years, WAFD has focused on climate change and how it affects local women's lives. In order to make it easier for women in this area, WAFD has collaborated with INSEDA as their technical partner, who are extensively working on designing low cost, low carbon and environmentally friendly technologies which can be easily used by women.

INSEDA (Integrated Sustainable Energy and Ecological Development Association) which was formed in 1995, is a national Indian organization formed by NGOs and individuals who have been involved in the promotion and implementation of renewable energy programs with a special focus on the implementation of biogas development in rural areas of the country. The main focus of INSEDA is the development and promotion of sustainable rural energy in the partnership of Indian NGOs, who are, members, associate members and sister and partner organizations of INSEDA. Climate change mitigation has been a major concern of the organization, with a programmatic plan being implemented to increase the climate resilience of the rural poor in India.

Aar Social Development Association (ASDA) is non-government, non-profit organization concerned with civil society issues, particularly promoting the equality of opportunities and good relations between people of different racial groups. ASDA organizes activities for youngsters in the European Union. It has been involved in

development co-operation from the year 2012, particularly related to environmental and gender issues. The organization was established 1995 and registered 2000 in Helsinki, Finland. ASDA has been a partner in the project for planning, monitoring and reporting to the main financier, Ministry for Foreign Affairs, Finland.

The Concept for Eco Village Development (EVD) was jointly developed by INSEDA and WAFD. It is implemented by WAFD with technical inputs, guidance and technical supervision for technologies by INSEDA. It is an integrated approach to achieving low-cost, low-carbon development for the rural population. It majorly involves innovating technologies for mitigation and adaption.

The Eco Village Development (EVD) program is being conducted by WAFD in the villages of Ranichauri, Savli, Guriyali, Moan and Jagdhar near Chamba district in Uttarakhand. EVD is a purely volunteer based program. INSEDA is working towards helping install these technologies in this region. The Women's group and the volunteers are working towards increasing the impact of the technologies by keeping in touch with the beneficiaries and spreading awareness about climate change. WAFD is also closely working with local policy makers and keepers from government offices across the region.

EVD is an integrated approach of creating, development focused, low carbon communities practice in existing villages. It has the number of mitigation technologies like small household size biogas plants, smokeless chulha (Heera), wind turbine & solar energy technology, as well as the adaption of the technologies like organic farming, rooftop rainwater harvesting tank, compost basket, mist harvester. All these technologies have low or almost nil carbon footprints, to be used by

the rural population and people from a lower economic background. These technologies are very significant since they are low-cost and easy to build with less or almost no guidance. It also aims at promoting the "pro-poor" concept where the income of the poor in the region grows in comparison to the whole population, which helps beneficiaries to decrease the uncertainty of financial stability.

The training and technologies which have been provided to the people in these areas are listed down below;

Smokeless Chulha (Heera) –

It is the upgraded version of the existing chulha (stove) where value proposition has been added with the core functionality of the product by adding a solar panel to run a fan (to accelerate the process of burning), mobile charger and LED light for the kitchen. Also, other benefits of chulha are that, it has two burners and all day long hot water provision as an effect of cooking. The design of chulha is such that majority of the smoke goes out and gets filtered through the water bucket on the terrace leaving only small or almost nil amount of carbon in the air. Hence, reducing the carbon footprint of the chulha as a product.

Solar Dryer –

It uses the solar energy to dry edibles, it is faster and more efficient than other traditional drying techniques. Apart from these benefits it also protects edibles from animals and sudden weather changes due to its closed design. As a frugal product, it uses plastic as a cover and bamboo for construction.

Compost basket –

The Compost basket is the in-house basket made out of bamboo strips which are used for making a compost fertilizer. It uses day to day organic waste from the houses and uses it to make compost, which can later be used as fertilizer in the kitchen garden or organic farming.

Solar poly house –

Poly house gives new crops a controlled environment to grow and produce efficiently. The solar poly house built by INSEDA/WAFD is made out of plastic, bamboo/wood, and net. Whole structure gives a greenhouse effect, which maintains enough moisture and temperature in winters. Whereas in summer, the heat can be controlled by pulling the plastic cover up and letting the wind pass through the structure. This controlled environment gives efficient and quicker results to the beneficiaries helping them get the non-seasonal crop as well as seasonal ones. Apart from this incubating effect it also helps in keeping the animals away and provides protection from sudden weather change.

Rainwater harvesting tank –

The tank is made from baskets woven from strips of Bamboo and reinforced by cement and concrete to give it strength and make it leak proof. With the capacity of 3000 litres, it collects rainwater from the roof top and collects it into the tank, which can be used over a period of time. People use it to store normal tap water as well to deal with the scarcity of water in certain seasons or time of the month.

Bio gas plant –

Bio gas plant uses daily waste from the animals as well as other

organic waste to produce gas. It is an underground construction which uses the heat from the earth to produce gas in the plant. It also depends on the season of the year; the hotter the place more the possibility of gas generation.

Mist harvester –

It is a product designed in such a way that it accumulates mist from the air and collects it in a jar that can be used later for cooking or other household work. It consists of the net, bamboo/wood and a jar in which water gets collected. It is specifically designed for the people staying in high altitude terrain.

Wind turbine –

Vertical Axis Wind Turbine is a type of wind turbine which have two or three blades and in which the main rotor shaft runs vertically. It stores energy in the batteries, which can be used as per the need.

And skill based training and practices such as:

- **Organic farming**
- **Self Help Group**
- **Women's Group (Mahila Mandals)**
- **Kitchen gardening**
- **Beekeeping**
- **Health awareness camps**

The research was divided mainly into two parts; the first one being one-on-one conversations and the second was group activities. To carry out these activities, a variety of different tools were employed

such as brainstorming, interviews, card sorting, resource mapping, history mapping, narratives, etc. Although it was mostly focused on covering the beneficiaries and the volunteers for the data collection. During research, few non-beneficiaries were covered as well from each village in order to understand the needs of the organization and consequently get more clarity on the further steps. The research was conducted to understand and assess the following;

- What is the impact that EVD program brought about in the region?
- How has it affected the people in the area?
- Do the women of the village feel empowered after EVD program commenced?
- How has it affected the livelihood of the women?
- How can the program be more sustainable and scalable?
- What are the other opportunity areas in which program can intervene?



beneficiary with her compost basket at Savli



Beneficiary watering her kitchen garden

Timeline

		PLACE							
		Guriyali	Ranichauri, Jagdhar	Ranichauri, Chamba	Moan	Savli	Ranichauri		
ACTIVITY	Secondary research							Researcher	PEOPLE
	Informal meetings							Beneficiaries & Researcher	
	Semi structured interview							Researcher	
	Personas							Volunteers & Researcher	
	Card sorting							Researcher	
	History map							Volunteers & Researcher	
	Empathy map							Researcher	
	Resource map							Researcher	
	Observation							Researcher	
	Workshop							Volunteers & Researcher	
		26/01/2017	27/01/2017	28/01/2017	29/01/2017	30/01/2017	31/01/2017		
		DATE							

Researcher - Vivek Chondagar
 Volunteers - Mukeshji, Krishnaji, Kididevi, Anitaji, Bimalaji, Kalam, Hemprakash
 Beneficiaries - Product holder, SHG & Mahila Mandal members

Research methodology

Method : Secondary research

Getting a gist of the project and previous work done on the field by studying previous reports for the same

Outcome

Qualitative data about the programme and people, setting up the context for the research

Method : Semi structured interview

A method to collect specific information by probing in with given specific choices to understand the impact of the effort

Outcome

Perspective about the Climate change, personal development, advocacy and the products

Method : History map

A method to understand their context more deeply and any other historical contexts to the place or the people

Outcome

Legacy of the place in terms of infrastructure, stories about the people who played significant part in the region

Method : Informal meeting

A method to have a casual conversation with a number of people to understand the dynamics of the focused group

Outcome

Group concerns and dynamic

Method : Resource map

A method to understand the resources in the beneficiaries' context

Outcome

Income generation sources and outgoing resources

Method : Empathy map

An empathy map is a collaborative tool, which can be used to gain a deeper insight into the beneficiaries

Outcome

Their thinking pattern, feelings and worries

Method : Persona

Personas are portraits of fictional but realistic individuals that are used as common reference points to communicate to particular groups in one's intended audience

Outcome

To get information about their Likes, dislikes, dreams and extra skills

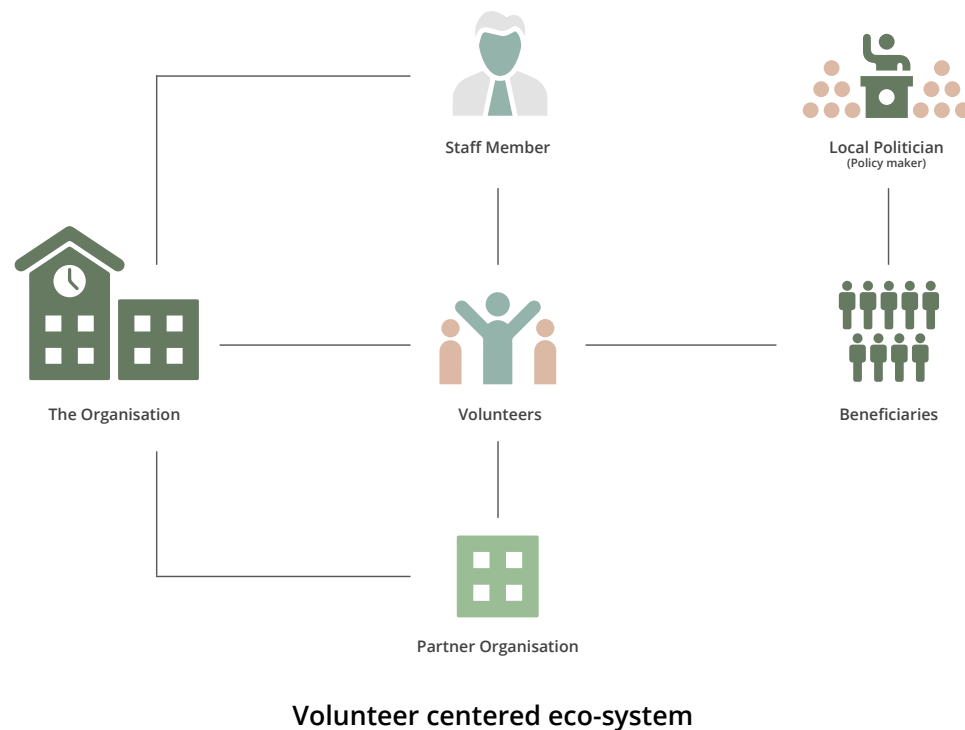
Method : Card Sort

A Card Sort is a quick and easy way to spark a conversation about what matters most to the people

Outcome

Aspirations, needs and new experiences they look forward to

The Eco-System



The ecosystem is a system formed by the interaction of a community of people with their surrounding environment. The ecosystem of WAFD/INSEDA consists of the volunteers, beneficiaries, staff members, the partner organization, government officials and their surroundings. Each of the stakeholders plays a crucial part in reaching the goal of the organization here.

The volunteers play a significant role in terms of connecting beneficiaries and organization in a particular manner. The work they do on the field and the support they get from the organization is to enhance their learning and understanding of climate change. In fact, all the volunteers are motivated by the organizational support in mitigating the effect of climate change and trying to reach out to people on their own.

The beneficiaries, are the extreme last point of the contact in the hierarchy and hence the most important in the whole ecosystem. They are the ones who are actually implementing the learning provided by the organization. The major implication which can be drawn from the system is that beneficiaries are majorly connected with the organization through the volunteers and few other people from the organization. With respect to that, the major flow of communication is from the volunteers in the whole ecosystem. In fact, volunteers are the first point of contact for them to get information as well as the products which have been provided by the organization for mitigating and adapting the climate change effect.

The staff members. It is really important for an organisation to have technical experts to help out in executing the ideas and implement it successfully on the field. In addition to that, here staff members are



Volunteers at Ranichauri



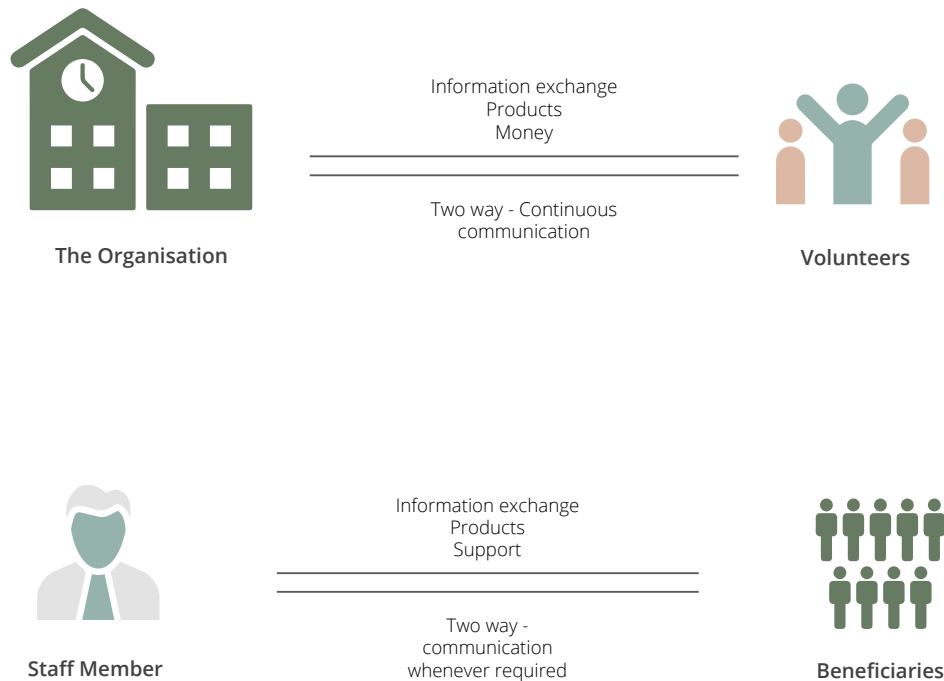
Volunteers with the staff member

also supporting the volunteers and beneficiaries with the provision of information, technical assistance, administrative work, assessment work and accounting work. Apart from that staff members on the field are closely connected with all the beneficiaries and know about all the problems and obstacles faced by beneficiaries and volunteers.

As for the partner organizations, the significance of having a partner organization on the field is to keep track of the work being done and being able to assess it in a timely manner. In case of WAFD, they have partnered with the local community development organization Garhwal Community Development & Welfare Society (GCDWS). They have appointed Mrs. Rajkumari (mentor) & Mr. Hemprakash (volunteer) and from their side to support WAFD on the field.

Government officials. Even though they are not very much involved in the process, they are the essential part of the ecosystem. Some of them are part of the Women's group and are actively working for the organization but the fusion of the government policies and the aim of the organization is not possible. The probable reason could be that the engaged officials don't know their authority and are not able to share it with others effectively.

Surroundings, are a tangible aspect of the organization but not exactly controllable. The unexpected outcome of surroundings can lead to the inefficient working of the organization. Although sometimes it works for the benefit of the organization. As in the case of WAFD it is really important to have rain once in a while to have water accessibility in uphill areas like Guriyali, where a water pipe has not been set up by the government office.



The relation between volunteers and beneficiaries is the most significant one. All the major interactions about the information, product & training happen at this level. Currently, the volunteers are responsible for spreading awareness and spotting beneficiaries. Volunteer's biases, if any, would lead to the disruption of the ecosystem. In that case, the beneficiaries would not be able to get as much information as required, which will lead to the lack of proper information to back the concepts or the interventions which have been provided to them by the organization. The same is true the other way as well where beneficiaries are not able to put their concerns to the volunteers which can lead to misunderstanding about the issues.

Staff members and volunteers, this relation is very crucial for the efficiency of the organization. Here the flow of information goes one way, which is from staff members to the volunteers. It needs to be assured whatever information is flowing is right and fool proof. The regular contact between these stakeholders may lead to a better understanding rather than keeping in touch with them sporadically. Same applies to the staff members and beneficiaries, where both the stakeholders are in contact whenever it fits necessary by using the link of volunteers to reach out to the beneficiaries. Here, beneficiaries might not know the right staff members to connect to or talk to regarding their concerns. It can be a personal or societal concern. Looking at this relationship, and nurturing it might actually lead to a better and unbiased flow of information. Whenever the beneficiary has a problem, they can directly contact or talk to staff members about his/her concerns.

Policy makers and beneficiaries, this relation is the most significant.



Information Support

One way -
In direct communication
whenever required

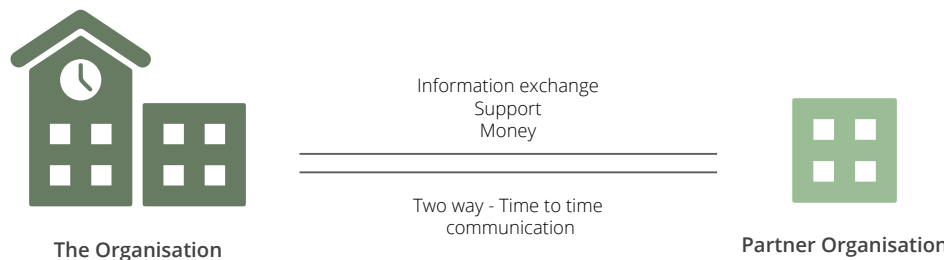
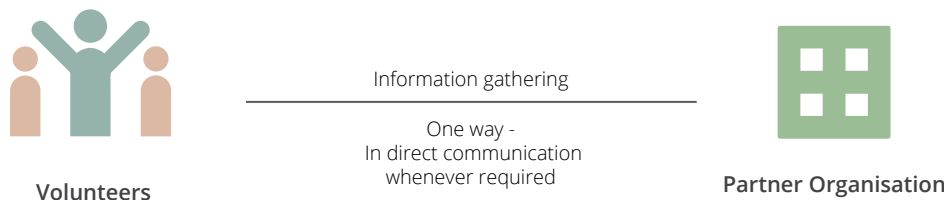
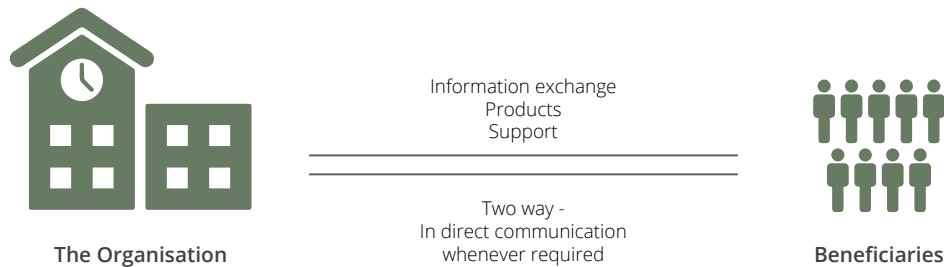


No communication



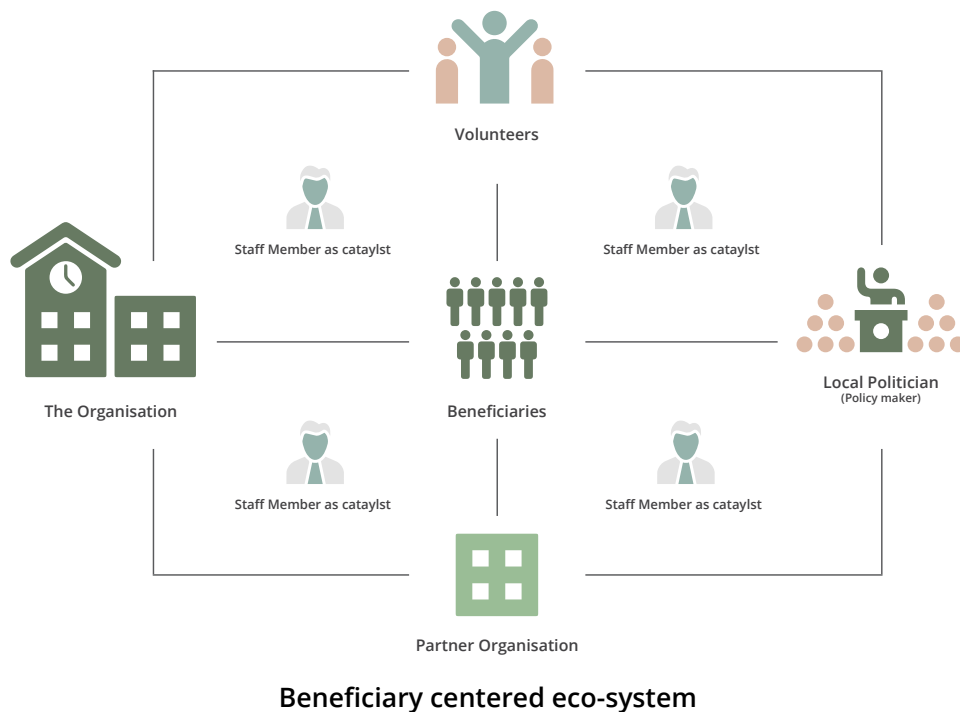
This is not visible on surface but it affects the whole ecosystem. Policy makers are the ones who are in government offices like the pradhan, panchayat member, and local politician. Their decision about the village or the community affects the whole ecosystem in terms of infrastructural development, community development, employment information and awareness about the policies. Like if a policy maker decides to have a community center in the village without taking an opinion from the villagers or a community water tap at some place in the village; it doesn't work. Taking the opinion of beneficiaries becomes very important as it affects their lives directly. Having a policy maker involved in the process of spreading awareness as well as increasing their knowledge base will directly affect the whole ecosystem. If we look at the relation between policy maker and staff members/ the organization, it can be nurtured in a way that this relation can work in improvising the ecosystem. Policy makers are the people who are from the community itself, and can understand their need but have very little knowledge about their power of reach. If having an awareness campaign by staff members/the organization may help them take better decisions in terms of making it a better environment for the ecosystem as well as the beneficiaries. This close and synchronized relation may lead to awareness about the structure in staff members which will eventually reflect on the beneficiaries' lives.

The relation between the beneficiary and the organization is also a key link to the success in terms of achieving the goals of the organizations. Here both of them are at two extremes but still very significantly linked. The organization is looking to attain its goals in developing the community and the beneficiaries are looking for support through which they can attain financial certainty,



development of the society, awareness about the policies and infrastructural support. Now, here it is very important that the link between the beneficiary and the organization is maintained to make the ecosystem flawless and for the better implementation of the program. Having another stakeholder between these two might lead to some biased information and support, which will again hamper the achievement of goals and results. This relation may lead to massive success of the organization if maintained properly and regularly. If the organization is not able to maintain the relationship, it can deploy a mechanism through which the beneficiaries can be in constant touch. The organization can take help from policy maker or the partner organization for the same. In fact, the organization can incentivize the whole process to get to more people and can have a rotating volunteering system where everybody gets equal opportunity to lead. That way the organization can attain personal development & community development simultaneously.

The partner organization is again a major member of the ecosystem which leads to a better implementation of the program. The goal of the partner organization and the organization should be in line and in sync with each other. Having different goals than each other may lead to misalignment of resources and results that are expected out of the partnership. This can be maintained by regular meeting of the management with a proper and synchronized framework to update on the progress and a person should be assigned to see and assess the work of the partner organization on the field. Also, the partner organization, the volunteers and the beneficiaries, the relation between the three of them need to be assessed as well as regularly scheduled report from the volunteers about the work done by the partner organization should be taken. This may lead to efficiency and



effectiveness of the partner organization and the organization will be able to see the proper roadmap of the success.

Here the whole ecosystem revolves around volunteers where they are the touch points to the other stakeholders. There are a specific number of volunteers who are working to implement and sustain the existing system apart from their day to day work and households. It eventually leads to a sense of ownership in them towards the program and its effects, which is very important for maintaining a level of motivation. Keeping the system volunteer centered has the possibility of biases coming in away, while trying to increase awareness about the climate change, product or program. Now if the ecosystem becomes beneficiary centered rather than volunteer centered, it may lead to a better implementation of the program as well as a sense of ownership in the beneficiary's mind, which can result in an efficient and effective system. The organization can achieve this by keeping in touch with the beneficiaries on a regular basis. The medium of communication can be workshops, meetings, distribution of helpful materials (like health, personal hygiene, climate change related material etc.), skill development center, audiovisual materials about climate change in and around the world. If the beneficiary can directly put her concern to WAFD, government authorities or partner organization; that would comparatively help more because it will provide first level information at the same time getting rid of the biases between people or organization while sustaining the scale of the program.

Eco-system model Assessment;

- As we can see in the system model here; Interaction between



Volunteers at Ranichauri EVD center

- policy maker and staff member can increase the opportunities for the beneficiaries by availing better information and support.
- Direct connection between the organization and the beneficiaries, is missing which leads to value offset in beneficiaries' mind.
 - In the ecosystem, the volunteers are at the center of the system, if system is beneficiary-centered then it could have significant impact on the community.

Eco Village Development



Eco Village Development (EVD) is a program, which aims at achieving sustainability through women empowerment. It satisfies the need of the user along with alleviating the climate change effect while spreading awareness about it. There are one to too many aspects of this program which includes its beneficiaries, volunteers, technical experts, non-beneficiaries, the organization, the products, policy makers and the effects these products bring to the environment around the community.

The Eco-Village Development (EVD) concept involves the implementation at village-level of appropriate, inexpensive renewable-energy technology (RET) and capacity-building activities for climate change adaptation and mitigation. It takes a collaborative approach by involving community members deeply in planning and implementation, while also giving them the tools to be resilient while facing climate change. EVD is an integrated approach of creating development-focused, low-carbon communities of practice in existing villages. The bundle of practices includes mitigation technologies like small, household-sized biogas plants, improved smokeless stoves, solar-energy technology, improved water mills to generate electric power, stand-alone systems like pico-/micro-hydro power for rural electrification, and solar-powered drying units. It also includes adaptation technologies such as organic farming, roof-water harvesting, water-lifting technologies like hydraulic ram pumps, and other solutions.

Then and Now

As we talk about climate change, it is affecting each and every living organism in this world. In fact, we can see an even more prominent effect of the climate change in the Himalayan range of India. Ice caps are melting and year by year the snowfall is also reducing. An adverse effect can be seen in Delhi and few other major cities in India.

Specifically, if we talk about the village Ranichauri, 15 years back there used to be an environment in which apples, guava & oranges used to grow. Regular snowfall aided in the constant growth of these fruits. Now, there is an increase in the number of forest fire incidents and irregular rainfall, which tampers with the crops and eventually human life around.

As for the Guriyali village, there was a natural water resource here dried over a period of time. Now, also the villagers have to be purely dependent upon rainfall which is irregular. The condition which it led to now is that there is no natural water resource & the government has not put up any pipeline for water due to high altitude and lack of equipment to pump the water uphill. Due to this people are not able to grow anything and they have to come down to Ranichauri or Chamba for all their basic requirements. With respect to that WAFD has provided a rainwater harvesting tank which is helping them to collect rain water.

Moan and Savli, both the villages are on the downhill. They have advantages over others as they have access to natural resources and at the same time, the government has provided a water pipeline. They store water in the Tank and use it for their daily usage. Both the villages have rich organic farming places, where everybody grows their own vegetables organically. Out of both the villages, Savli is



Heera chulha



Solar polyhouse



Rain water harvesting tank



Anusuyaji with her Bee keeping box

better connected to the highway which helps in getting things easily from the nearby town.

Talking about Jagdhar, the village is connected with Ranichauri through the forest and by road. Due to a steep slope, the houses are cramped together which leaves with less possibilities of farming. Due to lack of employment and less opportunities in the area people are migrating to the cities for earning possibilities.

Briefly, if we talk about the scenario in this area. In the past, as mentioned by locals:

“pehle bhaiya yahan pe barish bhi hoti thi aue barf bhi girti thi” (Before we had rain as well as snowfall),

“Barf girti thi to do teen din tak bahar nae nika sakte the hum” (when snowfall was there it was hard to get out of the house for 2-3 days),

“pichle 10 to 15 saal se barish bhi samay par nae aati aur barf ka to durr durr tak koi nishana nae he” (Past 10-15 years there is less rain and snowfall is nowhere to be seen)

“Jungli suvar aur bandar bhi itna nuksan karte he ki sab ne kheti karna bandh kar diya he” (Wild boars and monkeys started coming and destroying the crops in so everyone has stopped farming altogether)

“Abb jab farming nae hoti to hum log khaye kya aur kamaye kya, isiliye hum log bahar jaate he paise kamane ke liye, kyun ki abhi yaha kuch bacha nae he” (When there is no farm, people started migrating outside, because there is nothing left here)



Mahila mandal in Guriyali



Kitchen garden

WAFD/INSEDA's EVD project

“Jabse ye EVD aaya he bahot madad ho jati he jese ki konsi sabji jaldi ugati he, kese usko acche tarike se ugaya jaa sakta he, badlate vatavaran ke sath konsi sabji zyada faydemand he sehat ke liye aur paise ke hisaab se” (When EVD came here, we got information about vegetable with respect to money, crop timing, atmosphere and health)

“Abb jab hum sabji ghar pe ugate he aur vahi khane me istemaal karte he to harroz jyada durr jaana nae padta cheeze kharidne ke liye” (Nowadays we use vegetables from our organic kitchen garden so we don't have to go too far to buy vegetables)

“Barish ka paani jab hum bharte he tank me to bahot accha lagta he, kyun ki pehle to aesa kuch socha hi nae tha ki ye ho sakta he, plastic ki tank mehengi bhi aati he aur usko lane ka charge alag, baki iss tank ko to hum ghar pe hi baana sakte he dusri mahila ki madad se” (When we harvest rainwater, we feel good as we didn't know it could be used. A plastic tank is expensive and transportation cost is also high, This tank we built with the help of mahila mandal's members)

“Hume lagta he ki vatavaran badal raha he par uski asar abhi tak hum logo ko pata nae lagti” (We understand climate is changing but we can't really figure out the effect of it)

“Jab koi bahar se aata he baat karne ke liye volunteers ke sath tab hum logo ko pata lagta he ki bahar ki duniya me aur kya kya chal raha he” (When someone comes from outside, we understand what all are going on outside)

Narrative workshop on Climate change



Workshop Analysis

The narrative workshop on climate change was conducted with the volunteers and staff members at Ranichauri. Described below is the report of findings;

Who is your audience

- Volunteers from WAFD who participated in the workshop that went on for 2.5 hours (Kididevi, Krishnaji, Bimalaji, Anitaji, Mukeshji, Hemprakashji & Kalam)

What are their demographics/occupation?

- Almost all the volunteers were mostly housewives apart from Hemprakash who works at the hospital, Mukeshji who has his own provision store and Kalam who works at WAFD office Delhi.

What was the demographic of your Narrative Workshop?

- Total no. of participants was 7 and all of them were related to WAFD organisation.

SECTION 1 - VALUES AND IDENTITY

INTRODUCTION

What did people say they liked/disliked?

- After this question was asked, answer was very varied from driving vehicle, wearing nice clothes, buying jewels, playing chess, roaming in the forest, dancing on disco music, decorating their house,



Workshop at Ranichauri with the volunteers



- cooking food, cleaning the house, praying to god, participating in social work, riding motorcycle to playing games.
- When asked about dislikes, people were more shy and not able to explain what are the dislike. They requested to move on to another question.

What was the common theme or words?

- Common theme which was found during this question was about keeping their house clean and decorating it to make it look good and appealing. Their inclination was towards the house itself and how they can make it better.

PERSONAL VALUES AND IDENTITY

What were the most important personal values?

- Most important personal value according to the group was the ability to LISTEN and to RECIPROCATE in a better way to make a person UNDERSTAND the essence of the conversation.
- “Sunana zaroori he par sunane ke sath sath usko samaj ke acche se jawab dena bhi zaroori he naeto koi matlab nae he” (Listening is necessary, but after listening it is required to respond accordingly otherwise there is no point)
- “Ek jhuth se agar kisiki jaan bach sakti he to vo jhuth jhuth nae hota” (If a lie can save somebody’s life then it is not a lie)

GROUP VALUES AND IDENTITY

What qualities makes them proud of their group/type?

- Ability to accommodate elder as well as younger people in the community.
- In the middle of the conversation one volunteer started praising the work of another volunteer. (Krishnaji-Anitaji)
- This specific pattern was continued till the end. That showed the respect towards each other's work.

What makes their group different from other groups?

- The way of doing things, they praised their method of building relationships with people on emotional basis and educating them rather than giving money or any other false promises.
- "Hamare yahaan pe hum log unko paise nae dete, unko padhate he, paise to aaj he aur kaal nae, but jo samaj me aa gaya padhai se vo to hum rahe ya na rahe, zindagi bhar sath me rahega" (Here we don't pay them but we teach them, money is there today and tomorrow it's not, but the education will be there even if we are not around anymore)

What qualities do people the group share?

- Listening capabilities, tolerance, helpfulness, respecting each other, these are the qualities which emerged out while talking to them as a group.

NATIONAL IDENTITY

What makes them proud to be Indian?

- Being Indian women, we have the freedom to work with men in the same community.
- They get respect from the community.
- Freedom to move around and do things they wish to do.
- Overall, they were really excited to answer this question but not able to articulate their feeling.

What makes India a special country?

- Country's tolerance towards other countries and Indian culture, which is very rich and still preserved throughout this time. India has a more empathetic and caring outlook towards others
- Acceptance of any person of any age.
- Whole conversation was centered on giving and taking respect.

Do they think India is better than other countries?

- They put up the example of North Korea and talked about how people out there don't have any kind of human rights and how they are suffering.
- They have sense of pride in being Indian and were open to talk about it.

DOMINANT IDENTITY

Which identity (e.g., occupation, country, language religion is the most important to them?

- For them work is worship. “Acche karma karne se accha dharam ban sakta he” (Doing good work can become a better religion)
- “Koi dhandha chota nae hota, aur dhandhe se bada koi dharam nae hota” (No business is small and No religion is bigger than business)

SECTION 2 - ATTITUDES TO CHANGE

What things do they want to change in the world around them?

- They want to increase the possibility of employment in the area as they have to migrate from their place to other states to earn money.
- They want better lifestyle where their daily needs as water, food and shelter are easily available.

Does phrasing the question in terms of “a better world for their children” engage them more strongly?

- Yes, they were worried about their children. It had started the conversation in terms of their education, earning opportunity and health related issues.

What changes have they noticed in their lives?

- Technological advancement in terms of mobile phones, TV, vehicles and electricity.
- “Pehle koi serial dekhne ke liye kisi ek ghar pe pura gaon ektrit hota tha abhi sabhi ke ghar me TV he” (In the past we had to go to somebody’s house to watch TV, now everybody has TV in their

house)

- “Pehle phone nae hua karta tha to log har cheese dhyan se aur shanti se karte the” (Previously when phone was not there everybody used to work in peace, now everybody is in a hurry)

What things have become better over time?

- Water and other day to day food items are more accessible than in the past.
- Accessibility to the transportation service has been increased in the interiors of the region.

What things have worsened?

- Health related issues like breathing problem, diabetes, heart attack, etc. have increased and that is an area of concern for them.
- People have started migrating for earning opportunities to the other states and the plains.

What are the big problems in coming years? When they answer, this do they mention climate change or environmental problems?

- The farming culture is gradually diminishing due to irregular rain timing and wild animals who started visiting the region than the past.
- Snowfall has totally stopped which affected our crops of apple, guava and orange in this region.
- They are well aware of the situation related to climate change in

the area.

When you mention environmental changes what aspects of the environment do they mention? Do they mention climate change?

- They have mentioned the references like; rain fall, sudden environment change, snowfall, landslide, forest fire and air pollution. Climate change was not very prominent part of the conversation as they were not very articulative about it.

SECTION 3 - ATTITUDES TO "CLIMATE CHANGE".

What are their associations?

- They were able to associate tree cutting, air pollution, increased population and increased demand with climate change.
- Although climate change as a word for the person staying in a remote place, might not make sense as there has to be visual cues which should be provided while talking about it.

What are their conversations about climate change? Do they have them, with whom, what about?

- They have conversations about it, with family members sometimes, mostly the group of similar interest e.g. mahila group, panchayat members and friends.
- The conversation happens about melting glacier, SMOG in Delhi, flood in Mumbai, Water levels in Rajasthan, Deforestation, forest fire, Thunderstorm, etc.
- Due to television, they are very well aware of the things that are

happening around but have never experienced first headedly. Which leads to sympathizing rather than empathizing with it.

What do they say is causing climate change - do they think it is natural?

- They are aware about the condition and believe that it's all manmade problems. The cause might not be the direct action by humans. But surely humans are the only one to aggravate the situation.

What do they think about pollution?

- They are very well aware about the air pollution but other than that they don't have prior knowledge about the existing problems in other categories like; light pollution, Noise pollution, water pollution, soil pollution, etc.
- They know that burning fuel, coal and wood lead to air pollution.

SECTION 4 - ATTITUDES TO CLIMATE CHANGE IMPACTS

What personal experiences do they report?

- They have experienced heavy sparse rain in Chandradhar district, Over flooding in Mumbai, landslides near Chamba Tihri Link road.
- Most of them, have not been out of Uttarakhand in their lifetime so their experiences are only related to Uttarakhand's climate.

How did they and others cope with it?

- They have helped people where they can, although there was no loss of human life but due to lack of knowledge about the survival skills and rescue skills, they were not able to provide much help to them.

Which of the impacts are most concerning to them?

- They are most concerned about the irregular rainfall which is leading to the loss of farmland and at the same time other weather issues like increased heat and drought.

Do people think they will be affected?

- Yes, they strongly feel that they will be affected as they know that earth is closed system. It will always come back to them. So whatever precaution they have to take, it has to start from personal efforts.

SECTION 5 - ATTITUDES TO RENEWABLES

What do they think about renewable power, the benefits and problems?

- They have this perception that renewable energy sources will make electricity free or less expensive.

- They have perception that the renewable energy equipment is expensive.
- It depends upon the resources available to generate the energy. Like wind, sun light and waves.

What are their personal experiences of renewables?

- They have experienced solar energy with Heera Chulha where it gives them small light inside the kitchen.
- They have seen wind energy being generated at the Chamba hospital.

Should India move to renewables? -look carefully at the reasons they give.

- If India moves towards the renewable energy sources for the power generation then pollution control will be possible.
- Less import of coal and oil will lead to better economic condition.
- Surviving in the future with renewable resources.

SECTION 6 - NARRATIVES

For each of the six narrative pages indicate what people liked or did not like and what they said in detail in the conversations or marked on the paper.

Red = Disliked | Green = Liked

General climate change narratives

- The earth is heating up. We are getting more and more extreme heatwaves. The earth has a fever
- Taking action on climate change is a matter of fairness
- The monsoon is changing and coming at the wrong times.
- The poorest people will be affected the worst by climate change.

General climate change –fairness

- And we as individuals need to play our part. Working together we can stop climate change.
- India is in a unique position to be the first developing country to take action. We can lead on this issue.
- Climate change is a major threat for everyone, and no one can or should be expected to stop it on their own.

Security and independence

- These fuels are expensive and are running out. And they make us dependent on foreign countries- many of them are dictatorship and are unstable with terrorism and war.
- Renewable energy is unlimited because it comes from the sun, wind and rivers. It can never run out. Indian has always been blessed with natural resources: the water, wind, forests and sun that can supply our energy needs far into the future.

Renewables are reliable, safe, not breaking down

- Our power system is always breaking down- often at the peak of summer when we need the electricity the most.
- Renewable energy is much more secure and reliable.

Modernism = leapfrog to the future

- Not able to identify any like or dislike.

Imagine – positive vision, development and social justice

- A quarter of Indians have no access to electricity. This is holding back their opportunities.
- Prime Minister Narendra Modi has pledged \$50billion in investment as subsidies for solar panels on rooftops.

Pollution- like smoking

- The pollution from burning fossil fuels- coal oil and gas - in our cars, homes and power plants -is dirtying our air and damaging our health, especially the health of the old, sick and children.
- And air pollution is just as dangerous: it kills over 3,00,000 Indians every day.
- Electric vehicles are getting faster and cheaper by the day. With over five thousand new cars and buses coming onto Indian roads every day we have every chance to lead in the electric vehicle revolution too.

Renewables

- Many people around the world are now talking about moving to 100% renewable power and moving out of dirty fossil fuels.

Which narrative did they like the most? Why?

Which narrative did they like the least? Why?

F- Female | M - Male

F- I didn't like the 1st because earth is heating up. And liked the 6th because about the future plan of learning from other countries, investment of 50 crores in the same.

M- I liked the 1st because of the emphasize on balancing out the climate change at any cost. I didn't like the 2nd because they are talking about how it is going to affect everyone's life

F- I didn't like the 7th because it talks about bad health, and I liked 8th Because people started adopting renewable energy sources. Which might change the future scenario.

F- I like solar energy because it doesn't require coal.

M- I didn't like the part where the earth is heating up, I liked the 7th one because of the Indian government support,

M- I didn't like the 1st because earth is ill, and heat wave is coming up. the 5th I like more because 1 lakh people will get earning opportunities

Were there any key words they marked or used in conversations?

- Common pattern which is emerging out of the activity is about;

future plan, renewable energy, government initiated projects, Solar energy, Coal usage and Indian

SECTION 7 - IN THEIR OWN WORDS

How would they describe climate change to people like themselves?

How would they describe renewables to people like themselves?

- Too much time was taken so the workshop has to be dismissed

Individual Analysis



Volunteers at Ranichauri



Beneficiary with compost basket

This narrative workshop consisted of 7 participants. Out of which lead volunteers included; Mukesh, Hemprakash, Krishnaji, Anitaji, Kididevi, Krishnaji and One staff member Kalam were there.

The conclusion of the workshop on an individual level has been deduced to the number of words spoken, sentiments, similar words, comparative statements, Suggestive statements and factual statements by individual participants. Words spoken give the glimpse of the overall engagement and the knowledge base of the individual, similar words/repetitive words give the sense of repeating words that kept coming up while talking subconsciously, comparative statements give the ability to see the difference between two situations, suggestive statements give the individual's ability to improvise on the current situation, factual statements give individual's general information base as well as ability to quote that information at the right time.

Mukeshji (Educated)

Word spoken – 163

Sentiments/Key phrases – Good person is the one who sees good in other people, people stopped farming

Similar words/repetitive – good, people, heat, earth

Comparative statements – 1

Suggestive statements – 3

Factual statements – 3

Hemprakash (Educated)

Word spoken – 623

Sentiments – Socially we should listen, He said thank you to me, my role is very tiny, freedom is important

Similar words/repetitive – help, listen, reduce, start, electricity, effects, climate
Comparative statements – 3
Suggestive statements – 8
Factual statements – 9

Anitaji

Word spoken – 362 (45% of the workshop)
Sentiments – Even god forgives, strong from inside, religion is very important
Similar words/repetitive – quality, accept, help, take care, respect
Comparative statements – 1
Suggestive statements – 2
Factual statements – 4

Krishnaji

Word spoken – 471
Sentiments – Feeling of doing good for others, with love anything can be conveyed, Gandhiji's letter and pin example, Giving and taking respect
Similar words/repetitive – Respect, giving, good, motivate, people
Comparative statements – 6
Suggestive statements – 5
Factual statements – 10

Kididevi

Word spoken – 156
Sentiments – Just listening is not enough, I only have bad qualities
Similar words/repetitive – help, need
Comparative statements – 2

Suggestive statements – 1
Factual statements – 2

Bimalaji

Word spoken – 161
Sentiments – Keep good things and throw bad things away, changes are good, there is no rain
Similar words/repetitive – Respect, change
Comparative statements – 5
Suggestive statements – 1
Factual statements – 3

Kalam (Educated)

Word spoken – 445
Sentiments – India is more tolerant; no religion is bigger than work
Similar words/repetitive – Support, happen, give, conversation, good
Comparative statements – 2
Suggestive statements – 3
Factual statements – 9

Conclusion

From the above deduction and classification of the collected data; Hemprakash, Krishnaji, Kalam and Anitaji have more knowledge base and have ability to articulate it properly in given context, whereas if we look at Bimalaji, Kididevi and Mukeshji are a little bit shy about opening up as well as discuss things. The reason behind this is the lack of exposure to a number of people as well as the lack of interest in the on-going conversation.

Similar/repetitive words and sentiments that kept coming up for each participant gave a deep insight of how they feel and what their feelings are. Mukeshji, in general, is interested in talking to people and he tries to keep good qualities about people in his mind. Anitaji is again very respectful towards the people and she is very sensitive towards other people's feeling. Krishnaji has a combination of emotional as well as a pragmatic outlook on things. Kididevi and Bimalaji are hard workers, they believe in doing things rather than talking about it. Kalam and Hemprakash both of them have a degree and their sentiments are mostly related to the world at large rather than people.

Comparative statements, they mostly came from Krishnaji and Bimalaji, which shows their ability to be analytical and look at things with logic and relate it back to their lives. Where else if we look at the other participants, they were not very critical about the situation they are in.

Suggestive statements came mostly from Hemprakash, Krishnaji, Mukeshji and Kalam. This shows the ability to give a quick solution to the given situation with the resources that are available and known to them. They are able to foresee the outcome of the situation and understand how it can be resolved with given resources well.

Factual statements came mostly from Krishnaji, Hmeprakash and Kalam. Even though Krishnaji is from the village and hasn't stepped out, her knowledge base is very high and ability to retain information is at par with the others. Her ability to put the information up in front of people makes her open-minded and quick decision maker.

By looking at the narrative evaluation, Krishnaji and Anitaji, both of them are very well articulative and understand the context of climate change. They are able to convey the message despite being from the region compared to other volunteers. Kididevi and Bimalaji, both of them work hard in terms of application and support for the product which is also necessary at times. Continuous interaction by Anitaji and Krishnaji for climate change awareness would be helpful for the beneficiaries, as well as Engagement of Kididevi and Bimalaji for product deployment would increase the impact of EVD program exponentially rather than giving them separate individual responsibility of the village.

Assessment of the Workshop

- For the participants of different educational background and literacy rate, the workshop has to have some or the other visual aid with Narrative (While conducting the narrative workshop, it was hard to keep them engage while narrating stories)
- Also, the length of the workshop is too long for the participants to carry out the end activity (Narrative, which is important),
- Suggestion of videography for the narratives to engage the participants and make it more interesting.
- Distinction between different narratives for the participants was harder.
- At the ending of the workshop, the participants were almost about to quit because of the exhaustive discussion at the initial stage.
- If possible, workshop should be conducted in regional language for better communication as well as understanding their point of view.

Women's group & SHG: livelihood of women

Self Help Group

WAFD has been an integral part of the community for almost 15 years now. In fact, today in all the villages everyone knows about the organization or they have heard about them from beneficiary or volunteer. With the help of WAFD, in this region, all the women have started SHG (Self Help Group) as well as Mahila Mandal in all the villages. It helps them get access to information related to organic farming, women health, climate change initiatives, helpful policies in government and other earning opportunities in the area.

In this area earning opportunities are very less, people migrate from their hometown to cities for some kind of employment, majorly getting employed as hotel staff. The region has very good farming capabilities due to the access to natural mountain water and it is still in nature's lap. But due to irregular rain and problems created by wild animals like Boar & Monkeys, people are not able to sustain their crops for a longer period of time. Now, it becomes harder for locals to sustain where the only way of earning is by farming.

Reduced efforts to grow vegetables due to mentioned problems are leading to unemployment and migration. Whereas comparatively, men are less active than the women in the area. When men are away in other states or districts, women farm as much as they can, still it doesn't solve the issue of financial uncertainty.

To tackle the problem of financial uncertainty, the Self-Help Group was formed with the help of Women volunteers in the organization and local people. In addition to solving the problem of financial insecurity, it is also helping women in this area to come together and talk about their issues openly with the community.



Mahila mandal and SHG group members at Guriyali



Mahila mandal and SHG group members at Savli



Beneficiaries at Moan

Women in the area gather at one place and contribute to the group. The meeting starts with the introduction of the new member following which problem discussion takes place. If in the group any of the members is in need, financial support is given for marriage, equipment buying, farming help, health related issues, family emergencies, and education.

There have been one to many cases where group members were supported through SHG in the region. Now, the member of the SHG is not necessarily part of the EVD project but EVD volunteers are the only ones who are leading the SHG groups and managing it for the people.

Deepti Bahuguna is one of the beneficiaries, who had a major family event coming up where her daughter was getting married. She talked about her concerns to the SHG group and after coming to an agreement. Through SHG she was able to withdraw INR 30,000/- for her daughter's marriage. As mentioned by her that it is really hard to save money, but through SHG group she was able to put aside INR 50/- every month which resulted in as an investment. She was able to successfully conclude the important family event and eventually return the money in installments.

Pushpa Bahuguna, is a beneficiary, who had a dream of having her own house but was not able to save money for the same. Through SHG group she took INR 20,000/- for building her own house. She was able to build her house with pride and without having to worry about borrowing money from anyone else. She managed to give it back to SHG group within the given period of time.

Not necessarily are all the people a part of the SHG group, as Godabaridevi was one of them who faced an emergency situation. Her brother in law had to go through an emergency operation and didn't know whom to turn to. At that time, the SHG group lent her INR 20,000/- for the operation. She is in fact very proud of the fact that she could help her family despite being a woman, which in the given circumstances is a very big thing.

Sarita Bahuguna, wanted to have a toilet in her house. She raised her concern at the SHG group meeting and after the discussion, she was able to take INR 10,000/- for that. Now, she is a proud owner of a well-built toilet. She talks about this incident with pride and joy and mentioned that a small investment also, like the one from SHG can go a long way in helping someone out.

Major benefits of having SHG as per members are given below;

- Benefit on interest rates
- Money on loan whenever required
- In emergency, the option of having easy access to funds as compared to banks, based on their relationships with the SHG group members.
- Due to personal relationship with people in the group, getting help for anything is easier

Missing link which was been found in the system;

- Emergency access to higher funds are not available which is necessary in some cases
- Some relationship biases come in the way of working of SHG
- There is no regulatory council which includes a member of the organization to keep track of the information.



beneficiaries at program center in Ranichauri



Beneficiary with her Solar polyhouse

Women's Group (Mahila Mandal)

Women's group known as mahila mandals are actively working in this area under the supervision of WAFD organization. Group of women coming together and solving problems and tackling situations in this area is one of a kind, which has been achieved by the help of local champions (volunteers).

Major work of mahila mandals is related to information sharing, where they come together and train and teach each other in terms of providing sustainable product, food processing, organic farming, seed provision under EVD project. Availability of temporary employment and financial support through SHG group.

Mahila mandals have more number of members than a SHG, it requires physical presence at a time to get through training and other meetings. Now, mahila mandals have impacted the lives of women in this region.

Prior to the EVD intervention by WAFD, women used to meet each other and talk about the issues as well as help required, but the number of people and information was limited to a maximum of 5-10. Now with the help of mahila mandals, members know lots of women in the area as well as other people from outside.

Being in the mahila mandal, women have tackled lots of problems in the region. While having a conversation with the members, we were told about some people coming from outside to this area and littering around, as well as about the locals who own cattle throwing the dump on the road sometime. Mahila mandal members have figured this problem and started talking to the individuals who did that and adapted the culture of keeping their waste in particular place and dump it in a common dump yard at given place.



SHG members at Moan

One incident to mention here happened 2 years ago. Some men used to drink and misbehave which made it really difficult for the women to pass by or to go to the market. They had come together talked about these issues to each other. Collectively they reached out to each and every man who was involved in this activity. They had asked them to stop this habit and requested them to do it in their own house if need be. Due to this action from Mahila mandal, today Ranichauri is the village that very less number of people drink alcohol and even if they do, either it is in their own house or somewhere outside the village.

Another notable incident that happened, was when there was a forest fire in Uttarakhand. No authorities were able to reach out to all the places. Ranichauri and Guriyali were the villages which were on the border of the forest fire. At that time 15-20 members of the mahila mandal came together and tried to stop the forest fire by -separating dried leaves and branches in the forest to stop the fire at that line. In the action, the members of the group were burnt and their clothes were torn. But that didn't stop them from working for their community. For them, this incident is a matter of pride since they did well for the community.

Farming was one of the issues which was faced by all the women. Previously, when they used to sow crops in their garden or farm due to lack of knowledge all of them used to get wasted. For e.g., when they put rai (mustard seeds) and palak (Spinach) together that resulted in not getting anything out of it. After expressing their concerns to the group meeting, they got this information that sowing crops separately is much more effective. After a small training session for few of the members with experts, they understood the

real problem and shared the same knowledge with everyone in the region. Today everyone is equipped with the methods on how to get the better harvest at the specific time of the year.

How has it changed the life of women in this area?

- Networking led to the access to more information
- Members started knowing other villagers who all were in proximity before but never had a real conversation with
- More information about the timing and methods of farming led to predictable crop around the season although wild animals and irregular rain is of concern.
- Interaction led to the personality development in terms of personal hygiene, health, grooming, etc.
- Due to proper guidance from outsiders and fellow members, women are now able to take up their own stand and able to speak up freely about their issues to Panchayat, Gram Pradhan or any government officers.
- Previously they were not able to even talk to strangers from neighbouring village, now they are able to have a conversation, ask questions and raise an issue if need be.
- They know proper channel through which they can put up the request in government offices
- Reliability and trust have been built between fellow members of the group.

Also, spreading awareness about Eco Village Development program is a crucial aspect of Mahila Mandals. As noticed women's group share a very special bond through which they share knowledge, problem, and information. The group has been able to discuss the effect of climate



Women are preparing rice for the sweet dish at Savli



Members of Mahila Mandal (Women's group) after finishing up the compost basket

change and how it has been affecting their life and mother earth. It led them to discuss the mitigation and adaption of the same through better technological interventions.

Information flows from the organization to the volunteers and finally to the members or the beneficiaries. Mahila Mandal member is not in constant touch with the organization which leads to a lot of information loss in the process. Although it has affected a lot of member's life personally. The basic concept of climate change and eco village development is understood by all the members but core sensitivity and understanding of the system is lacking.

The role of the volunteers



Anitaji sorting cards



Bimalaji sorting cards

WAFD is purely a volunteer based organization. They are playing a very major role by spreading awareness about climate change and how it can be reduced by using different sustainable products. They also help the organization with other administrative work and are paid for keeping track of things as well as writing down reports for each village under them.

There is a total of 5 volunteers - Village(s); Krishnaji - Savli, Bimalaji - Jagdhar, Anitaji - Ranichauri, Kididevi - Guriyali & Moan, Mukeshji - Ranichauri (Administration). Their work is to spread awareness about the new sustainable products, information about climate change, promoting EVD in selected villages and nearby villages.

The volunteers have been given vocational training for the climate change. A number of workshops have been organized for the volunteers and outreach programs have been conducted for them. Through which, they have been informed about the changing climate around them, and how it is affecting the livelihood of local people, what kind of preventive measures can be taken for mitigating the effect of climate change.

The organization is running solely on volunteer base, there is no motivation for money. Yet 5 of the volunteers get minimum wages for the work they do for the organization as there is no official person on the field. Frequent visits are made by the office staff to see the progress. In which all the volunteers submit their report to the staff and explain about the progress made.

They are playing very important role in terms of promoting EVD in the villages. Listed below are the benefits:



Krishnaji's kitchen garden



Mukeshji's polyhouse

- A command on the local language command gives them the power to make beneficiaries understand them better.
- Proximity of beneficiaries and volunteers leads to better information flow.
- Understanding the effect of EVD interventions from both the end; theoretical from the organization and practical from the beneficiaries' application/experience.
- Able to find and address the need for the beneficiaries' end
- Beneficiaries are able to reduce the usage of plastic and other material with the help of information provided by volunteers
- Due to system level interventions by volunteers, policy makers started involving in the activities
- Word of mouth by volunteers about the products like tokri, chulha, water tank, organic farming has impacted the perception about climate change in beneficiaries
- Volunteers are gateway to the community to reach out to as many people as possible.

Personal level benefits to volunteers;

- Development of leadership qualities through EVD program
- Conversations are more articulate than in the past
- Being first touch point to the system from both the ends they are well informed about all the policies on the government level as well as organizational level
- Volunteers have become more open to talking to strangers as well as going to unchartered territories for spreading awareness about EVD
- Also, all the volunteers are beneficiaries as well, who have one or the other EVD products installed in their houses.

The workshop



Workshop at Ranichauri with volunteers

The design research workshop was conducted at Ranichauri for all the volunteers to understand their perspective. The methods used were subjective to the individuals who participated. Methods used were; card sorting, brainstorming, and personas. Each of them gave very intricate insights to volunteers thought process.

Firstly, personas as a method were used to understand their likes, interest, dreams and their feelings. Initially, they were asked to imagine one animal which they can relate to personally. All of the volunteers chose one wild animal for themselves. Given were some pictures of the animals which were chosen by volunteers: elephant, deer, rabbit, honey bee, dog. All of the animals had been chosen by volunteers have qualities like teamwork, sensitiveness, loyalty, hard work. This suggests that all the volunteers are working in the direction of promoting the organization's goal. In addition to that, they are more understanding and respectful towards other people, whether they are from outside or neighbouring villages.

Skills and interest areas: Skills which have been mentioned by volunteers are rope making, broom making, basketry, chutney making, sewing, pickle making, kite making, and paper bag making. Interest areas mentioned are playing games, climbing mountains, jewelry buying, driving vehicle, wearing good clothes and dancing on Disco music. When asked about their dreams; building a house for themselves, work for society or village, get a job, girls' marriage, buying a car and children's future were the points that came up. Thus, their aspirations, interest, and skills can be incorporated into the activities that organization provides for EVD program and effort can be utilized more effectively.



Workshop at Ranichauri with volunteers

Card sorting technique had also been used in the workshop, where there were 30 abstract pictures (drawings) which had been given to the volunteers to choose any 10 and hierarchize according to their likings. The common pattern which was found was, most of them chose; lantern, leadership, bicycle, provision store, mobile phone, books, animal husbandry cards. Which states that they are interested in and aspire to be a leader, looking for sustainable and cheap energy alternative, looking forward to educating their children and themselves, Looking for a trade in terms of produce and advanced technological interventions in their life.

So here the major interventions that can happen by keeping volunteers in the focus as follows;

- Inter-village provisional store
- Educational initiative (Non-curriculum based)
- Alternative energy interventions
- Leadership workshops and literature to enhance their perspective.
- Sustainable ways of building houses in the region which will impact their lives and as well as the environment
- Other self-sustainable programs can be introduced to deal with financial uncertainty

The impact of EVD programme on beneficiaries' lives

Eco Village Development program has been providing training, sustainable product solutions, information and farming aids to the local people. It has positively changed the way people live their lives in the region.

Through EVD there are a number of products that have been provided, which are; Heera (smokeless) chulha, compost basket (tokri), Solar poly house, Rain water harvesting tank, Gobar gas, solar dryer and mist harvester. The training provisions are; health awareness, organic farming, farming season/crops, climate change effects and policy (yojnas). Each of these product or training is in one or the other way are mitigating the effect of climate change or sensitizing the locals towards a better and sustainable future.

To understand the impact of the products and training which have been given to the beneficiaries, series of interviews and discussions were conducted. On the field, the first-hand experience with product and beneficiaries gave a deep insight on how and why some of the interventions are working out for them and some are less effective comparatively in their context.

UrmilaDevi (For 15 years) – Guriyali

Urmila devi has been part of WAFD for 15 years now. She married her husband and came to Guriyali from Moan. She has never gone out of this area. She usually goes to Chamba for some work, which takes a whole day to go and come back due to lack of local transport vehicle. She has built the rainwater harvesting tank with the help of WAFD members and has been using it since to fill it with rain water as well as tap water. She uses the water for day to day activities. Previously



Discussion at Beneficiaries' house



Activity board at Guriyali



Urmiladevi/Ushadevi at Guriyali

as she mentioned, there was no way she can get water filled in any tank as it costs a lot of money and transportation cost is really high as Guriyali is on top of the mountain. She started using water for organic farming to get the produce for her house, now due to enough knowledge about farming she doesn't have to go to Chamba to buy vegetable in a timely manner. She goes to Chamba once in a month. She also has installed Heera Chulha, which she thinks is very useful as it uses less firewood comparatively, which she has to collect it from the forest. Now with Heera chulha, the frequency of visit to the forest has been reduced to twice in a month.

She also mentioned that there are not enough employment opportunities for men in this region since there is a lack of income generating activities. Monthly, with the collective efforts of her husband and her, they can earn around 4000 Rupees, a major amount of which goes into education for their children and food. In the hope that her husband gets some work to earn money she needs to rely on Pradhan in the panchayat as they have all the information about employment opportunities in the area. She also mentioned that she'd rather rely on WAFD for income generation or employment opportunities since she already trusts them.

Ushadevi (2011) – Guriyali

Ushadevi had joined the WAFD in 2011 since then she has been actively participating in all the activities. She even got a chance to go to Bharatpur for basketry workshop where she learned how to weave the basket. She mentioned that the weather conditions in Bharatpur, as opposed to the other areas, were really hot and that it was hard to survive in that condition. During her visit to Bharatpur,



Beneficiary at Jagdhar



Ushadevi's house at Guriyali

she could relate to her own surroundings as well. She noticed the weather conditions in Guriyali to get hotter by the year as well. She did although also mention, that it is important for people to step out of their cities or towns, and eventually out of their comfort zone to expand their world view.

WAFD has put lots of efforts to uplift the region by supporting the women in this region, as most of the men don't work or have moved out of the state for employment. Time management has been a major problem for her, having had to stay at home all the time. Since WAFD, she is able to do some extra work in terms of farming, meetings and can also manage her home in a much better way. Talking about climate change, she mentioned having experienced 6 inches of snow every year in winters which has now turned into just dry chilly winters. She also mentioned that there are hardly any natural resources left in Guriyali.

She has the smokeless Heera chulha installed in her house. She described the chulha to be very helpful not just in terms of cooking but also the fact that it has a LED running on solar energy which comes in very handy during power cuts. Apart from its mobile charging and hot water facility, it also keeps the house warm in cold weather, which is helpful as well. She described the chulha like a safety matchbox. The distribution and placement of the houses in the area make it difficult for the people to interact with each other, WAFD helps them come together to discuss and solve problems allowing them to interact better with their neighbours and fellow town dwellers.



Member of Mahila mandal at Guriyali



Rainwater harvesting tank at Guriyali

Sonidevi/Krishnadevi (5 years/3years) – Guriyali

Sonidevi as well as Krishnadevi, both of them joined WAFD 5 and 3 years ago respectively. Their husbands work in maintenance, construction and so on depending on the opportunities given by the gram pradhan. Inquiring about their awareness on government policies, they mention that they are completely unaware of the policies for employment. Interestingly though, they are not shy about asking the Pradhan about it. WAFD's mahila mandal and volunteers support in terms of how to approach the officials helped them deal with these issues confidence. They did also mention that a proper communication link between gram Pradhan and villagers is missing which leads to a lot of misunderstandings. WAFD has tried to make it easier for them to connect to gram Pradhan seamlessly but still, that expected rapport is not there.

Despite having rainwater harvesting, they don't have rainwater to fill it in. They have taken the help from intercollege where they have water point set up, once in a while they connect the pipe from intercollege to the houses which are 2-3 km depending upon where your house is. In monsoon, storing grass and firewood is a problematic task, and hence they have a specific room dedicated to it. Apart from these issues they face financial uncertainty, for which sometimes they sell produce which they get from kitchen garden or sell milk to make money.

Although they have a good rapport with the volunteers and WAFD, they still have ambiguity in terms of how they are supposed to put up a request for any product to be installed at their place. Apart from word of mouth, there is no written request, which they think should



Ushaji at Jagdhar



Discussion between beneficiary and Kididevi

be provided for assurance. They know the volunteers and few of the staff members personally but they don't get to know about their availability on the field. Volunteers are always available but the staff member for any other issues.

Umeshji (Mukeshji's Brother) - Ranichauri

Umeshji is a part of the family of two of the essential male volunteers in WAFD. He has been able to understand the climate change effect and knows how cutting down trees, vehicle and chulha smoke affects the environment. Mentioning the climate change, he says that he realized that the climate was changing when the summer fruits started surviving in the region. While talking about climate change and surroundings, we don't consider cutting down trees as one of the reasons, although it is the most important one.

Umeshji works at nearby Educational NGO and has a bachelor degree. When asked about the product he has installed in his house, he mentioned not needing the Rainwater harvesting tank because the government has provided the water tap very nearby which they can use whenever required. Rainwater harvesting tank is very useful for the people, from whom the water tap is far away. Despite the fact it's low cost and easy to maintain, he thinks that it should be provided and produced for only for the people who need it.

In reference to the organic farming and kitchen gardening, he said that it has been extremely beneficial for them that the experts of this field, come and give them first-hand information about the crops and different techniques related to growing vegetables. Although this is already very beneficial, he mentioned how according to him



Mukeshji at Ranichauri



Mukeshji's Polyhouse

the increasing the frequency of such meetings would help them in regulating the results better.

He also has Heera chulha installed at his place, which he thinks is well designed considering the need of the women in the kitchen as well as its low carbon emission which mitigates the effect of climate change.

Mukeshji – Ranichauri

Mukeshji is the only male volunteer in WAFD organization who supports the process of spreading awareness about climate change and how to mitigate it with efficient and effective methods. When talking about Climate change he mentioned that, previously apples used to be one of the fruits which used to grow all-round the year but since the snowfall has stopped, it is not able to survive. There is a lot of non-seasonal rain every year which started hampering the crops due to which it's really hard to grow. In this area, people started facing health related issues like asthma, diabetes and heart-related issues. This is another reference point for changing the climate and unhealthy living conditions.

Visitors and researchers visiting the region give him some reassurance about the situation, he understands that people other than the locals are also concerned about Climate change as a whole. Although there is a huge language barrier since most locals don't speak Hindi, People showing concern about it surely creates an impact on their mind. Because of his exposure to places like Rajasthan and Delhi, he can understand and differentiate the wider scope and impact of Climate change.



Bimalaji at Jagdhar



Bimalaji's house

He has been using the poly house since 2011. Earlier he had a wooden poly house and later shifted on to a more sustainable bamboo poly house since the older one broke down. He keeps on sowing and harvesting different produce ranging from rai (mustard seeds), Malta (a variety of Orange) and other green and leafy vegetables. He once sold his produce for approximately, 32,000/- and 16,000/- in a year. He has been experimenting with different techniques to increase his produce. Somehow according to him, temperature control is still a big concern in poly houses. Lack of awareness about temperature control once lost him his entire produce.

Bimalaji – Jagdhar

Bimalaji is a volunteer for Jagdhar village; which is situated right beside Ranichauri village. She is also one of the beneficiaries by having installed products like; gobar gas, heera chulha and solar dryer. She has been using the solar dryer constantly for not just personal use but also lends it to people every now and then. She started drying vegetables and turmeric for off-seasonal use every year after the solar dryer has been installed. She also started earning money as well from letting other people use it whenever required, which actually led to awareness about the solar dryer in the neighbourhood. Also, apart from these benefits she also appreciates its ability to keep dust particles and wild animals away from the edibles and still be able to dry it. When talking about gobar gas, she is very eager to use it and wishes she could produce gas all year round.

Talking about how heera chulha has changed her life, she mentioned in winters and in monsoon she found it very difficult to use a normal



Family of non-beneficiary at Jagdhar



Manishji/Saritadevi (non-beneficiary) at Jagdhar

chulha, where she had to face the problem of the smoke getting in her eyes and nose and that she was just able to cook one item at a time. Now, she is able to get hot water running as she cooks, charging port, and a light.

She understands that Climate change is, in fact, the concern of the moment. She may not understand the gravity and depth of the situation, but she agrees that making small changes such as switching to a smokeless chulha from a regular chulha goes a long way in ensuring the coming generation's future. She believes people need to have increased awareness and participation in the cause.

Manishji/Saritadevi (non-beneficiary) – Jagdhar

This project gained valuable insights by talking to some Non-beneficiaries as well. Manishji and his wife Saritadevi have a family consisting of 2 children. Manishji has a permanent job in Chamba and Saritadevi is a housewife. When she is out in the village and gets to interact with the women about WAFD's work and understand what they do, she finds it extremely interesting but household responsibilities refrain her from joining it herself.

Manishji on another hand told that he has a secure job and enough money to provide for his family and he doesn't think that his family needs support for financial uncertainty. In the winters, they use angara (burning charcoal) or heater for heating the house. As suggested by him that chulha is good but gas is quicker to use and he doesn't see any advantage of using it over the gas. Interestingly though, he understands Climate change and his exposure to the rest of the country has helped him understand the concern better.



Ashadevi (non-beneficiary) at Jagdhar



Senior volunteers Anitaji at Ranichauri

Ashadevi (Non-beneficiary) – Jagdhar

Another non-beneficiary, Ashadevi, who lives in Jagdhar village with her son, who works in an office nearby, has heard vaguely about WAFD. She mentions having known about the WAFD although she is not aware of the work they do specifically. She has also heard about how effective and easy to use the smokeless chulha is and personally finds it extremely valuable for a housewife, but doesn't exactly know how she can get one for herself. Lack of awareness about a proper channel keeps her from being able to get a smokeless chulha installed at her place.

Completely unaware of the concept of Climate change and global warming, Ashadevi, is under the notion that the products are in fact provided solely to the people belonging to lower financial strata and have nothing to do with the environment at large.

Anitaji (Senior volunteer) – Ranichauri

Anitaji is the senior most volunteer in the whole ecosystem. Her experience has given her a very deep and thorough understanding of WAFD. She has been using Heera chulha for 1 year now and she is most satisfied with it because of its capability to dispense hot water throughout the day. She mentioned that it is very necessary for people living in this area to have hot water running all day. Previously they have to keep burning firewood to get, this has changed with the Heera chulha.

She has noticed a lot of environmental changes such as a decrease



Krishnaji's kitchen garden



Tar collected from the smokeless chulha which can later be used for plants as a fertilizer

in forest cover because of inadequate rain and frequent forest fires, a rise in temperatures, unseasonal rain etc. She mentions that the forest density has decreased to a great extent. This is why WAFD greatly promotes organic farming and kitchen gardening, to cope up with the daily supply to fight climate change and promote healthy living at the same time. She also goes out of her way and tells non-beneficiaries to adapt organic farming and start a small kitchen garden. Her thought process and perception about climate, health and personal development have been changed since she joined WAFD and especially after EVD. The need to step out and spread awareness about climate change has also made her self-confident. She is now confident enough to be able to go to any village to talk about the EVD program.

As a volunteer, she thinks that be it a volunteers or beneficiaries, we are strongly dependent upon each other as a society. If we want to make a difference everyone has to walk together and work together to achieve something better. For which she always talks about the climate change and uplifting women by empowering them with decision-making abilities, providing better sustainable product for their household and tackling the problem together.

Dr. Rajesh Singh (1 year) - Chamba

Dr. Rajesh Singh has been working as a one and only surgeon in this area and running Garhwal Community Development and Welfare Society. Being a member of the partner organization, he sees that uncertainty of funds from the organization hampers in product implementation. Also, while talking about the climate change, he thinks that people need to be given much more concrete information



Dr. Rakesh Singh at Chamba



Christian Hospital at Chamba

and material for information sustain in their mind and later on to be able to talk about it. Low-income group's focus will always be on earning money or saving it in whatever way possible so why not create income generating programs through which we can spread the awareness as well as help them sustain themselves economically. The products which have been provided to the people in this area should add value in their life to respect and adapt it.

He himself is using the wind turbine provided by WAFD/INSEDA to meet daily and emergency need for his hospital. Having a hospital, he faces a lot of challenge with electricity supply which is not constant all day long due to unpredictable weather conditions. Wind turbine gives him that freedom to work and be able to provide for his patients when an emergency situation comes.

Talking about the mahila mandals and SHG groups, he said that it has impacted the women in the region very deeply. Being able to turn to somebody whenever you face a problem or have any concerns is the best thing a person can expect. WAFD has made sure of that by creating a close network of people which tackles issues independently without anybody's support. As explained by him, that if we are able to ensure financial certainty anyhow then the impact of whole EVD program will rise exponentially because already all the products are efficient and effective enough on the ground. To sustain the motivation in the volunteers all the time is necessary for an organization which can be achieved by supporting information by graphical, audio and visual material for the same. Awareness programs for beneficiaries are also necessary to make it work as beneficiaries' need to understand the value of the product they have been provided at subsidized rates from WAFD/INSEDA.



Kididevi with beneficiaries at Moan



Sun dried edibles at beneficiary's house

Ramidevi (2011) – Moan

Living in one of the remotest villages, Ramidevi mentions how she was very reserved when it came to having a conversation with an outsider or a stranger earlier. She reminisces about the first time WAFD came to her village and talked to them about personal hygiene, development, climate change and self-advocacy. After being part of the organization for more than 10 years now, she is very open to having a conversation with anyone from outside and able to talk about her concerns openly to them. In fact, she has been in constant touch with Pradhan to get more information about the policies and employment opportunities. She talks about the constant contact with the WAFD organization, which gave her opportunities in terms of workshops, visiting another state, interacting with the experts.

She owns a Heera chulha very proudly and a kitchen garden. She cooks her daily food on the chulha and enjoys having her phone charged properly with the chulha. She mentions not having to worry about cooking at night because the LED in the chulha makes it very convenient to work without electricity. The chulha has 2 burners and can be faster to cook more food as opposed to a normal chulha, not to forget whilst saving electricity, firewood and of course money. She also doesn't have to carry a heavy cylinder on her head to be able to cook food, thanks to the heera chulha.

Kitchen garden, according to her is the best things happened to them. The information about how and what to grow has been extremely helpful. Although information about the kitchen garden has been provided by WAFD to the beneficiaries. It spread further with the



Sitadevi (non beneficiary) at Moan



Beneficiary at Moan

word of mouth. They learned more by helping others learn about farming and kitchen gardening. Adapting this culture helped them to create a strong network of women coming together and trying to sustain themselves as well as their own family, which resulted in increased confidence and self-respect in them.

Shusheeladevi - Moan

Shusheeladevi from Moan, explains how it is very difficult for her to step out to get food supplies and firewood and that takes up an entire day. During school vacations, it is still easier because her kids don't have to go to school so she is relatively more relaxed. She talks about how it has become easier over the period of time to take decisions with the help of WAFD volunteers. Now she can any time connect to all the beneficiaries, express her concerns and with the help of few of them, she can represent it in front of gram Pradhan or any other government authority. Previously, she was never able to even talk about her issues.

When an outsider visits the region, she appreciates the fact that people are interested and aware of the issues in the region. She is aware of Climate change per se, but is unable to answer direct questions about it and can't really talk about it. She learned Hindi after going to the SHG and Mahila mandal meetings.

Sitadevi (Non-beneficiary) - Moan

Sitadevi stays in Moan, proximally slightly far from the clusters of houses in the village. She has never been told about the work being done in the area. Volunteers came and gave her the required



Saraswatidevi/Bissadevi with Kididevi at Moan



Beneficiary at Moan

information, but the lack of cell phone in her house led to no or very less connectivity with others.

She has also heard about the Heera chulha but doesn't know how and whom to approach for the query. She doesn't know much about the kitchen garden or organic farming. She also feels shy about going up to someone and ask about the information.

Saraswati/Bissadevi – Moan

Saraswati and Bissadevi are one of the oldest and most experienced women in the group. About farming, they mention that the return is not very adequate in terms of the harvest quantities. The young people in the family usually attend the meetings and tell them about it when they come back. One such incident she mentions, where they got Broccoli from somewhere and because they didn't know what it was or how to cook it, they fed it to the cattle.

According to them, with changing times it is really necessary for the youth to get involved in this to understand how things are moving in this world. They have talked about how they have to send their children to earn money because there is less rain in the region. Less rain led to less farming possibilities, which led to less employment and less earning opportunities in the area. Men don't work much in the area so women send them outside at least to provide for the house.

Satyawatiji – Savali

Satyawatiji is one of the major users of the EVD program's products.



Krishnaji/Satyawatiji at Savli



Satyawatiji's organic farm and Polyhouse

She has installed poly house, a small unit of the solar dryer and rainwater harvesting tank. She stays in Savali with her husband and her children are outside studying in Rishikesh. She usually spends her time in kitchen garden and farming. She says that poly house helped her harvest crops which are non-seasonal. Also, the crop is safe in a poly house from animals and different weather condition. Talking about farming she mentions that the Compost tokri given by WAFD helps in keeping her house clean as well as getting fertilizers for her garden and small farm. Due to that waste management is easier.

She also says that farming is highly dependent upon the amount of time you can take out for it. Due to less number of family member whatever produce she gets, she sells it to people around to earn some money. Solar dryer is the product which has been a point of attraction. As mentioned by her, other local NGOs came and took photographs of it and understood how it works and how it's made. Also, Rainwater harvesting tank has been useful to fill normal tap water for using it later on.

Vijayalakshmi (Gram Pradhan, Savli)

She was a part of the mahila mandal before becoming Pradhan. She says mahila mandals are really helpful for women to realize their potential and ability. On an incident, she mentions that the men in the village used to play poker all day long. The group got together and approached the men to stop doing so and make a more productive use of their time. According to her, mutual support from the mahila mandal is the best thing all the women can have.

As the conversation moved to the responsibility she is being a



Savli Mahila mandal



Discussion with Savli Mahila Mandal

Pradhan, she says that all the things including; infrastructure, lighting, employment opportunities for villagers, Conveying the information about the government policies to the people are her responsibilities. Thus, she has to deal with each and every aspect of the village development. After she became Pradhan she has built community center after discussing with the villagers.

She understands her responsibility towards the village development, but as mentioned by her, she doesn't have a prior training for the same. Sometimes she needs to ask higher authorities for the guidance which might or might not be given depending on the problem she is putting up with. If she knew about it beforehand, then she could have directly put up the request rather than asking them about how to do it.

Savli Mahila Mandal meeting

Savli mahila mandal is been the most active group in the whole ecosystem. Members who were involved in the discussion were; Sheila Bahuguna, Sarojini, Rajeshwari Bahuguna, Kaladevi, Guddidevi, Jaumatidevi, Banaragidevi, Iaxmidevi, Roshnidevi, Bindyotmadevi, Purnadevi, Roshnidevi and Kusumdevi. While talking about the products one of the best things about the heera chulha is that they can close the door and cook the food at the time of winters and monsoon. Water stays warm for them all day long. The room doesn't get black due to less smoke as the smoke gets accumulated in the bucket on the terrace. The mahila mandal is very enthusiastic about the compost tokri as it takes a team to build one, they say that we work together to build the tokri (basket) and tank, which led to trust and reliability building amongst themselves.



Kalam is holding onto Solar panel for routine checkup of Heera Chulha



Gobar gas (Bio gas) plant at one of the beneficiary's house

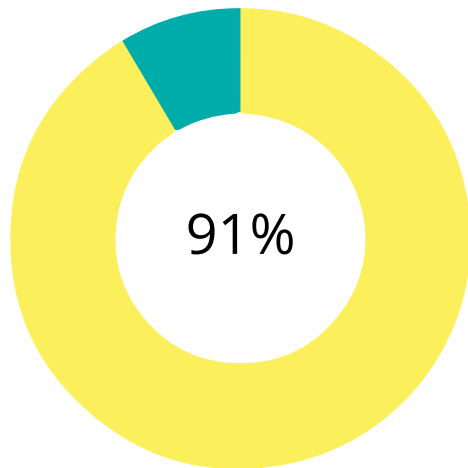
Talking about the group, they say that number of participants varies depending upon the type of meeting we are conducting, if we are discussing about climate change then the number of participants would be less or they will leave earlier than if we are discussing about the product distributions or the issue which is affecting all of them. Sometimes they come to the meeting but they don't know the agenda of the meeting, so they might end up confusing themselves more.

They have been provided with the information about farming and in some cases with the seeds to grow a new crop in their farm. They say that it is a good thing as we have been given the information, we try our level best to get a harvest from it. If it doesn't happen, we get together and share our concerns with people in the organization. The organization provides us expertise after investigating the current scenario and we get better harvest next time.

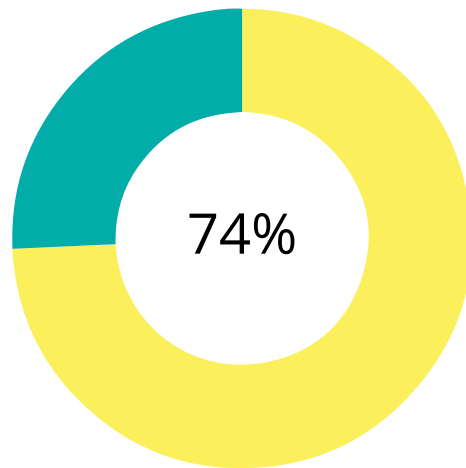
Mahila mandal is very actively seeking information and training in sewing, animal husbandry, handicraft, food processing and farming. The group mentions that in the meeting information about the policies (yojanas) and other earning opportunities get discussed.

Personal/ Organizational

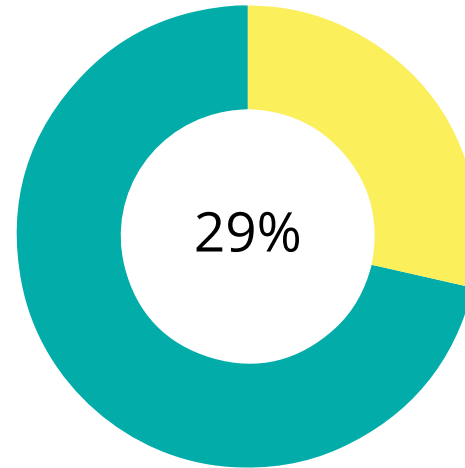
Total of 40 people were interviewed, out of which 30 beneficiaries, 5 non-beneficiaries and 5 volunteers participated. The questions asked were related to personal, organizational, climate change, awareness, participation and advocacy. Here their responses are converted into percentages to see the impact more clearly.



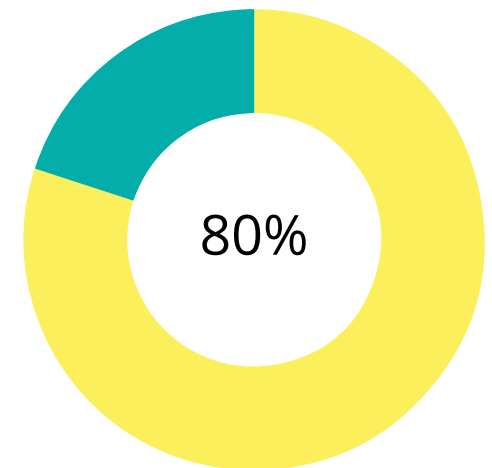
Think that their effort through EVD programme helped area develop itself.



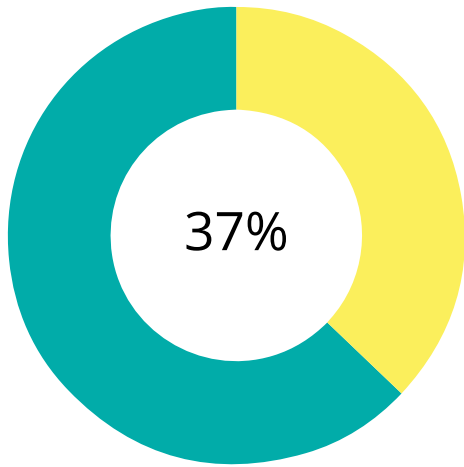
Are looking for other skill development opportunities.



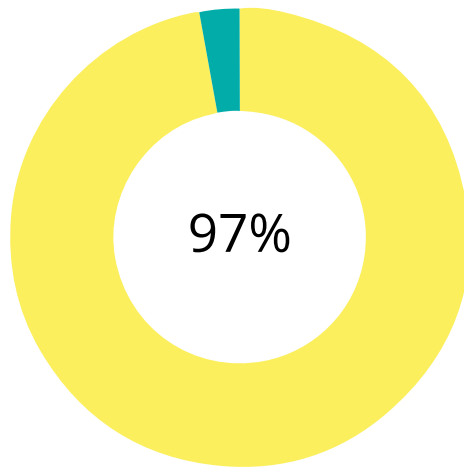
Have extra skills which they use to earn some extra money.



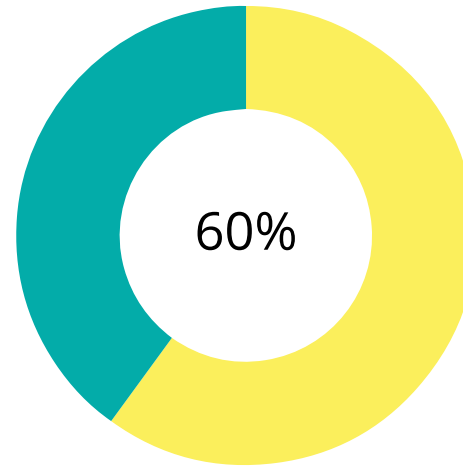
Say that their communication has improved after EVD program by WAFD in their village.



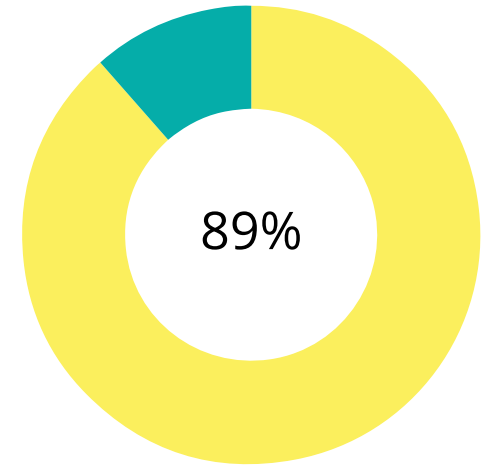
Say that their knowledge about health and hygiene has increased.



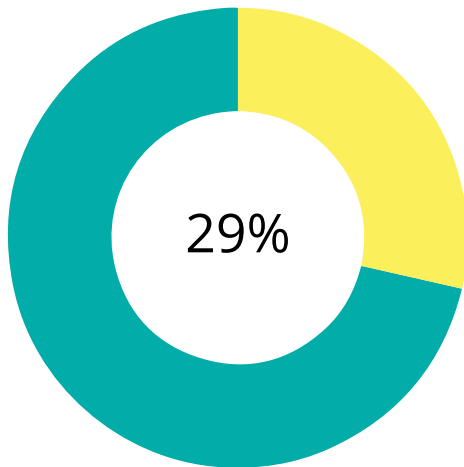
Say that they need to have constant touch with outsiders to develop their community.



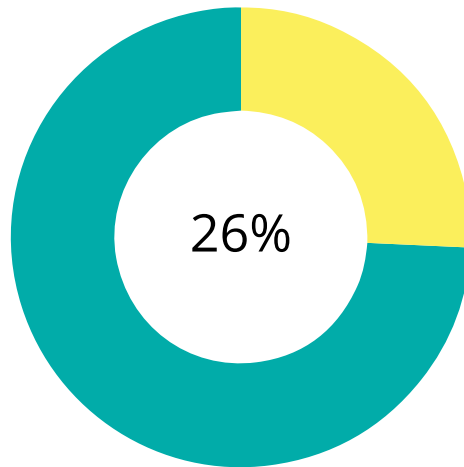
Say that experts from outside widen their knowledge.



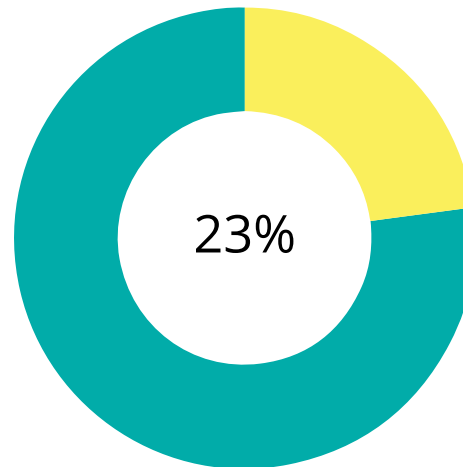
Think that they will be able to continue working if WAFD is not operational anymore in the region.



Have sold produce harvested out of products that have been provided by WAFD under EVD programme.

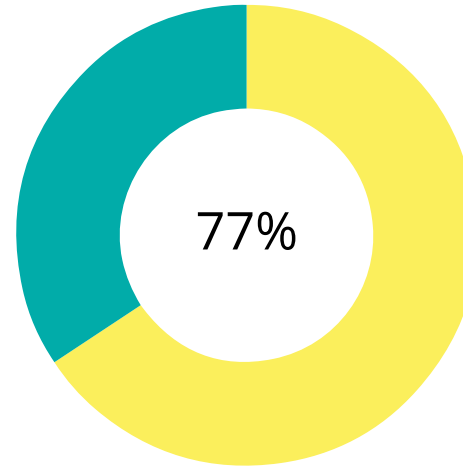


Have permanent employment.

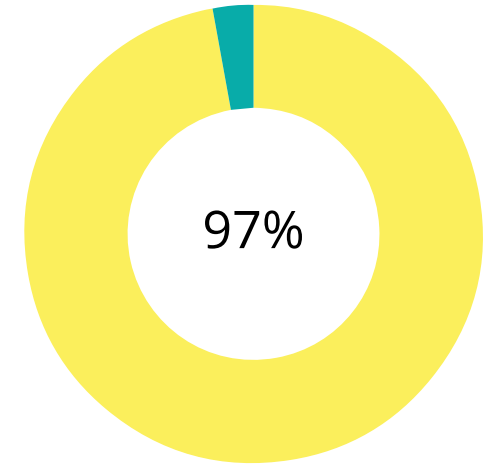


Have been out in other state/area.

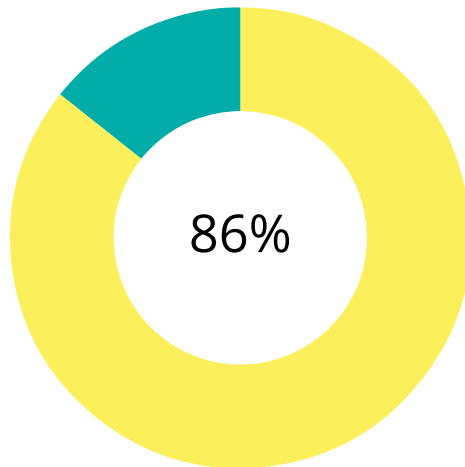
Climate change



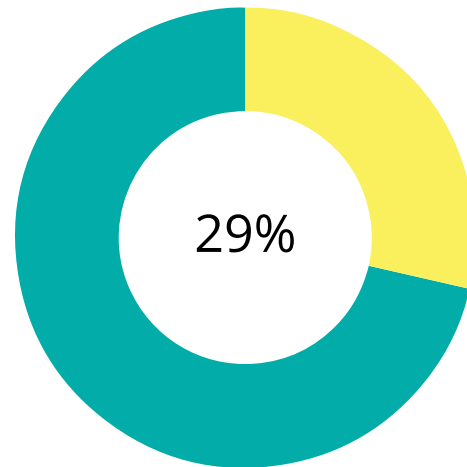
Think that group efforts led to development in the area in terms of climate change.



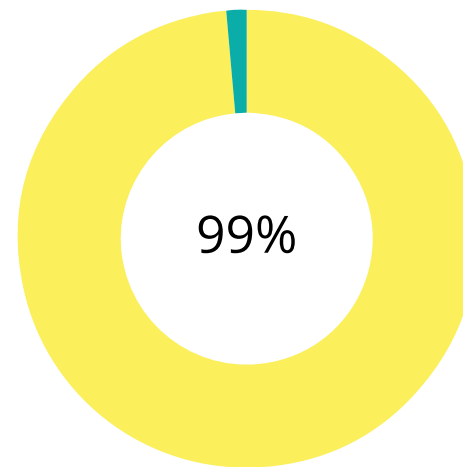
Think that climate is changing and defined it by quality of lifestyle and environment around them.



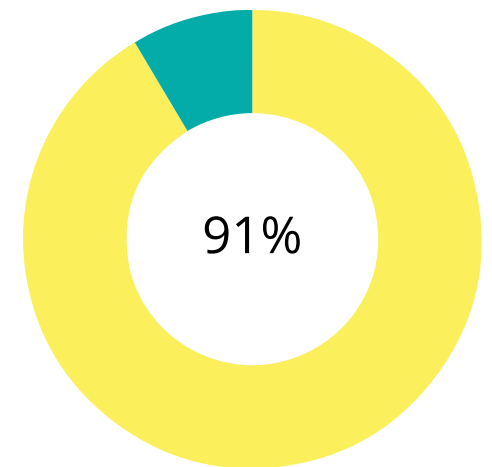
Still worry about the water supply in the area.



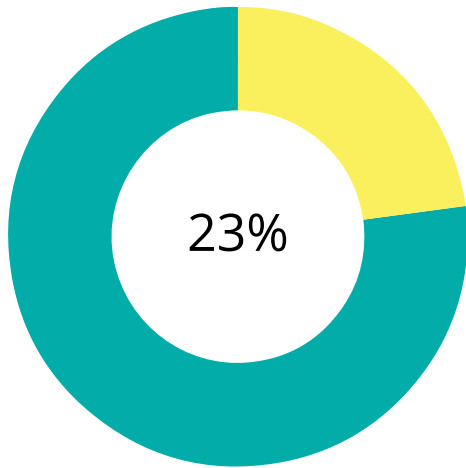
Think that, it is related to climate change.



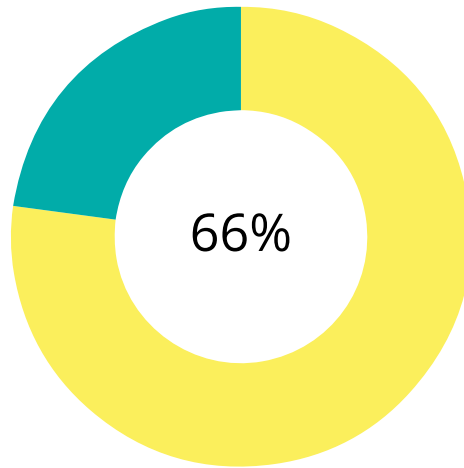
Think that solar and wind energy is better than burning coal because it's free, it's continuous, it's clean and it's low maintenance.



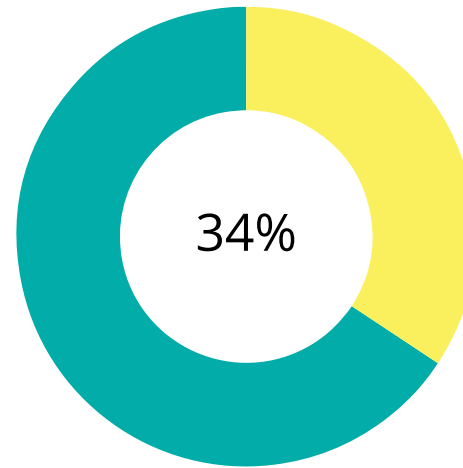
Think that cutting down the trees and deforestation are the reason behind climate change.



Think that smoke from vehicles and industries cause climate change.

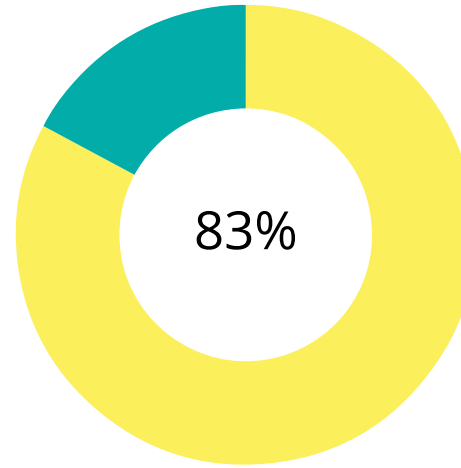


Think that burning coal and firewood are the reason for climate change.

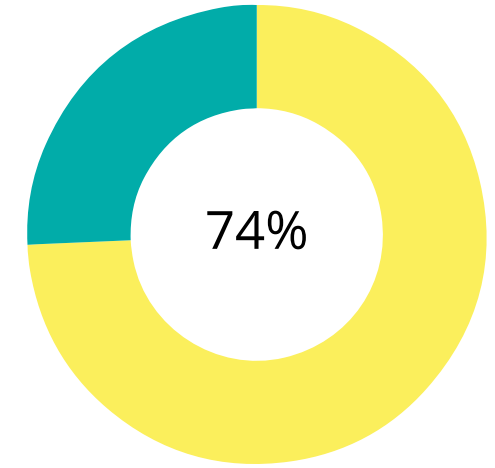


Think that electricity generated by fossil fuels, is the reason behind climate change.

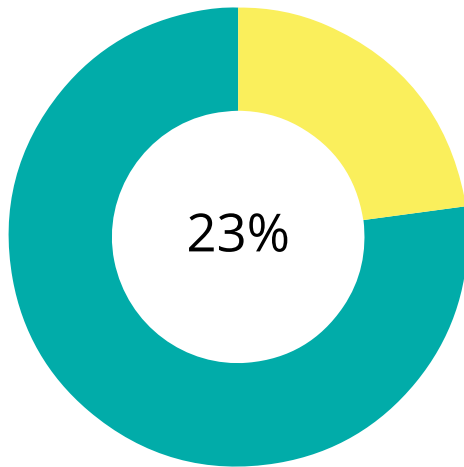
Participation/Advocacy



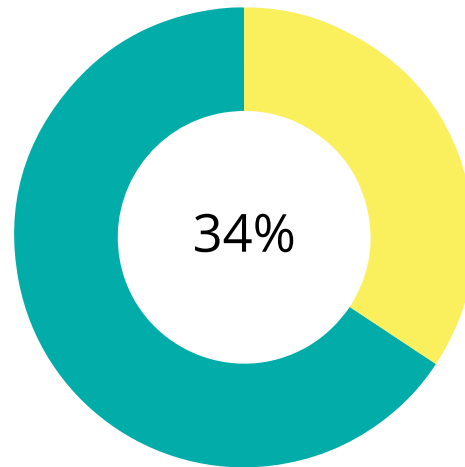
Like participating in group activities.



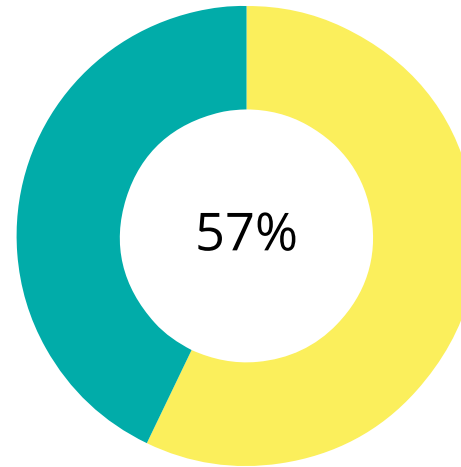
Are able to have a conversation on their own if someone comes from outside as compared to before.



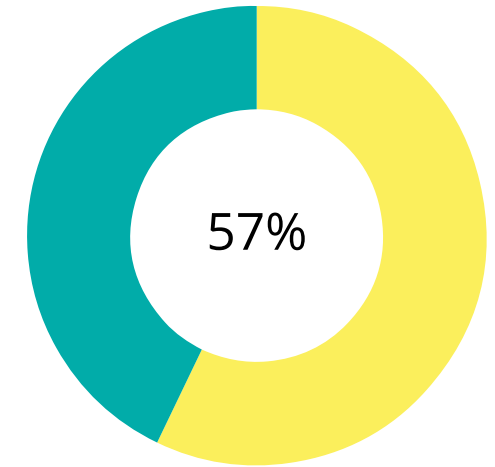
Have talked to the gram pradhan on their own for their concerns.



Have raised concerns in Mahila Mandal.

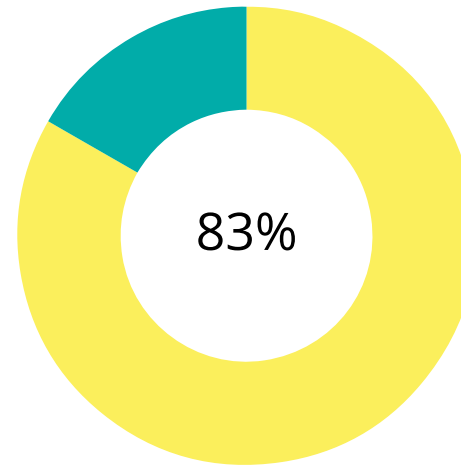


Would like to go out or attend any activities to learn something new.

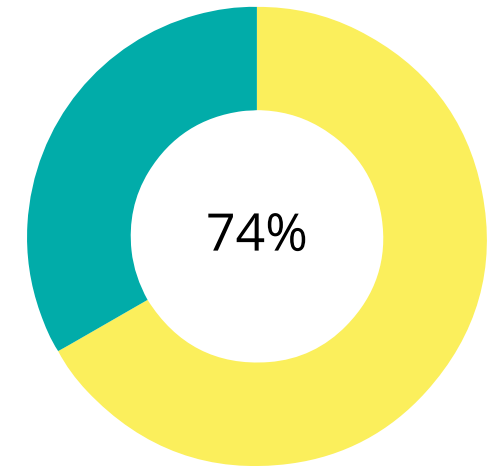


Can speak their concerns to local government authorities.

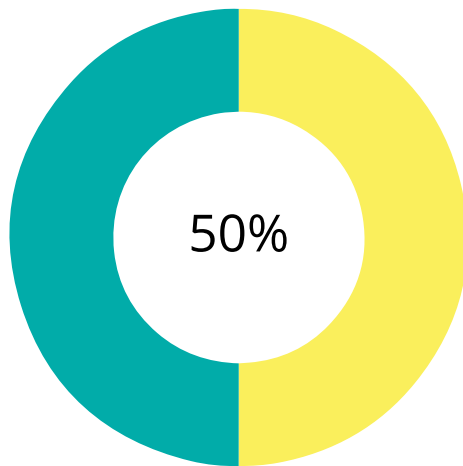
Non-beneficiaries



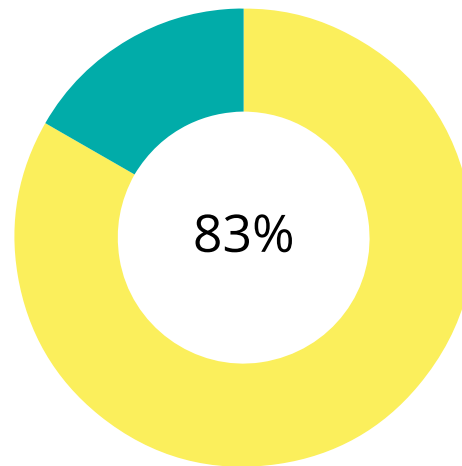
Have heard about EVD programme and WAFD.



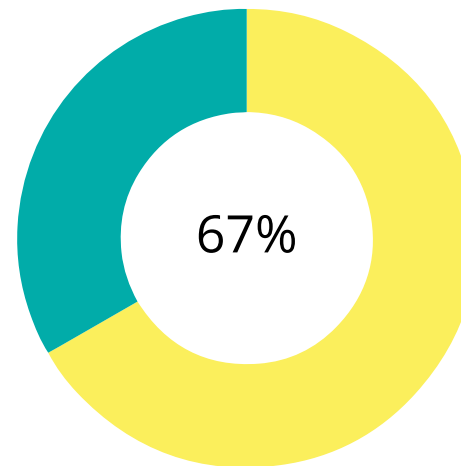
Are interested in knowing more about the programme.



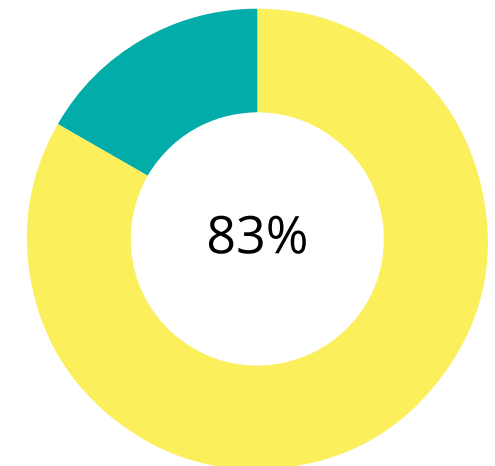
Think that it is going to be helpful for them in terms of their personal development.



Think that climate is changing but they are not contributing to reduce its effects.



Have seen the products installed in beneficiary's house.



Think that it will help them impact the climate change effect.

Impact Assessment

Eco Village Development program has brought about a huge impact on the lives of locals be it a beneficiary or non-beneficiary. The impact that occurred is on different levels; environmental, awareness in people's mind, the low carbon footprint of the village and in the group of women. Number of impacts that reflect are described below;

Mutual development by group activities

Through basketry, rooftop rainwater harvesting tank building, group meeting or casual meeting, all of them are given a chance to put forward their concerns to the members of mahila mandal in a very controlled environment with trust and reliability. Helping each other out in the situation of emergency, like women in the area help other women by helping them sow new crop when the season has arrived, some health related issues and emergency situations as well, this has helped them build trust and reliability in between the beneficiaries and the organization. Mutual development takes place when two known beneficiaries come together to help each other through EVD program interventions.

Empowerment through Information

Information sharing is the key feature of EVD program, where experts or the organization goes to the region and give first-hand information on climate change, health, personal development, farming and product interventions. After which women of the area on their own share this information with other, either beneficiaries or non-beneficiaries. This culture of information sharing has started after the EVD program got implemented. Women started sharing information regarding earning opportunities in the area, farming possibilities,

issues, and concerns. They started the culture of tackling issues on their own rather than being dependent on someone else, which led to personal development (hygiene, health & personality), speaking their concerns out loud and openness towards adaption of the information/product. Understanding of Hindi language has increased in the people after EVD program has been implemented.

Fighting financial uncertainty with the help of SHG

Self Help Group started with the help of WAFD in the region. Women in the area started coming together to deposit INR 50/- every month. This led to a behaviour change in women where they started coming in every month or if they can't, they started sending money through somebody else in the group. Given the fact that they are contributing towards SHG, they started sharing their concerns about the situation where money is needed. Now, the culture is such that in any situation whenever they think financial support is needed, they directly come to the group and discuss the concern. After the discussion with other members, they can withdraw the money as per their need. Women have started being self-sufficient with the help of SHG as they know they can rely on SHG without any obligation.

Uplifting the poor by the use of eco-friendly products

Each product has its own benefit. By installing it in the house people do know that they are helping the environment. Apart from that, the products are embedded into their life so much that, it is almost a part of their family. It has been helping them sustain themselves in one or the other way in terms of money, work, health, and the environment.

Heera chulha which is an integral part of their life. Which helps them cook their food at low carbon emission than an old chulha. Firewood for the chulha is less so the frequency at which they have to go to the forest is really less. Due to its ability to reduce the smoke, it reduces the effect of smoke on the health of the beneficiary. Also, another feature which filters out the smoke before releasing it in the air makes them a contributor to the environmental preservation and mitigation policy.

Gobar gas and compost basket make their organic farming and kitchen garden efficient by consuming all the organic waste coming out of their day to day activities. In return, they get gas as well as fertilizers, which reduces their usage of product which is fossil like LPG gas and other chemical fertilizers. Sometimes they sell their fertilizers to the others as well as the organization, leading to financial support.

Rainwater harvesting tank requires the bamboo structure, and these tanks can be made by the help of other beneficiaries. Because of its availability and easy to build characteristics, it has proven very helpful for them as they can store normal tap water as well as rainwater. Resulting into reduced usage of plastic tanks, that eventually affects the environment

Poly house and solar dryer, both of them use solar energy to grow and dry edibles, which are helping people get non-seasonal harvest and to preserve it to use it later in the year. These technologies have made it easier to farm and as well as to get vegetables right at their doorsteps. Some of them have been using these produces for their own houses. They have started selling extra produce to others leading

to promote the organic farming and kitchen garden in the vicinity. The solar dryer has also been rented out by some of the beneficiaries to earn a few bucks out of it. These have been self-initiated by them. Thus, leading to preservation of their environment, soil, and health with the benefit of earning some money.

Healthy living by organic farming and kitchen gardening

The culture of information sharing can be seen about the organic farming and kitchen gardening has been developed after EVD program deployment. The information given to them about the farming, they have been sharing it with acquaintances, which led to the increased awareness in the locals. Now, most of the families adapted this culture and started getting produce for themselves. That has increased health consciousness and reduced the consumption of chemically produced vegetables in the region.

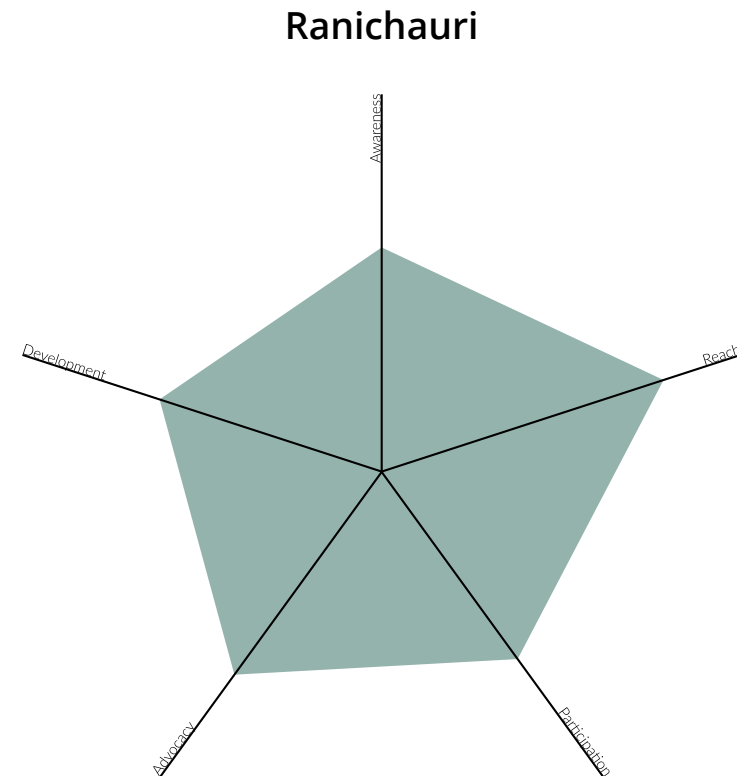
Waste utilization and cleanliness adaption

People in this region have started using their organic waste for compost fertilizers. The other plastic waste has been dumped at a particular place of the village. They have been promoting cleanliness in the whole village. The culture of collecting garbage at a place where it can be collected by the corporation has been adapted. Understanding the effect of plastic on the environment, the reduction in the plastic usage as well can be seen in the people.

Village Evaluation

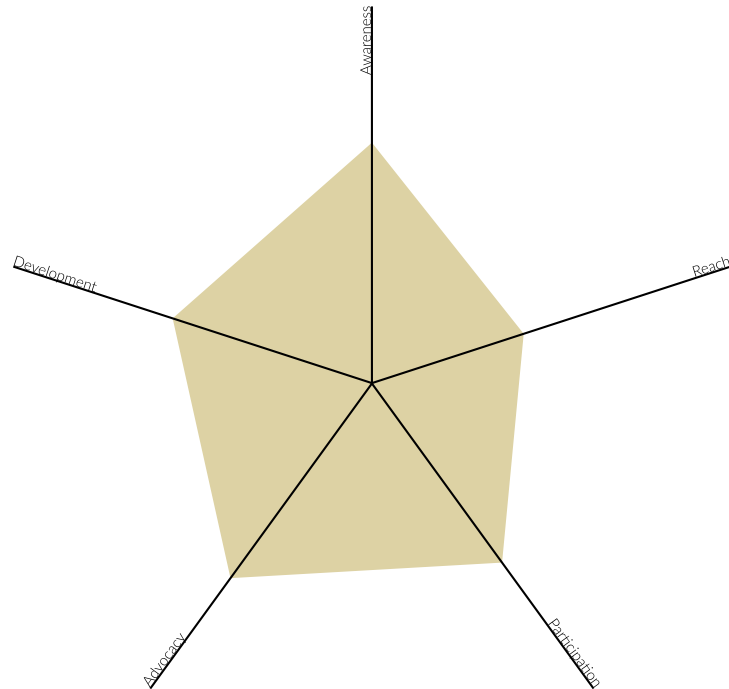
Here, each village has been mapped on its development, reach, awareness, advocacy, and participation. The visualization helps in terms of figuring out the overall development of the village on these variables. Reach is one of the important variables of all which impacts the village directly as accessibility is proportional to the participation. Better reach in terms of communication can be attained by more participation from the area with the help of beneficiaries. Development is another aspect, which reflects the overall development of the region by EVD program. Awareness is a variable which consists of the ability of people to reflect back on the acquired knowledge and have a conversation about it. Advocacy is another aspect which looks into the ability of people to be able to express their concerns freely in front of respective authorities and people.

The major area covered by village shows its development on all the fronts. To make it more efficient and effective, an individual variable can be introduced or empowered as all the variables are interlinked to each other.



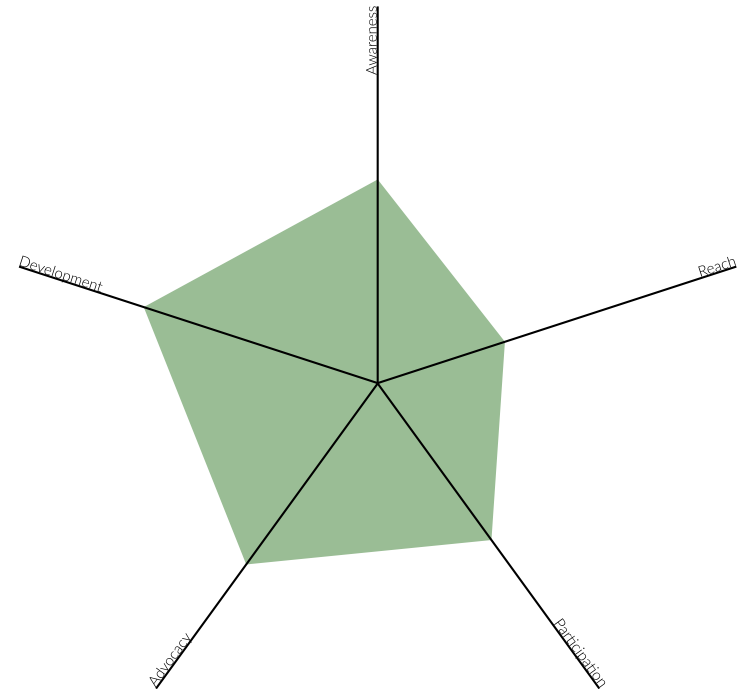
Ranichauri is the main access point for WAFD to the region. Reach of the place is easy due to convenient transport connectivity. Awareness, participation and advocacy can be seen at the highest point. People here are well off financially so the beneficiaries are less compared to other villages.

Guriyali



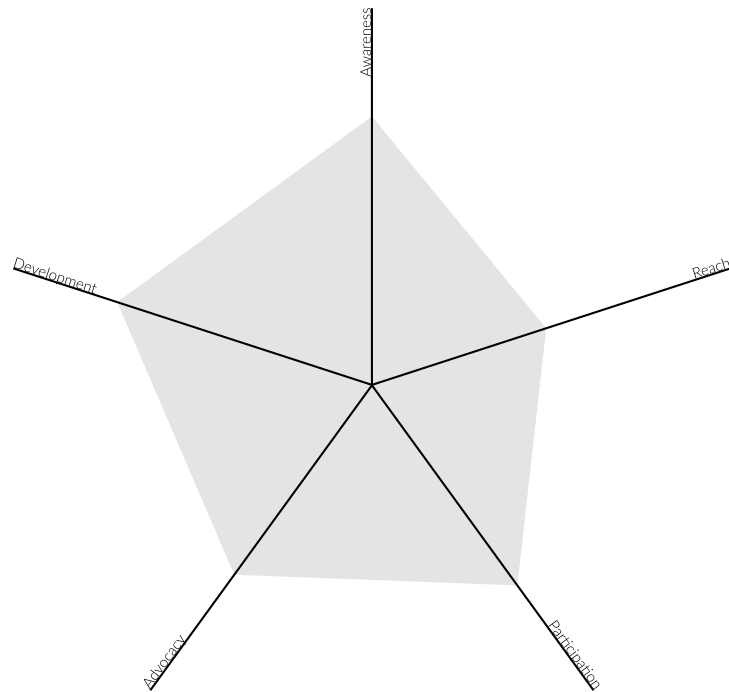
Guriyali is connected with Ranichauri. Although it is not easily reachable, development and participation in the village is significant with the effort of volunteers. Advocacy and awareness can still be looked at while trying to increase the scale of the programme.

Moan



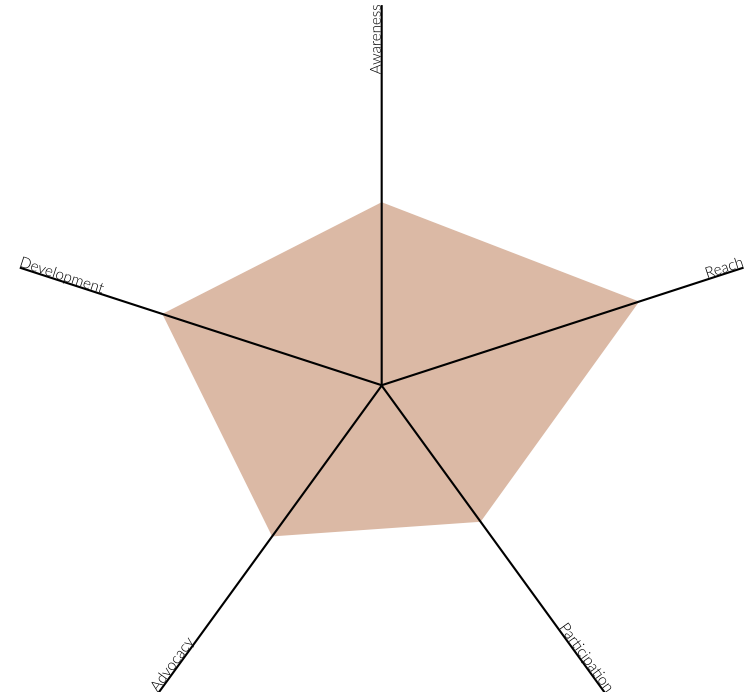
Moan is the least accessible village of all. Still the development and participation from beneficiaries are notable. Culture of information sharing and climate change awareness is high with respect to the villages which are well connected.

Savli



Savli is one of the most developed village of all in all aspect. Participation of beneficiaries is excellent. Closed network of volunteer, the organization and policy maker made this village stand out in the region.

Jagdhar



Jagdhar is very well connected with Ranichauri. Even though the reach is real high, Collective participation is still lacking for cumulative development. Even then the advocacy and awareness in beneficiaries are very well embedded.

Resource map

Income

- Farming
- Animal Husbandry
- Labour work
- Organic produce
- Dried produce
- Milk products



Expenditure

- Food
- Education
- Clothes
- Transportation
- House maintenance
- Electricity
- Seeds for farming

Product Evaluation

Each EVD product has a different impact on the beneficiaries' life. Each of them has two sides of their usage. If we put each product one by one in CARE (Conveyance | Affordability | Relevance | Engagement) model, it can be figured why some products are very successful and the others not so much. Here affordability of the product is taken care by the organisation. So we are comparing products on CRE model



Heera (Smokeless Chulha)

Convenience

- Easy to use.
- Less smoke.
- Two burners.
- Charging port.
- Warms the house.
- Less firewood required.
- Mobile charger.
- Light inside the kitchen.
- House warmer
- Higher maintenance

Relevance

- Warm environment inside the house
- Hot water as by product
- Less harm to health
- Less harm to the environment

Engagement

- Daily cooking activities
- Hot water dispensing
- Fresh water pouring
- Accessing charging port
- Accessing LED light
- Higher engagement



Solar Polyhouse

Convenience

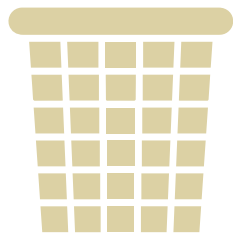
- Building and maintaining is an issue
- Safety from wild animals and rain
- Easy maintenance

Relevance

- Controlled environment
- Off season crops can be harvested

Engagement

- Water spraying
- Overlooking crop time to time
- Getting fresh produce
- Sowing new seeds
- Higher engagement



Compost Basket

Convenience

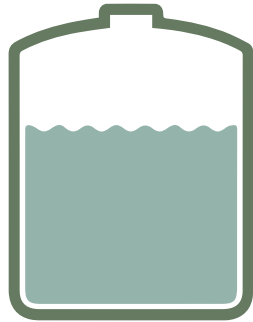
- Easy to maintain and use
- Near to zero maintenance

Relevance

- Bio waste can be utilised to make fertilizer

Engagement

- Putting in waste and taking out the fertilizer
- Less engagement



Rainwater Harvesting Tank

Convenience

- Easy to use
- Rain water collection
- Tap water collection has not been incorporated in the design

Engagement

- Time to time cleaning is required
- Water tap
- Moderate engagement

Relevance

- Better for people staying in Ranichauri, Moan, Savli and Jagdhar
- Not effective for the people who stay in Guriyali



Biogas Plant

Convenience

- Have to have bio waste to put in
- Have to wait till it starts generating gas
- Maintenance of the plant has to be done by expert
- Have to have space for bio gas

Engagement

- Putting in waste
- Cleaning it time to time
- Moderate engagement

Relevance

- Problem of gas availability can be solved permanently
- Generating gas in winter is a task



Solar Dryer

Convenience

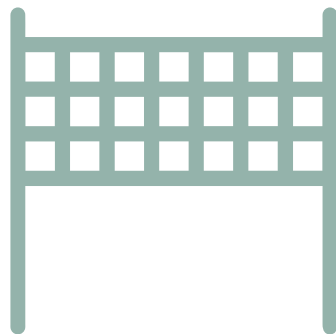
- Easy to use
- Easy to maintain
- Easy access

Relevance

- Protects from rain, cold and wild animals
- Works faster than open dryer

Engagement

- Putting it in
- Taking it out
- Less engagement



Mist Harvester

Convenience

- Easy to collect water harvested from mist
- Maintenance of the product

Relevance

- Its seasonal or very rare
- Quantity is very less which might not make a difference to them
- For people staying in Guriyali it is helpful

Engagement

- Water collection
- Maintenance purpose
- Less engagement



Wind Turbine

Convenience

- Access to electricity anytime once it's stored
- Less maintenance once installed.

Relevance

- It has to rely on wind all the time
- Placement of the product needs to be decided that it gets maximum exposure to the wind

Engagement

- Access to electricity through plug point
- Daily access to electricity
- Maintenance in timely manner for moving mechanical parts



Solar dryer



Beneficiary with her solar dryer and dried grain

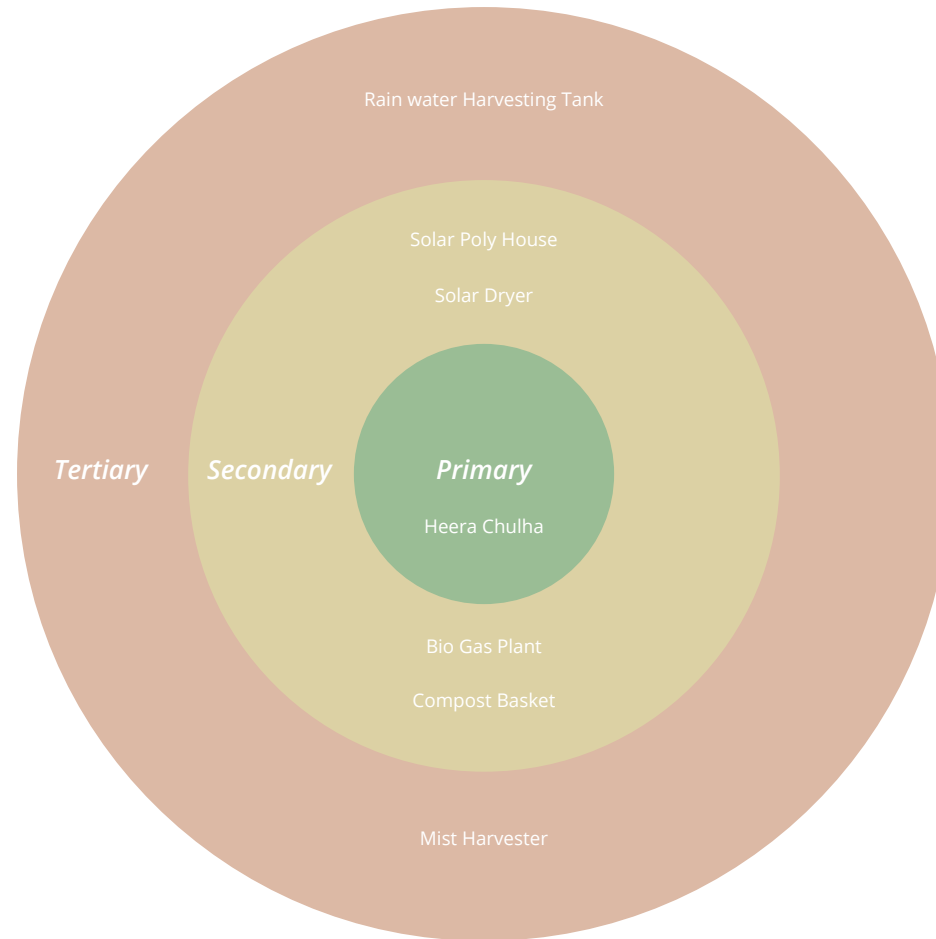
Thus, here if we see;

- Heera chulha is integral part of their life as it is used in day to day life and it's a necessity.
- Bio gas has it's own complications as they require cow dung and other organic waste on timely basis and after that as well there is uncertainty of not getting gas when required
- Compost basket is successful in a way that it doesn't require much of an effort to get the final product out
- Solar Dryer is significant product of all but people around the village, they are not well aware of it's capabilities
- Rain water harvesting tank is useful in a way that they can store normal tap water to use it later on
- Solar poly house is successful but the space required to install it, is a problem for the most of the beneficiaries
- Mist harvester is not been able to reach out more because it's capabilities are high but the output is less

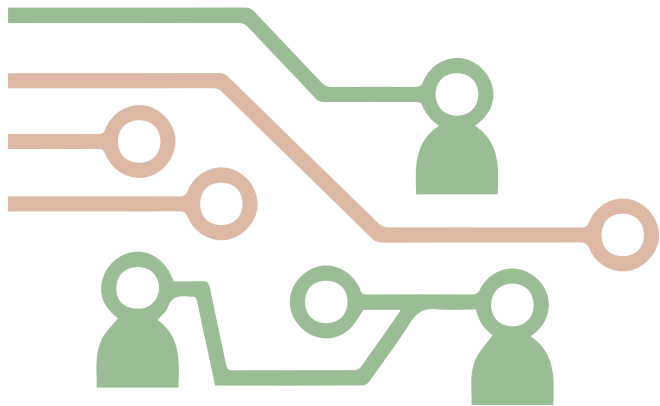
Recommendations/Follow-ups

Throughout the research much more insights have been collected which are based on the need of the beneficiaries, which are listed below;

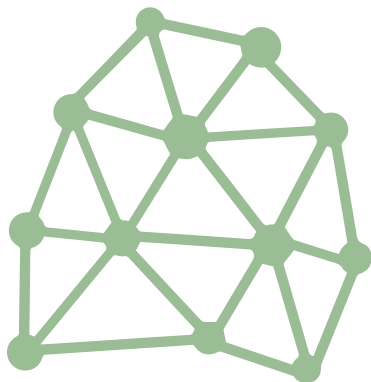
- It is better to provide a skill based training to locals incorporating sustainability aspect to it
- Sustainable house design can be made and taught to the villagers, to get it built without spending too much money from their pocket
- Motivation can be seen in the beneficiaries to sell their fresh produce, which can be converted into the earning opportunity
- With all the EVD products, Self-help guide can be provided to help them repair it on their own
- Written format for SHG group meeting agenda for volunteers and beneficiaries
- Feedback system can be generated to understand beneficiaries need, without any biases
- Gruh Udyog on community level, can be encouraged to make them self-sustainable as well as making the community stronger
- A model sustainable house is needed to set the benchmark for villagers with the help of educated and financially stable family
- Sense of ownership can be shown to encourage others in the village with the help of success stories
- Educational and advocacy initiative under EVD program can be introduced for people to understand as well as fight for their own rights
- Information centre can be opened for new beneficiary. Purpose of which can be information sharing, product maintenance, produce selling, etc.
- Encouraging workshop on technology can be arranged with the



Classification of products based on proximity and frequency of contact



Connection between fellow beneficiaries is important



Proximity is directly proportional to the participation

- help of expert working in frugal innovation area
- Dire need of Graphic or printed material for volunteers in order to give them more and sustainable information
- Awareness and skill development program for Policy makers (Government officials) to make them understand their capabilities
- Community rain water harvesting tank can be made for the village like Guriyali where access to water is an issue
- Power of youth can be utilised in increasing the value of EVD program with the help of educational institute across India
- Graphic manual can be stick on the product explaining its benefit which will help beneficiary to know the effect of what he/she is doing
- Proper printed framework for report generation on monthly bases is required
- Proper channel through which partner organisation's effort can be noted
- Awareness can be achieved by some fair or festival by partnering with art and craft institution
- Heera chulha can have house heating capabilities by properly channelizing the exhaust
- Some mechanical input can be introduced to generate gas in Bio gas plant in winters
- Complain registering framework has to be introduced to make it more formal than just the word of mouth
- Regular maintenance procedure has to be taught to volunteer to give quicker response to the complains
- Audio Visual material (movies and documentaries) should be used to give them reference to refer to while talking about climate change

Achievements

5 GENDER
EQUALITY



7 AFFORDABLE AND
CLEAN ENERGY



Eco Village Development (EVD) project has achieved the goals in terms of personal development, community development, sustainable energy generation, gender equality, women empowerment, women leadership, organic farming and health practices for women. These achievements are the result of certain programs and products that have been introduced under Eco Village Development (EVD) program in Ranichauri village in Uttarakhand. The products, which include rain water harvesting tank, wind turbine, bio gas plant, solar dryer, smokeless stove (Heera chulha), solar poly house, compost basket (tokri) and mist harvester, have helped the locals achieve sustainability in terms of financial uncertainty, community development, and better living standards. The programs and awareness campaign, which includes information about organic farming, women personal health, advocacy for women and awareness about climate change effects, have resulted in personal development, community building, awareness about the environment & the rights.

The achievements can be categorised under the Sustainability Development Goals for 2030 by the United Nations. Specifically, Targets under which these achievements can be classified are given below;

Goal 5: Gender equality

- "Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women"
- "Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life"

13 CLIMATE ACTION



15 LIFE ON LAND



- “Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate”
- “End all forms of discrimination against all women and girls everywhere”

Goal 7: Affordable and clean energy

- “this programme is able to achieve and enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology”

Goal 13: Climate action

- “Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries”
- “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning”

Goal 15: Life on Land

- “promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally”
- “ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development”

Acknowledgment

I would like to hereby thank a lot of people who made this research study successful. First of all, Mrs. Zareen Myles for heading and guiding this project.

WAFD for commissioning and Ministry of External Affairs, Finland for funding this project.

Kalam and Mukesh Bahugana, for coordinating the field visit. Kididevi, Krishnadevi, Anitaji and Bimalaji for assisting in reaching out to the beneficiaries.

Kavita & Kshitish Purohit for letting me stay with them and introducing me to the organization.

Chhail Khalsa for being the best companion and motivating me to finish this project successfully.

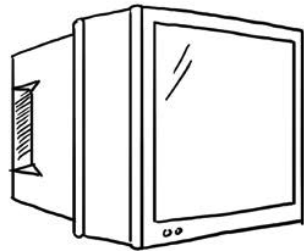
Last but not the least, my family for supporting me.

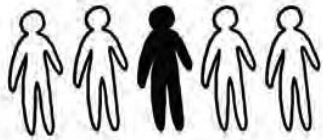
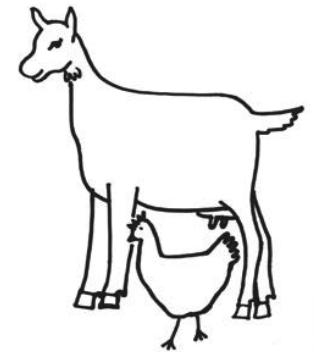
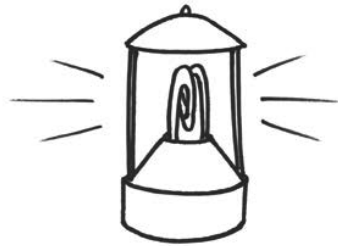
Appendix

Cards for card sorting









Narratives for the narrative workshop

1.

The earth is heating up. We are getting more and more extreme heatwaves. The earth has a fever

The monsoon is changing and coming at the wrong times. It is not . how things are supposed to be. Things are out of balance. The weather is less stable. Seasons are coming at the wrong times. We need to take action to restore the natural balance.

The weather is not normal it is strange abnormal and weird. We can no longer ignore the role of climate change.

We've always had extreme weather events but climate change is like stacking the deck...making the chances much higher.

Taking action on climate change is a matter of fairness. It is not fair that a few energy and oil companies can make huge profits from destroying our air/climate/environment. And it is not fair that the richest people use the most energy but the poorest people will be worst affected by climate change.

2.

The natural world is a precious gift. We are all connected to the natural world, to the water and to the air. And we are connected to each other. Climate change affects everyone and all living things. We have a responsibility to reduce our own carbon pollution because what we do affects everyone else and the whole world. Be a true Indian, live a sustainable lifestyle!

We are proud and resilient. We have strong communities. We will

prepare ourselves for climate change, pull together to defend our families and communities against future extreme weather.

Climate change is a major threat for everyone, and no one can should be expected to stop it on their own. We all need to pull together to play our parts. Governments, businesses, farmers and communities all need to make their contribution. And we as individuals need to play our part. Working together we can stop climate change.

The rich countries have already industrialised and they need to do everything they can to reduce the carbon pollution that causes climate change. The developed world should provide funds and technology to India. In India we have a right to develop so our responsibility is to make wise choices and choose the path of least pollution while meeting the needs of our people.

We cannot wait for help to arrive from the west. India is in the unique position to be the first developing country to take action. We can lead on this issue.

3.

India is dependent on imported oil, coal and gas. Every year we send 6 trillion rupees to other countries to pay for these fuels. That is five times more than our national and state governments spend on health altogether .

These fuels are expensive and running out. And they make us dependent on foreign countries- many of them are dictatorships and are unstable with terrorism and war.

But there is a better way. With renewable energy we can be energy-independent, running off our own resources, free from dependence on foreign countries.

The old fuels are already running out. Renewable energy is unlimited because it comes from the sun, wind and rivers. It can never run out. India has always been blessed with natural resources: the water, wind, forests and sun that can supply our energy needs far into the future.

With renewable energy the Indian public will no longer be dependent on the large monopoly power companies. Energy production will be distributed around the country, from solar panels in every village to large scale wind farms, sharing the income from power generation across the whole country, not just handing it to the big energy companies and their foreign suppliers.

Shouldn't an independent democracy like India have an independent and democratic energy supply- using Indian resources and Indian technology and sharing the income and benefits across the people of India?

4. Our power system is always breaking down- often at the peak of summer when we need the electricity the most. Just think of the cost, the misery and even deaths caused by those outages.

We have cuts because we have an old and badly designed energy

system that cannot supply power when we need it. We are dependent on a handful of large and unreliable power plants and their high voltage cables. It is like being tied together to the same rope and when anything goes wrong, anywhere, the rope breaks and we all fall together.

Renewable energy is much more secure and reliable. There are thousands of smaller local suppliers in a network from small solar and wind systems. If one supplier has a problem there are always other suppliers to maintain our power. It is more like a net and even if one link fails the net still holds.

And renewables are far better at meeting our energy demands. The peak of the hot season, when our supply most often fails is exactly when solar panels are working the best- Renewable energy combined with modern energy storage can match supply to demand far better than the old system, providing power when we most need it.

Isn't that what we all want and deserve, a secure energy system we can depend on to provide with a regular reliable supply for our work, homes and families? Isn't it time to change?

5. India is modernising rapidly and we should choose the very best energy systems for the future. In the political debate there is no longer any argument from either side about the importance of investing in renewables because they are simply good common sense.

Fossil fuels built India and our modern economy. We are rightly proud of the hard work of the people who produced them. Now it is time to move on, from 20th century to 21st century fuels.

They are called renewables with good reason: they will renew our country and our entire outdated energy sector

This is not a matter of environment vs economy- we can have both! The best opportunities for new growth is with renewables. Solar power alone will provide 1 million new green jobs.

In India things are changing so fast that we have a unique opportunity to leapfrog over the dirty technologies straight to the best cleanest modern technology. Think of mobile phones. They started being rare and expensive and in just a few years they were everywhere.

Some communities could go straight to a local solar system without being connected to the grid just as some villages went straight to mobile phones without ever having a landline connection! And every new house could have a solar panel on the roof and be a powerhouse!

And when we embrace the renewables revolution India will be a leading position to compete with other countries and play a leading position in this new century.

6. Imagine this. Clean cheap reliable energy for everyone. Every house, every school, every village has solar panels and wind turbines. Villagers have light, refrigeration, and fans. Farmers have cheap and constant irrigation water with solar pumps. There are new industries and opportunities. And everyone who is making power is also trading in it, generating local income and jobs.

A quarter of Indians have no access to electricity. This is holding back their opportunities. Is it any surprise that so many people leave their villages and surge into our cities?

They have been waiting a long time for power and, with our old dated power system they will have to keep waiting. It will take a generation for the power companies to build new power plants and the put up the power pylons to reach them. We know how bureaucracy and corruption increases the wait for new roads and other development.

Renewable power systems can provide the power they need, right now, directly in their villages. Investing in clean energy means investing in our own communities and taking charge of our own energy: – creating local jobs and stronger communities, and a more stable climate

Prime Minister Modi has pledged \$50billion in investment for solar panels on rooftops. But we should demand he goes further, moving out of old fossil fuels altogether and embracing renewable power and the fuel of rural growth. They've been waiting a long time- isn't it time to give power to the people? Now.

7.

The pollution from burning fossil fuels- coal oil and gas - in our cars, homes and power plants -is dirtying our air and damaging our health, especially the health of the old, sick and children.

We have banned smoking in public places but the air pollution in many cities is now so bad it is like smoking a packet of cigarettes a day! And air pollution is just as dangerous: it kills over 300,000 Indians every day.

We need to “kick that fossil fuel habit”.

Now, scientists say, the carbon pollution from these fuels is even changing the weather and shifting the monsoon.

For all these reasons it is time to move from dirty fuels to clean natural renewable energy- solar and wind.

With renewable energy we can close the dirty electricity power plants fired with coal.

Electric vehicles are getting faster and cheaper by the day. With over five thousand new cars and buses coming onto Indian roads every day we have every chance to lead in the electric vehicle revolution too.

So India stands at the crossroads and we need to choose: do we continue with dirty fossil fuels or choose the path to clean renewables. Let's choose the path to a healthy path for our children and a cleaner world for them to raise children of their own.

8.

Many people around the world are now talking about moving to 100% renewable power and moving out of dirty fossil fuels altogether.

Dirty fossil fuels are on the way out. It is inevitable. The national government is now cancelling plans for new coal power plants and says that nearly half of all our electricity will come from renewable power within 15 years.

So why stop there? Surely we can have for a future where all our power comes from clean renewable power? We have all the technology, all the brains and all the natural resources we need here in India, now.

The rich countries now realise they made a mistake investing in dirty energy - and they are now closing their coal power stations at huge cost. We have also made mistakes in our electricity industry- using the new technology to cover over our old bad choices. But if you have old worn clothes you don't keep using them with fine silk patches. As we build our new energy systems we have the opportunity chance to do something new. Surely we should choose the very best and get it right from the beginning.

Narrative workshop transcript

F - Female | M - Male

First Session

- What qualities would you say are important in a person?

F - Common good

M - Listening to others

F- Listening habits

F - After listening they should not take it personally

F - With listening. Having sense of doing good for others

F - At the time of listening taking all good qualities and leaving behind bad qualities. Accepting as good human being. Sometimes bad people also speaks good things and does good things.

F- After listening they should be able to implement it. Just listening is not enough

F - After listening let's say help is needed so the person should be able to help others. I have listened and then left from here and done nothing. These type of people will be there. We need somebody who can take decisions for us.

F- Gentleness while speaking, as different people have a different way of saying things.

F - With love, everything can be conveyed

F- Helping everyone in the village.

F - With respect to their capacity. Somebody's buffalo is on loose. If found the person is taking care of that situation which also makes a person good in others eyes. Or let's say somebody's child is about to fall, saving that child is also a quality in person.

F - As someone fights. They don't say it to each other but behind the back, they will say bad things about each other that is bad. Things

have to be straight forward and upfront.

F - Should be able to help someone in their loss

F- First is the truth,

F- Both truth and lie, are required. Let's say in the situation somebody's life is dependent upon that statement, then lying is always good. As Gandhiji said.

F - That lie is not a lie, that to even god forgives

M - Good person is that who sees good in other people. If a bad person is there good guy should be able to see his good qualities and celebrate it and ignore the bad parts of his personality. And accept it as he is.

F - Gandhiji had gotten a letter from the british saying all kind of slangs with a pin. So, he tore apart the letter but kept the pin. That means the pin which can be used in future, he kept it and the letter which was of no use he threw it away.

F - Keep good and throw away bad

M - Never say bad things about anyone. Say it upfront. As it depends upon the kind of person he is. As if someone is a leader he has to tell lie sometimes for the greater good.

M - Socially we have to listen to somebody. And understand the way it can be made them understand.

- What would you say is the main thing that makes you proud about being (your type)?

M- I personally try to respect elder and love younger. And I accept if I make mistakes sometimes.

If somebody asks for help I never said no. be it a family member, staff or any person in the community.

F - Anyone who is coming to my house. I feed them, take care of

them.

F – I only have bad qualities.

F – I serve the elder person, cause one day I am going to be old. And I love children even if they are 50 in numbers. Whenever someone used to go to the farm they used to keep their child with me to take care. In neighborhood children stay at my place rather than going to their own house

F – Best qualities about her is she never said bad things about anyone. She always said it upfront.

M – Krishnaji is very hardworking. She is always on time. She has a family member, conducting a meeting, meeting another stakeholder. But she always goes to each and everyone's house to call them up.

M- Same as Krishnaji, Kidiji is also hardworking as she looks after two villages simultaneously. Going back and forth from Guriyali to Moan is a big task. She is strong from inside

F – I like talking to people and respect them.

F- Giving respect and take respect

F – It's way of our behavior, then only others will follow.

- How important is being (your type) in terms of your life?

M – My role is very tiny. Wherever the work is not being able to finish by people. I have always been sent there to finish it up as a volunteer. I am always on the field. Emailing is also I have to look after. Problem-solving, I always have been called. To set up the call for the doctor I was needed to set up call and he was able to talk and he said thank you to me for that.

F – Whenever we go to the village for the first time. Nobody has asked for water. Denied photography. Mukesh we went to Kahtiyar anybody had offered anything? One day went came back empty handed. Next

day we go to talk to few women afterward we were able to have an open conversation with them. Now the scenario is like this if we don't go on a specific time they come to our house and inquire about us not coming there. Dhargi people said why did you leave us and not come?

- If you met another [your type] what do you think you would talk about or have in common?

M – The way of having a conversation. In volunteers listening capacity is high. They always listen. And never take it personally.

F – motivating others

F – As we did kitchen garden and helped others.

M – Two of my friend they work in AAjeevika. They get paid but we work on the volunteer basis. They also do the field visit and we also do the same thing.

- And what do you think makes (your type) different from people who are (another similar type)?

F – the way we do it. It's different.

F- we help people to upgrade their lives by educating them.

F – as of others they give them seeds, fertilizers, funding, etc.

F – In our organization we motivate them. We don't give money, but we educate them. One month there are two meeting. The way of working. Tomorrow these organization will stop funding, will you stop working? We teach you and educate you with the vital information which can be used later at any point of time.

F – more people will go on that side but we will also attract more women on our side.

F – They will go for once or twice. But when they will understand the value of our organization. They always come back
F – Money is not there always, but education stays.

- What makes you proud to be Indian

F – Indian women

F – Independence, respect

F – We can work with men hand in hand without any obligation here. India supports women to action.

F – Women get more respect here.

M – In metro if ladies seat is reserved people will give the seat to a woman if she is standing. As Indian Sanskriti.

M – Freedom is the main thing here nobody tries to impose any kind of decision on anyone.

- What do you think makes India a special country?

M – Tolerance, India is more tolerant in any way. Unlike other countries which always tries to start the war. As in the case of US and Russia, they always start the firing at the border if things move out of hands. In India, we investigate and take a decision.

F – Here we respect older people. We have heard someone left their parents at Kumbh Mela and never came back to pick them up.

M – There were german people, who came for the research. When asked about elders, they said they don't have time for that. We don't have time to take care of them,

F – Here there will be time

M – In Indian culture if you haven't taken care of your parents. You are a failure.

M – Here we can educate your child the way you want. Caring is the culture which makes India Special.

- Is India better than other countries?

M – We are independent

F – you know Kim Jong Un in North Korea. It's better to be in India than in any other country.

M- I have heard that whoever not won the medal in Olympics. He threw them in the coal mine to die.

F – India is better than that

- Of all these things- your occupation, your country, your language your religion...which would you say is most important in your life and defines who you are? Or is it something else?

F- Religion

M – Deed is the most important thing. With good deeds, the good religion can be followed. There is no point being vocal about being Indian or Hindu if you think and act differently.

M – No business is small, and No religion is bigger than business. (business = Karma), the deed is most important. That defines who we are.

- Tell me what things have changed during your lifetime...

- How do you feel about that?

- What things have become better?

- And what things have become worse or worse?

- And looking ahead into the future, what you think are big problems

that we will face in coming years?

F – before we used to go to somebody else’s house to watch TV, now a day everybody owns their own TV.

F – Mobile phones have come and it’s handy. We can talk to anyone

M – more vehicles and better roads are there everywhere

F - water pipelines are there everywhere before we had to walk 5 to 10 kms to get the water. It used to take 2 hours

F – Changes are good, it’s better for our lives.

F – we like that everyone has car

M – I believe that it is not healthy anymore. Before people used to walk from Guriyali to Ranichauri. I used to walk 5 kms every day now I can’t even 1 km. there is always a vehicle available.

F – due to few facilities our health is deteriorating.

M – there was this guy climbing the mountain and had a heart attack. And kind of food we eat, now a day you don’t get better food in the market it’s all chemicals. People don’t farm. They are running after jobs

F – Unemployed even if they want to farm, how can they? Rainfall is not there, wild animals like boar and monkey ruin the crop.

F – time to time there is no rain

M – before it used to be fixed when the rain will come. Now a day weather forecast with the advanced technology is not able to determine the exact time

F – pollution is also increased which is one of the major problems for the less and uneven rainfall

M – Population is increased, needs have been increased, everyone needs better road due to that landslides are happening in this area. On the link road landslide happens very happen,

F – forests are being cut down, which leads to a landslide.

Second Session

- Do you talk much about these climate changes with your friends, family, workmates? Can you tell me about the last conversation you had with anybody about it?

M – Environmental changes, day by day breathing problems. Natural water resources are getting over. In the heat, the pumped water is less for the requirements. Rain is not regular and farming is affected. F- deforestation and forest fire

M – glaciers are melting, and heat is rising

M – I am from UP, I have been staying in Delhi for 2 years now, the Worst effect can be seen in the city like Delhi. Air quality has been worst in the city, sunlight is nowhere to be found in day time till 2 o’clock in the afternoon. I have been to Rajasthan also their water levels are decreasing. At 800 ft it is harder to find water. Goa and Mumbai will be flooded with water in future. We should save the environment

F – Cutting down the trees are bad thing, when we don’t want the rain, it is there and when we want it, it’s nowhere to be found

M – Once in UP there was the wind at the speed of 80 kmph. Crops were destroyed by that.

F – We say don’t cut down the trees, if you cut one tree, grow 10 more.

M – I say please do not lit forest on fire by intention. The Wind multiplies the effect of the forest fire. People have mentality if we burn the forest, there will be better grass next time.

M – I support you on this one. But there is one in hundred, who does it.

F – as I smoke bidi and I throw it on the road and it can start the fire.

M- I have seen that in Haryana, farmer burn all the waste in their farm, which leads to smog problem in Delhi. The report was backed by NASA.

M – One guy from Singapore, they have the crop of wheat and at the end of the season they burn rest of them which leads to air pollution in Singapore. We have to understand that environment is a closed system.

F- It will go somewhere and it will be affecting us as we are a closed system.

- What do you think is causing climate change?

M- Overpopulation, development

M- Deforestation and lack of trees

F- Number of vehicles have been increased

M – People stopped farming

M – Industrialisation, where they have the smoke of plastic, diesel or coal for that matter and which is adding to the problem.

- Tell me your experience of unusual or extreme weather?

M- Once I have seen in 2004, In 2 kms area Chapradhar area where it was raining just on a particular patch.

F – it happens in March to May

F – It's raining here and not there we can see that with our eyes

M – Due to that the area was totally wiped out. We had this pipeline setup for irrigation it wiped out with the rain.

F – When it happens all the farm were washed up in the valley.

M – Mumbai has the same situation

F – Mumbai that you have seen, we haven't seen it.

F – if this continues then climate change is the thing we need to fear.

The monsoon is less regular and timing less predictable

Heavier rainfall and flooding

Record breaking heat waves lasting longer

Heavier storms

Droughts and longer dry seasons

Sea levels rising

- Which of these worries you the most- and why?

- Do you think these impacts will affect you personally- and how?

- How do you think you and other people will manage as they get worse?

F – For us, everything is a problem here except sea water level.

M – I think droughts are much worse than any of the thing

M – I think heat wave is a bad thing which can be a problem.

(Not many answers)

M – With more rain, there will be cold weather. In our playhouse temperature goes to 50 degrees and if it's not raining then crop will be burnt.

F – We can't do anything about it, it's god's will

M – We started as 1 person who started the earth and slowly we are not crores in the world. It takes time

M- We should start sowing trees at any occasion like birthday, festival, etc. not only sowing but also taking care of it till it gets better. We should save trees than cutting it down. All the industries should run on electricity.

F – That can be done by scientists only, we can only save forests

M – We can reduce the usage of the vehicles which can reduce the

effect.

M – if we can grow the vegetables for ourselves. Then vehicles will be reduced automatically.

- What do you think about these kinds of renewable power?
- What would you say are the main benefits of them?
- And what would you say are the main problems.
- Do any of you use or own renewable power?

M – If we use it the electricity will be used less. Coal will be less used and pollution can be reduced

M – More we use renewable energy less we have to burn

F – Permanent use of the energy. There is no fear of power cut or any bill

M- BPL families are being provided by free electricity, I say they should be provided with the renewable energy equipment

F – Heera chulha has a solar cell which we use it to have light in the kitchen.

The Indian government is committed to shifting us from the older energy sources (coal, oil, kerosene), gas to renewable energy, especially solar.

- What do you think are the reasons for making this shift and how will it make India a better country?

M – if we use these technologies everywhere then the pollution control will be possible.

M – Economical condition of India will increase due to less export of coal and petrol. Higher investment in other areas

M – Coal is going to be over, once it's over we won't be able to do anything. If we start using these resources then in future, we will be able to survive.

F – Previously people used to say everything was there, farm, food, good air. We don't have any more time and our children even less.

Now you have heard them all:

- Which story did you like the most?
- Which did you like the least?

F – I didn't like 1st because the earth is heating up. And liked 6th because about the future plan of learning from other countries, investment of 50 crores in the same.

M- I liked 1st because of the emphasize on we need to balance out the climate change at any cost. I didn't like 2nd because they are talking about how it is going to affect everyone's life

F – I didn't like 7th because it talks about bad health, and I liked 8th Because people started adopting renewable energy sources. Which might change future scenario.

F – I like solar energy because it doesn't require coal.

M – I didn't like the part where earth is heating up, I liked 7th one because of the Indian government support,

M – I didn't like the 1st because the earth is ill, and the heat wave is coming up. 5th I like more because 1 lakh people will get earning opportunities