# Yuva-Shakti (Youth Power)

Youth Adult Partnerships (Y-AP) in Community Engagement: An Evaluation of the Youth Adult Partnerships in Community Engagement in Northern India

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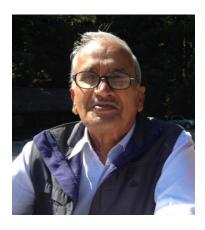
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Learn more about the organization by visiting the homepage: <a href="https://www.esroindia.in">www.esroindia.in</a>

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# **Dedicated to....**



**Dr. B.P.S. Malik** (1950-2016), in his career as a Professor in Plant Breeding, helped farmers and rural communities in enhancing their knowledge and expertise in crop management. Dr. Malik believed in hard work and dedication to his profession.



**Dr. Devendra Singh (1963-2015)**, as a Subject Matter Specialist in Animal Breeding, believed in empowering farmers by providing them guidance on livestock and poultry. Dr. Singh was an avid community builder.

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# **Letter of Commendation**

#### **BK** Chaturvedi

P 322, ATS Village, Noida

Former Cabinet Secretary and member Planning Commission



It was a delight for me to review the outstanding work done by Environment and Social Research Organization. The organization has been in a time of just four years, made major strides by adopting a very innovative model of Youth-Adult partnership and working with a number of schools. Preserving our air quality and water resources is a difficult task. Involving youth in them to carry the message is a very forward-looking approach. Social issues are best addressed by an inclusive approach of participation and active involvement of all segments of the society. The organization has done well to have this participatory approach.

A successful assessment of this work has been done by the Child Development department of Humboldt State University, CA. It has indicated many major benefits accruing to the stakeholders who participated in the programme.

My heartiest congratulations for the strong work commitment shown by the ESRO team and all its members

BK Chaturvedi

Date 24th July 2017

## **Foreword**

#### By BK Chaturvedi

I am delighted to review the excellent work done by Environment and Social Research Organization (ESRO) in the villages of Baghpat, a district that is less than hundred kilometers away from Delhi. The area and nature of challenges the organization has decided to address are especially important. Our country has major problems of environment in this region. One of the biggest issues is conservation of underground water resource. The water table has gone down drastically in this region and in a very large number of blocks of the country due to excessive exploitation and poor attention to the recharging of the water strata through water harvesting, water conservation and improved soil management. The indiscriminate felling of trees for development projects including construction of roads, housing colonies and urbanization has not been accompanied by new tree plantation and preserving green foliage through other measures. This has brought harmful changes in the environment of the region.

The project area faces a number of other development challenges. The level of literacy especially amongst women is low. Learning levels are abysmally low and standards of education are a cause of serious worry. Some of the other issues include crimes due to unemployment and poor education, female feticide and gender discrimination. The levels of air and noise pollution have been rising due to large increase in number of vehicles. The indiscriminate throwing of factory waste has caused water pollution and unhygienic conditions. Lack of civic duties has led to large encroachment over public lands of common usage. Poverty has often led to social conflicts in the area.

The challenges in these areas require a partnership of committed young men and women, supported by village elders and other community institutions. Such a web of mutually reinforcing institutional structure can be extremely effective in addressing these problems. ESRO has committed volunteers who work on Youth-Adult partnership supported by the schools in which they are working. They have thus tried to sensitize the community to these issues. Working with schools has enabled them to get support of teachers and some very impressionable young minds. This is clearly giving very positive results.

The evaluation study conducted by the department of Child Development, Humboldt State University has very clearly brought out the positive feedback about the program from all stake holders: youth, adults and the school. It also has very well identified the positive benefits to each one of them from the interaction with the community and taking up some of the burning challenges of the area. The plantation of trees and advice of adults and elders on social issues has been very

well received by the youth who feel energized and more confident of themselves. Interestingly explaining various programmes to the community has improved their communication skills and self-belief.

I am extremely happy that the work done under the programme has been assessed by an independent organization like the Humboldt State University, CA. It has given certain suggestions, which could be pursued for next phase of the programme.

Please accept my sincere congratulation on the work done by ESRO so far in addressing the social and environment issues. I do hope that in the coming years this interesting Y-A partnership will add new dimensions for the benefit of the community.

RK Chaturvedi

Date 24th July 2017

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# **Executive Summary**

In 2014, the Environment and Social Research Organization (ESRO), a non-government organization based in India, and the Child Development department at Humboldt State University (HSU) started collaborating on Youth Adult Partnerships (Y-AP) project in North part of India, specifically in Baghpat district. The idea was to engage youth in making their communities aware about various social and environmental issues with some adult guidance. HSU provided consultation on various programs, ideas on activities, and different models of engaging school youth in these issues; the ESRO team implemented Y-AP model in 18 different schools (15 of which participated in the current evaluation study) over 2 years. The team shared information on various social and environmental issues with 9<sup>th</sup> and 10<sup>th</sup> graders in 18 different schools, selected 5-9 youth from each school, and encouraged them to create hands on activities to educate their schools, peers, families, and communities. The youth initiated and participated in a 5-K run, signature campaign, debates, poetry contest, science fairs, art competitions, street plays (Nukkad Natak), and rallies. Two of the participating schools opened their gardens with the help of these youth.

The Y-AP research had two evaluation questions:

- 1) What are the outcomes of youth-adult partnerships for adult mentors and youth?
- 2) How did youth involvement in community development affect youth, schools, and their communities?

The Child Development department collected data from 102 youth (represented 41 different villages of the Baghpat district) and 28 adults. The adults included school administrators and ESRO team members. The goals of the data collection were: 1) to understand the social and environmental issues in the area; 2) to examine the reasons why youth should be engaged in these issues; 3) to assess the impact that the program implemented by the ESRO team has made in these communities, and; 4) to explore the challenges the program faced. The area is fraught with many social and environmental issues. We have summarized the issues in the following sections as shared by our participants.

#### Social and Environmental Issues in the Area

The participants in the study reported many social problems in their communities, such as:

- 1. Various forms of discrimination based on gender, caste, class, and religion
- 2. Lack of infrastructure such as roads, medical facilities, technology, sports facilities
- 3. Lack of education opportunities for girls as most higher education institutions are in cities and parents often do not want their daughters to travel to cities for higher education
- 4. Issues pertaining to the violation of rights of girls and women including veil system, female feticide, marriage at young age, dowry, eve teasing, and safety issues in general
- 5. Addiction among youth for alcohol, drug, and tobacco use
- 6. Population explosion
- 7. High levels of unemployment
- 8. High illiteracy rates
- 9. Lack of awareness and civic engagement among the villagers of these issues

Additionally, the participants in the study reported many **environmental problems** in their communities, such as:

- 1. Water, air, and sound pollution
- 2. Deforestation
- 3. Lack of clean drinking water in the village
- 4. Diminishing water bodies due to pollution and land encroachment
- 5. Lack of sanitation
- 6. No proper garbage disposal system
- 7. Excessive use of fertilizers and pesticides

#### Reasons for Youth Engagement in Social and Environmental Issues

When asked why youth should get involved in social and environmental issues, the youth, ESRO adults, and school administrators and teachers shared the following responses.

- Youth Population in India: India is a country of youth; more than a quarter of Indian
  population are youth. "It makes sense to engage youth in the environmental and social issues
  as they will be the future citizens and they will have the responsibility toward their country",
  said the founding member of the organization.
- 2) **Persuasion Skills:** The ESRO adults spoke about their reasons of working with youth. According to two of the members, youth have higher persuasion skills than adults. "Community members might pay more attention to what youth have to say".

- Risk Taking Abilities: Youth are young; they are also able to take more risks than older people.
- 4) Fresh Perspectives: Youth are likely to bring new and fresh ideas to the table.
- 5) Benefits from More Knowledgeable Adults: The chances of learning about social and environmental issues with more knowledgeable adults was one of the goals of these youth adult partnerships between ESRO and school youth. Youth can learn about the social and environmental issues in schools and through ESRO team interactions. They can educate many adults in their communities who are unaware.
- 6) Opportunities for Positive Engagement: Participating in environmental and social issues can guide positive engagement; hence, youth are likely to stay away from getting into problems. That way they can gain more strength and make good decisions.
- 7) Hands on Experiences: By participating in environmental and social issues, youth get practical knowledge of what they learn in their classes. This might help with their academic progress.

Before we started to work with the ESRO team, they were already working with youth. When asked, "why youth?" the founding member of the organization said, "It is easier to work with youth and connect with them on various environmental and social issues. They are more open minded and flexible to change their behaviors. We see them as change makers. They can share their knowledge about climate change with their parents, community members, and school peers. They will also be the future citizens. Therefore, we feel that they are the best place to start our work."

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#### **Program Impact**

Surveys of youth from 15 different schools, teachers, and ESRO staff members clearly indicate a variety of impacts the program has had among participating Youth, including:

Gain in Confidence: Ninety two percent of the youth in the program reported feeling confident about the future; 89% reported learning new skills; 87% felt that they were able to handle unexpected situations in a better way; 86% felt better about themselves; 76% felt that they had more control over things that happened to them, and; 76% thought that they could make a difference. Since this program involved youth speaking to their families, communities, and included public speaking activities, the youth reported improved confidence levels. They said that they were being fearful or shy before participating in the program and became more confident afterwards.

Gain in Communication Skills: The youth also mentioned positive changes in their communication skills. Some of them said that they had been hesitant in expressing themselves in front of adults. This program helped them overcome this reticence.

**Awareness--Environmental issues:** Because of the ESRO adults presenting information on various environmental issues and engaging the youth in several hands-on activities, the youth reported an increase in their awareness of environmental issues. The youth reported the following aspects of environment that they learned from this program: 1) importance of nature and safe environment, 2) responsible use of natural resources, 3) dangerous effects of plastic bags, 4) current levels of pollution, 5) current state of deforestation, 6) state of rivers, and 7) depletion of ozone layer.

**Responsibility--Environmental issues:** The ESRO programs not only helped the school youth raise awareness of various environmental issues, they also helped them take responsibility and modify their own behavior in relation to these issues. The findings show that the youth are taking responsibility for conserving water, planting trees, and helping keep their surroundings clean. They also learned how to reduce wastage and reuse some of their belongings (i.e., textbooks, clothes).

**Team Work:** Due to their work with other youth and adults on various projects, the youth learned: 1) how to work in teams, 2) how to collaborate with other youth and adults to work on a certain issue, and 3) how to organize their time better so that they can participate in ESRO run activities. Many youth reported increased confidence in leading group activities.

**Personality Development:** An overwhelming number of youth reported positive changes in their personality because of participating in this program. About 86% of youth reported improvements in teamwork skills, active listening (85%), problem solving skills (84%), communication skills (79%), planning and setting goals (78%), social skills and decision-making skills (76%), making friends (74%), and leadership skills (62%).

**Increased School Engagement:** Many youth cited improved communication, both written and oral, due to their participation in the ESRO program. A majority of youth reported that after participating in the ESRO programming, they started to participate in more class activities, care about their school, became interested in going to school, get along with their teachers better, and try harder to do well in school. The majority of youth (79%) reported changes in their grades.

Changes in Families: The youth, who participated in the program, reported a few changes that they noted in their families. Albeit slow, some youth noted the following changes in their family members' attitudes: families supporting youth's participation, listening to their youth about environmental issues, asking questions, understanding the importance of education better as their youth are learning about real life issues, and becoming aware about several social and environmental issues. Some families have also started to use water and electricity judiciously.

Changes in Schools: The schools have started having more discussions and organizing more programs around social and environmental issues. There is an increased motivation among youth and teachers. The schools are planting many more trees, focusing on cleanliness, and using water and electricity judiciously. Two of the schools have started their own community gardens in the school premises. There is a change in teachers' attitudes. Teachers get professional development opportunities by participating in this program.

Changes in the Community: As might be expected, changes in the community were slowest among all. The youth in the study reported many challenges to convince community members about not wasting the resources and not spreading the litter. However, there is a slow and steady change occurring. Among the positive changes is increased mutual assistance in the community.

The **ESRO** adults noted following changes in themselves because of this program: 1) increased enthusiasm due to a sense of generativity-the satisfaction that someone gets by contributing to the well-being of next generation, 2) increased engagement in the problems, 3) positive connections with youth, and 4) increased knowledge base.

### **Program Challenges**

This 2-year program faced many challenges such as:

- 1. time commitment as many ESRO team members are volunteers, who have regular daily jobs,
- 2. difficulty in some school buy-in,
- 3. difficulty in parent buy-in,
- 4. limited resources,
- 5. difficult to prove the benefits of this program to community members,
- 6. difficulty in proving effectiveness of alternative practices, and
- 7. difficulty in disseminating contextualized reading material

# Introduction

In 2014, the Environment and Social Research Organization (ESRO), a non-profit organization in India, and the Child Development department at Humboldt State University (HSU) started collaborating on a project using Youth Adult Partnerships (Y-AP) model in the northern part of India, specifically in Baghpat district. The Y-AP model seeks to engage youth in fostering community awareness of various social and environmental issues with some adult guidance. The Y-AP model has been described in the coming sections. HSU provided consultation on various programs, ideas on activities, and different models of engaging school youth in these issues; the ESRO team implemented Y-AP model through programming in 18 different schools (15 of which participated in the current evaluation study) over 2 years. ESRO, a non-government organization was established in 2013; it is registered under the Societies Registration Act, XXI of 1860 (www.esroindia.in). According to the mission page on the organization's website, "We (ESRO) are a youth oriented organization. We collaborate with young people from schools and colleges/university to fulfil our organization's overall mission in contributing towards minimizing human suffering, maximizing their reach towards education, and bringing awareness on environmental issues, to bring in holism in their lives." The organization already had a footing in the schools, having worked with them for many years. Therefore, ESRO was an ideal partner in facilitating program activities in the schools it already serves.

### Importance of Youth Engagement in India

It is important to engage youth in community development work for several reasons. The work may help youth to: 1) develop a sense of self-efficacy and responsibility towards communities, 2) enhance civic engagement, 3) have better academic outcomes (Zeldin, Petrokubi, and Camino, 2008), and 4) to be able to influence their community members and leaders for increased engagement (Zeldin et al., 2008). Several studies on 4-H youth programs (4-H stands for Head, Heart, Hand, and Health) affirm that youth who are engaged in effecting positive change in their communities have better academic outcomes and are more civically engaged, empowered, and connected to their communities than their uninvolved counterparts (Silbereisen and Lerner, 2007; Zeldin et al., 2008).

Research suggest that experiential community work is mutually beneficial to youth and their communities (Larson et al., 2005); while youth develop leadership and decision making skills, the communities benefit from their skills and enthusiasm that youth bring to the work (Hairston, 2004). Youth's access to the community adults, who have information, resources, and skill to work with youth, could lead to successful partnerships (Sullivan & Larson, 2010). In Y-APs, youth and adults create a collaborative learning environment that provides opportunities for contributing ideas, participating in decision-making processes, taking responsibility, and mutual learning (Wood et al., 2009). Our knowledge of the working of the Y-APs beyond Western cultural contexts is limited (Zeldin et al., 2005). This study intends to fill the gap. Due to the assumptions about lack of leadership skills in youth, adults may not feel comfortable providing independence to youth. However, youth are more likely to work towards adults' positive expectations (Camino & Zeldin, 2002).

According to a demographic study conducted by the Population Council of India, 31% of the Indian population (315 million) is aged between 10-24 years (IIPS and Population Council, 2010). Unfortunately, we often use deficit models to understand youth. The physiological and emotional changes during puberty do induce stress, but undue emphasis on pathology causes us to overlook the many strengths that youth possess. Kimball (2017) discussed this bias against youth in form of ageism. Similarly, according to Anuja Chauhan's article (as cited by Ayushi Ahuja), "The kids aren't alright", Indian youth face many moral, spiritual, and material challenges (Ahuja, 2013). Chauhan argues that youth in India do not have positive role models and lack direction; such arguments, even though are of value to make changes, often reinforce negative stereotypes about youth. An emerging body of literature demonstrates that it is important to use a strengths based model to understand youth and to harness their potential for positive youth development (Lerner, 2004). One such model is the youth-adult partnership (Y-AP).

#### Y-APs Model

Currently, service learning and community volunteering are not part of school curricula in Northern India. Research has suggested that Indian youth could benefit greatly from experiential community work (Hairston, 2004). In return, their communities could benefit from a better understanding of the societal and environmental issues that concern youth and from the skills and enthusiasm that youth contribute to society. Such efforts are enhanced when youth have adult role models and mentors with whom to partner. In youth-adult partnerships (Y-APs), youth and adults create a collaborative learning environment that provides several opportunities

for contributing and sharing ideas, participating in decision making processes, taking on responsibility, and learning from one another in order to bring about change (Camino, 2005; Mitra, 2009). It is important that adults not underestimate the youth's potential and remain open to youth's ideas. It is also important that in youth-adult partnerships, adults serve as facilitators not directors.

Due to the assumptions about lack of leadership skills in youth, adults may not feel comfortable providing independence to youth. However, youth are more likely to work towards adults' positive expectations (Camino & Zeldin, 2002). Even though the opportunities for youth's interactions with their adult extended kin and relatives are higher in India, the cultural values and social stratification can interfere with meaningful Y-APs (Sullivan & Larson, 2010). Adults hold more power and might demand respect from younger generations, which sometimes would mean "not making eye contact", "not questioning adults' decisions", and "respecting authority". The social stratification factors in India, such as class, religion, and caste, also create a power imbalance in these partnerships.

Research has documented many benefits of youth-adult partnerships, benefiting both youth and adult participants. Youth develop critical thinking, leadership skills, and a sense of self-efficacy (Camino, 2005). Adults learn about youth perspectives, develop skills in facilitation and community organizing, and develop confidence in sharing their knowledge with the younger generation (Mitra, 2009; Zeldin, 2004). In this report, we explored the benefits and challenges of Y-APs in north part of India.

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### **Program Development**

In summer 2014, the Child Development department at Humboldt State University started working with ESRO. The idea of youth adult partnerships (Y-APs) focused on empowering and involving high school youth by sharing knowledge and information about the work done on environmental issues in the United States, especially at Humboldt State University and surrounding community. The Child Development department shared this information with ESRO team members (on topics such as health and nutrition, recycling, and reusing), along with expertise on various models of youth adult partnership and community engagement, and evaluation research design (figure 1). The ESRO team adapted the content to Indian contexts and selected schools that would be ideal settings for sharing this information with youth.

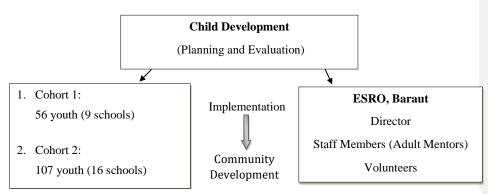


Figure 1. Collaborative model for Y-APs in community development

In the coming sections, we delineate the method and approach of the project. Below we present the evaluation questions and the hypothesized project outcomes:

## **Evaluation Questions**

- 1. What are the outcomes of youth-adult partnerships for adult mentors and youth?
- 2. How did youth involvement in community development affect youth, schools, and their communities?

We hypothesize the following outcomes for youth, adults, schools, and communities, based on Y-AP and 4-H research.

#### Youth

- Recognize their responsibility towards the community and make connections
- Develop a sense of self-efficacy and empowerment "they can"
- Develop leadership skills by working closely with adult mentors, while still taking charge of the situation
- Develop civic competence through public speaking and group facilitation
- Improve their academic outcomes

#### Adults

- Understand the importance of youth in community work
- Learn community organizing skills
- Develop a reciprocal sense of respect for the youth
- Develop leadership and facilitation skills
- Develop a bond with younger generation through knowledge sharing

#### Schools

- Spread the effects of community work through youth presentations in schools
- Encourage uninvolved youth to get involved
- Encourage schools to incorporate more hands-on experience in their curriculum

#### Communities

 Positive change in the community as a result of Y-AP and youth involvement in community development work

# **Methods and Approaches**

### **Baghpat District**

The current program was implemented in the Baghpat district, one of the northwest districts of the state of Uttar Pradesh (see figure 2), which occupies 1321 square kilometers on the banks of Yamuna River. The state of Uttar Pradesh is located northeast of Delhi. The closest big cities to Baghpat are Delhi, Meerut, and Ghaziabad. There are six blocks in the Baghpat district (see table 1). These 6 blocks include a total of 282 villages (BrandBharat.com).

Table 1.

Blocks and Villages in Baghpat District

0 01	
Blocks	Number of Villages
Baghpat	50
Baraut	54
Binauli	58
Chhaprauli	26
Khekara	46
Pilana	48
Total Villages	282



Figure 2. Location of Baghpat district on Uttar Pradesh map

The villages in the study represent about 14% of the district's villages. According to the Indian Census of 2011, the population of Baghpat district was1, 303, 048, of which 700, 070 were males and 602,978 were females. There has been an increase of 11.95% in the total population since the last census. The female to male ratio is 861:1000; the literacy rates of the Baghpat district are 72.01%. The male literacy rate is significantly higher than that of females. We targeted schools from rural areas for this program as about 79% of the district's population lives in the villages.

#### **Program Participants**

The ESRO team implemented the current program with two cohorts of participants from 9<sup>th</sup> and 10<sup>th</sup> grades (2014-2015 and 2015-2016).

#### Cohort 1

The team selected 56 youth from 9 rural schools (in the academic year 2014-15). The team members involved teachers, principals, and community members in coaching this group of youth on various issues (Health and Nutrition, Environmental Education, etc.). The selected youth initiated many community engagement activities such as a 5K run, a signature campaign, rallies, a school garden using recyclable materials. See table 2 for the number of youth participants.

#### Cohort 2

The team selected another cohort in 2015-2016 (107 youth from 16 rural schools). HSU provided consultation on various programs, ideas on activities, and different models of engaging school youth in these issues; the ESRO team implemented Y-APs model in 16 different schools. The team shared information on various social and environmental issues with 9<sup>th</sup> and 10<sup>th</sup> graders in 16 different schools, selected 5-9 youth from each school, and encouraged them to create hands on activities to educate their schools, peers, families, and communities. The youth were exposed to different ideas on engaging their communities in the environmental hygiene (particularly pertaining to water) and career options for youth in rural communities. The youth initiated and participated in 5-K run, signature campaign, debates, poetry contest, science fairs, art competitions, street plays (Nukkad Natak), and rallies (Appendix-A for program pictures). Two of the participating schools opened their gardens with the help of these youth.

Two of the 9 schools selected in 2014-2015 were dropped and 9 new schools got added to the study in 2015-2016, making it a total of 18 schools over 2 years. Between both cohorts, 153 youth were one-time participants, and 10 youth participated in both cohorts. Five different programs were implemented with 163 youth in 18 schools over the course of 2 years, namely:

- 1) Education Promotion and Extension,
- 2) Career Counseling,
- 3) Environmental Education.
- 4) Nutrition and Health,
- 5) Water Conservation. Due to the severe drought declared in India in 2015-2016, the team implemented water conservation program in several schools.

Table 2.

Participants of Cohort 1 and Cohort 2

Cohort	Academic Year	Schools	Youth	New Schools	Schools Dropped
1	2014-2015	9	56	9	0
2	2015-2016	16	107	9	2
		18 schools	163 youth		

## Sample of the Evaluation Study

#### Youth

For the evaluation study, 102 youth, 60% females and 40% males, from 15 different schools, 4 to 17 youth from each school, participated in an in-person survey with Likert scale type items and open-ended questions<sup>1</sup>. Table 3 illustrates the demographics of the youth participants.

Table 3.

Demographics of Youth Participants

Age Groups	Age Range	Fathers' Professions	Mothers' Professions
18 yrs (1%)	13-18 years	Farmers (53%)	Homemakers (93%)
17 yrs (7%)	7,	Teachers (9%)	Teachers (3%)
16 yrs (33%)		Laborers (6%)	Not reported (4%)
15 yrs (28%)		Mixed Professions (32%)	
14 yrs (19%)			
13 yrs (12%)			

These 102 youth, mostly 9<sup>th</sup> graders, with a few 10<sup>th</sup> graders, came from 41 different villages: 39 in the Bagphat district, 1 from Meerut and 1 from the Ghaziabad district. Table 4 demonstrates the number of youth from each of these 41 villages.

<sup>&</sup>lt;sup>1</sup> Likert scales are commonly used scales to assess the opinions and perceptions with nuances. For example, participants' agreement on a particular topic could be measured from "strongly agree" to "strongly disagree".

Table 4.

Youth Participants Representing 41 Villages

Village	Number of Youth	
Gangnauli	16	
Tavelagarhi	8	
Sherpur Luhara	8	
Baraut	7	
Baoli	5	
Chhaprauli	4	
Daha	4	
Sadikpur Sinauli	4	
Barnawa	3	
Bharal	3	
Nirpura	3	
Kurdi	3	
Pabli	3	
Chandanheri, Daughat, Halalput, Jiwana, Kandera, Adarsh	2 from each village	
Nangla		
Barauda, Barka, Barwala, Bitwadha, Bohla, Chachharpur,	1 from each village	
Gaidbra, Garhi Kangram, Idrishpur, Jattpura (Meerut), Johri,		
Kakour, Malakpur, Milana, Mukandpur, Noornagar (GZB),		
Rathoura, Shabga, Shahpur Baraulli, Silana, Tikri, Tilwara		

#### **Professional Goals of Youth**

According to figure 3, most youth in the program wanted to go into **Indian Administrative Services (IAS; 22%).** Many of them also provided their motivations for pursuing this career. Some examples included,

"I want to become I.A.S. Officer and want to develop the backward regions of our country"; "Firstly I want to become a good human being and then an I.A.S. Officer to reduce corruption from my country and to help poor people"; "IAS officer in order to change some way of our administration and working of political leaders. I also prefer to work for environment and for society."

The second most preferred profession was to become an **Engineer** (13%). Some of the reasons that youth gave were:

"I want to become an engineer because I want to do something for the world";

About 13% of youth wanted to join **Various Defense Services** in the country such as the National Defense Academy, Indian Airforce, Indian Army, and Navy Corps.

The next professional career choice was **Teacher** (12%). The reasons included:

"I want to become a teacher because I want to educate youth especially girls because in many places education of girls is not that much important"; "I would like to teach people who are uneducated. I would also include lessons on environmental/water conservation; cleanliness. I will also teach about water, electricity conservation, and excess of litter."

The other 12% wanted to become judges, politicians, bankers, businesspeople, Indian Forest Services officers, and athletes.

About 11% of youth wanted to become **Doctors**. The reasons included:

"I want to become a doctor because I want to help the villagers, poor and disabled"; "Doctor. I want to join the ESRO team because I want to make people aware."

About 9% of youth wanted to become **Social Workers**. Among the reasons they provided for their career choice were:

"I would like become a social worker. Be it cows, water, or environment, I believe in saving all of them; I also want to protect my environment".

About 6% of youth wanted to do different things in order to make improvements in society but they were not firm on one profession. One person was undecided and another one wanted to start an organization like ESRO.

<sup>&</sup>quot;I want to make something that can help people."

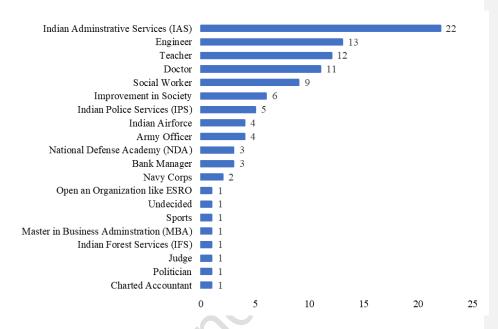


Figure 3. Professional goals of the students in the study

#### **School Adults**

Of the 16 teachers from the 15 schools in the study, who filled out the survey, 81% or 13 were males; all but one had attained a Master's degree. Fourteen of them were also school principals, in addition to teaching classes; two were fulfilling solely the teachers' roles.

#### **ESRO Adults**

All 10 ESRO team members, who participated in the study, were volunteers in this program. Four of them were working their regular public sector jobs, three were retired, two of them were farmers, and one owned a shop in the town. All team members in the study were males. We share the profiles of team members in the study along with additional volunteers and officers of ESRO in Appendix B.

#### **Evaluation Tools**

Evidence based practices are crucial to the improvement of future efforts. The iterative process of problem solving in the communities involve constant learning from challenges and failures, assessing what worked and what did not work, and trying various logics and solutions to one problem. However, we learn important lessons for future work by using program evaluation. The Child Development Department at Humboldt State University collected evaluation data to examine the effectiveness of the Y-APs in bringing about change in the youth participants, adults, and their communities. We used a mixed-methods research design to assess the outcomes of the partnerships and the involvement of the youth in community development work. Evaluation tools included the following:

- 1) A survey for youth participants consisting of Likert type items regarding the youth's experiences with the program and staff members, changes in academic performance, gains in confidence, leadership, and communication skills, awareness of community issues, and gains in environmental responsibility. The survey also included open-ended questions about specific issues pertaining to society and environment (See Appendix-C). The tool was adapted from Positive Youth Development Survey used in The Colorado Trust Afterschool Initiative Study (2004). Some questions on environmental awareness were adapted from the study "Examining Trends in Adolescent Environmental Attitudes, Beliefs, and Behaviors across Three Decades" (Wray-Lake, Flanagan, & Osgood, 2010). About 35 % youth responded in English, whereas the other majority answered the questions in Hindi. The first author translated the other 65% of responses into English.
- 2) A survey for the ESRO adults including Likert type items and open-ended questions (Appendix-D).
- 3) A questionnaire given to school principals/teachers in order to understand their perspectives on the program (Appendix-E).

The Institutional Review Board (IRB) approved the interview protocols and the evaluation proposal before the surveys were implemented with 102 youth, 10 ESRO adults, and 16 school principals (N=15; 1 person did not return the questionnaire). We have attached the approval letter in the end of this report. The ESRO team informed parents of the youth in advance that their youth would be participating in this study and they could contact the teachers/principal if they do not wish their child to participate in the study. Copies of the consent forms are included in Appendix-F. The surveys and questionnaires were given an ID and all the identifiable information was masked before the surveys were entered into an excel spreadsheet.

#### **Data Analysis**

We analyzed the numerical data by using SPSS 24.0 and Excel programs. We entered the open-ended responses into an excel file and used thematic analysis to identify repeated patterns in the data. We shared the first draft of this report with the ESRO team members to check the accuracy of the report. We further sent this report to many specialists in the field to draw recommendations based on the data in this report. Please see the section on future directions.

#### **Organization of Findings**

The findings section is divided into three parts based on the type of participant:

- 1) Youth,
- 2) ESRO Adults, and
- 3) School/Principals/Teachers.

We present the findings for these three groups followed by the conclusion, where we have revisited the hypotheses. We also make the recommendations based on data. We discuss the limitations of our study.

# **Findings: Youth Survey**

This section of the findings addresses the levels of youth's interest in the activities conducted by ESRO team members in 15 different schools in the area. We also examined the findings apropos youth opinions on the functioning of ESRO staff members.

#### **Interest in the ESRO Program**

The survey asked questions about the youth's interest in the ESRO programs. Figure 5 below represents youth's interest regarding participation in the ESRO program. Most youth reported high levels of satisfaction with the program and the new things they learned from it. They also found the program's hands-on activities interesting. About 88% of the youth reported telling their friends about this program.

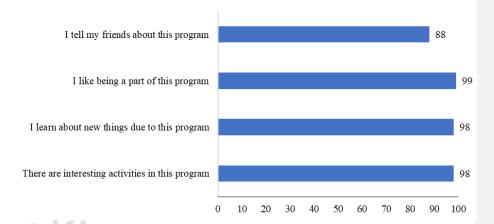


Figure 5. Youth's interest in ESRO programs

#### **Experiences Working with ESRO Adults**

An overwhelming majority of youth reported satisfaction in their work with ESRO staff members. They felt that the team members were encouraging, presented useful information, expected them to try hard, and provided lots of support. An item that scored on the low side was "Staff ask me to plan, choose, and lead activities" (73%). This could be due to the use of hands on activities for the first time in schools. The team can utilize this feedback in planning future activities. See figure 6 below for the percentages of youth who said "yes" to the listed items.

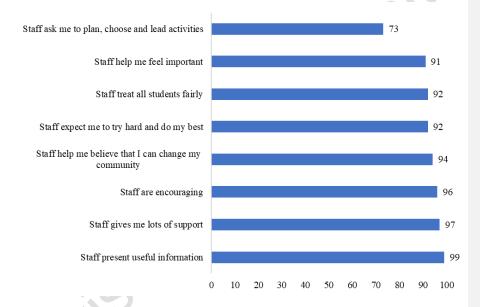


Figure 6. Satisfaction working with ESRO team members

#### **Effect of Program Participation on School Engagement**

A majority of youth reported that after participating in the ESRO program they started to participate in more class activities, cared about their school, became interested in going to school, started to get along with their teachers better, and tried harder in school. The majority of youth (79%) reported changes in their grades. However, fewer youth reported a change in scores in individual subjects, especially in comparison with extra-curricular activities. It is possible that there was noticeable change in their overall school engagement rather than their individual subject scores. The values of the program also focus on more hands on experiences with issues related to environmental education and social issues in their communities than academic achievement (figure 7).

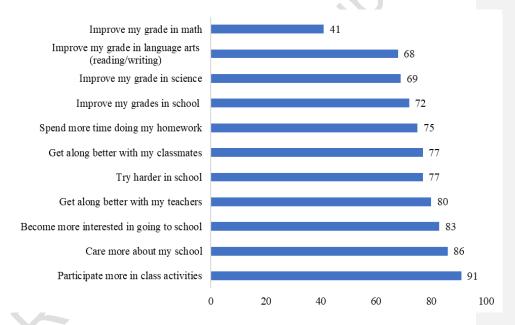


Figure 7. Effect of participation in the program on school engagement

#### **Improvement in Self -Development Skills**

We asked the youth if they noticed any changes in themselves due to their participation in the Y-APs in community engagement program run by the ESRO team members. An overwhelming number of youth reported positive changes. The skills the youth noted were: teamwork (86%), active listening (85%), problem solving skills (84%), communication skills (79%), planning and setting goals (78%), social skills and decision-making skills (76%), making friends (74%), and leadership skills (62%). Please refer to figure 8.

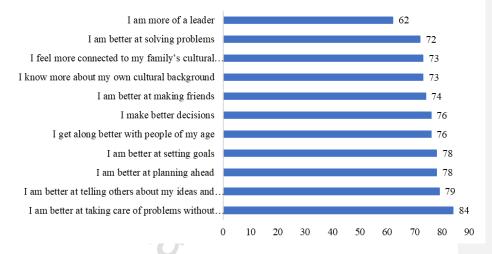


Figure 8. Improvement in self-development skills

#### **Increased Diversity Awareness**

The youth in the study reported that because of their work with other youth and adults from various cultural and economic backgrounds, they learned not to judge people based on their economic background (83%) or skin color (82%). Colorism is a common variable in the equation of discrimination, along with religion, caste, class, gender, and region. Often times the attitudes towards people with darker skin are so ingrained and pervasive that the oppressor and victim accept them alike and pass on to the next generations without much thought (Mishra, 2015). If the program is able to address some of these issues among youth by working on common issues that everyone faces regardless of their demographic and personal characteristics, it appears to be moving in the right direction. About 79% of youth reported reflecting on their first impressions

of people: "be more aware that I sometimes have ideas about people that are not true (incorrect or mistaken). Please refer to figure 9.

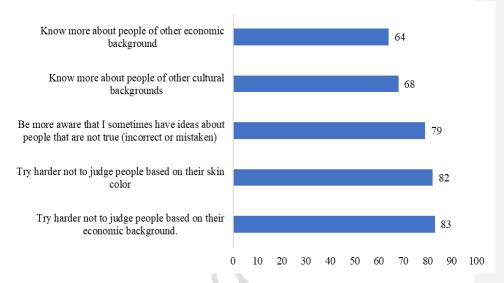


Figure 9. Increased awareness about diversity

#### **Avoiding Problems as a Result of Program Participation**

The youth in the study reported that as a result of their engagement in this program, they learned to say "no" to things that they knew were wrong (72%), were able to stay out of trouble (68%) and avoid violence and fighting (64%). Many youth reported that the program empowered them to assert their desire to avoid alcohol, tobacco, and drugs in the future (figure 10).

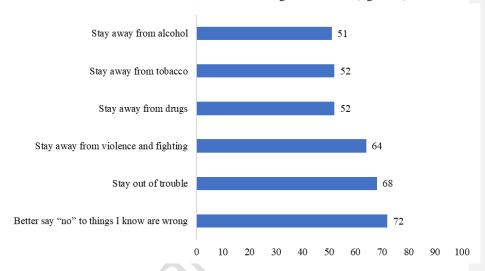


Figure 10. Staying out of the problems due to program participation

#### Sense of Community Responsibility

When asked questions about the changes in their sense of community responsibility due to this program, 93% of youth reported feeling better about themselves for helping others and being a part of this change in their communities through this program. Many sought out more opportunities to help other people (87%) and actually spent more time helping people in their communities (84%) (figure 11).

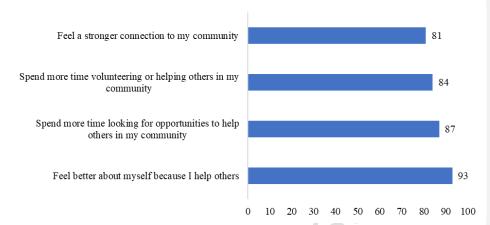


Figure 11. Increased sense of community responsibility

# **Sense of Cultural Pride**

The participants reported that they started to feel more connected with their community members and culture after participating in this program (figure 12). The program presented many opportunities to interact with people from their own communities as well as from other communities. The ESRO team was able to connect the environmental education lessons with rich cultural heritage and traditional knowledge system of environmental conservation.

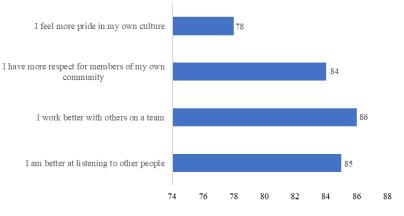


Figure 12. Increased sense of community responsibility

## **Awareness of Social Justice Issues**

In this section, the youth discussed their awareness of, and sense of personal responsibility for, various social justice issues (figure 13). Eighty six percent of them said that this program has enabled them to take more responsibility for their actions; 83% reported starting to care about people and 80% were more interested in world problems, standing up for what is right, and speaking up for justice for unfair treatment of people.

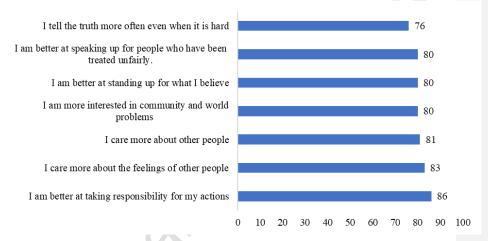


Figure 13. Increased awareness and action for social justice issues

## **Gains in Confidence**

The youth reported improved confidence (figure 14): Ninety two percent (92%) reported feeling confident about the future; 89% learned new skills; 87% felt that they were better able to handle unexpected situations; 86% felt better about themselves; 76% felt that they had more control over things that happened to them, and; 76% that they could make more of a difference.

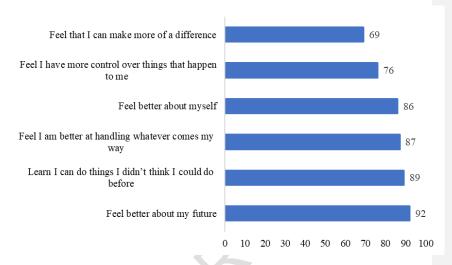


Figure 14. Increased confidence due to participation in the program

# Personal and Public Responsibility for Resources

In this section, we report the findings on youth's changed perceptions of personal and public responsibility for the limited resources available in the world, specifically in India. Figure 15, for example, demonstrates youth's responses regarding increasingly judicious use of water and electricity. Overall, the youth reported taking responsibility for saving electricity, water, and other resources. The item, "I make an effort to cut down on driving to save petrol" scored lowest. This might be because many youth in these schools do not drive; instead they either use public transport or their parents/guardians drop them. The youth scored overwhelmingly higher on keeping their books, school uniforms, and materials for long and buying secondhand books to protect the earth and its resources. The other two areas with high scores were the judicious use of electricity and water in their households. This is progress in a positive direction.

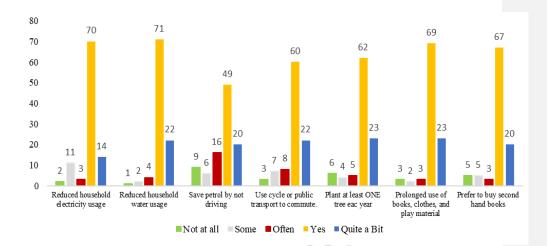


Figure 15. Changed habits: Judicious use of electricity and water

Figure 16 demonstrates the youth's views on public and government responsibility for combating the scarcity of resources, creating environmentally friendly products, and fighting for environmental issues. About 90% of youth observed that people might have to change their way of living to reduce strain on natural resources. For example, people need to change their buying habits and reducing waste. Ninety four percent (94%) of the youth thought the government should take responsibility for combating environmental pollution by banning plastic bags and Styrofoam products. Eighty four percent (84%) of the youth agreed that the government should increase taxes and the cost of products that are not environmental friendly in order to discourage their use. About 81% of the youth thought the government of India should take extreme steps to deal with environmental issues even if it meant imposing high taxes, albeit based on income levels.

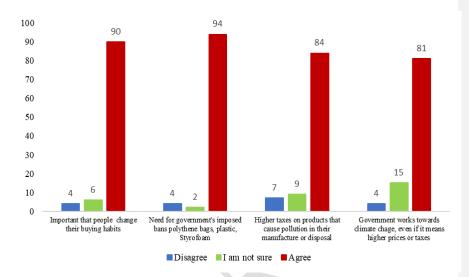


Figure 16. Public and government responsibility to work toward climate change

According to figure 17, 90% of youth believed that pollution has increased in India in the past 20 years. Only one-third of them agreed that India needed growth in order to survive, which might increase the pollution. Half of them, in fact, disagreed with this statement. Many of them articulated to the interviewer that small-scale businesses could help promote economic growth and that environmental pollution restrictions and the imposition of fines on big companies/industries, who do not use environmental friendly practices, could help protect the environment. Eighty two percent (82%) of the youth believed that some of the religious practices in India pollute our natural resources. Some examples of such religious practices are offering food to deities or at shrines; offering the ashes in various rivers; raising and sacrificing animals, and; relieving broken and old idols (sometimes with lead and paint) into water bodies. Ninety eight percent (98%) agreed that pollution in India is responsible for killing many birds and animals. Seventy two percent (72%) disagreed with the statement that "the dangers of pollution are not really as great as government, the media, and environmental groups would like us to believe". However, 20% of them agreed with this statement, which indicates that the program should contain more information on environmental issues and that delivery of the content might be improved. Given the U.S. withdrawal from the Paris Treaty on the Environment, it is even more of a global imperative to teach future generations about environmental issues.

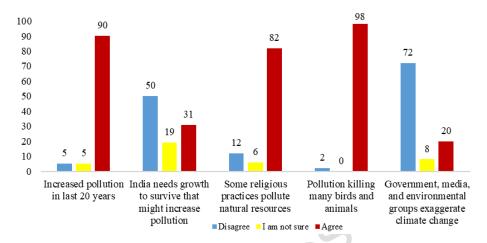


Figure 17. Understanding pollution in India

Table 5 demonstrates that 89% of the youth agreed that there would be a scarcity of resources in the future and that it is the responsibility of people in India to use resources judiciously and reflect on their consumer practices. Ninety two percent (92%) of the youth agreed with the statement regarding the scarcity of the resources on this earth and that they might be depleted soon. Another 96% agreed that water is an important source, especially because drinking water amounts to only a small percentage of all water resources.

Table 5.

Youth's View on Scarcity of Resources in Future

Item	Disagree	I am Not Sure	Agree
There will probably be more shortages in the future, so Indians will have to learn to be happy with fewer "things."	3%	8%	89%
Some of the resources are scarce and we may soon deplete them.	1%	7%	92%
The drinkable water on our earth is a very small percentage of our water resources.	2%	2%	96%

# **Self-Reported Changes in Youth**

In this section, we present the analysis of the open-ended responses. The youth who participated in the study reported many personal changes after their participation in the program. Below we present the descriptions and examples of various themes that emerged from the youth's responses to the open ended questions in the survey.

Gain in Confidence: Many youth reported tremendous gains in confidence. Since this program involved youth speaking to their families, communities, and included public speaking activities, the youth reported improved confidence levels. Some of the common statements in the data included: "I used to be fearful"; "I was very shy before participating in this program"; "I did not have confidence in expressing myself until I participated in this program."

Since the youth took many responsibilities in the program, where they had to come up with activities, including debate, public speaking, street play, or organizing rallies, they had to go out of their comfort zone to accomplish some of those tasks. Some examples of gaining confidence through this cognitive dissonance are as follows:

- "We got an opportunity to talk among our community and to educate them about various issues. My confidence has improved. Confidence is important to move forward in life. I feel now I can do anything in my life."
- "Before joining this program I use to have a fear of public speaking but now after joining this team I have developed more self-confidence. I have learned so much about the environment."
- "I have gained lot of confidence after working with ESRO team members. I feel confident in standing against who is doing wrong even if that person is my father. My confidence in talking with other people has increased."

The team members encouraged these youth to build confidence by showing their self-worth and recognizing their efforts through various awards and accolades. As behaviorists would say that, many behaviors are learned through observation, others learned by doing, and some of these behaviors are reinforced through rewards. The statements from youth included:

- "I liked it that I was praised for my efforts. I have started to talk to people about the water pollution. I have also stopped wasting electricity."
- "I got an award of 'Environmental Hero' by the ESRO team. So I had to live up to that."

**Leadership Skills:** Many youth reported increased confidence in leading group activities; speaking publicly; standing for others; making decisions, and; sharing what they have learned with others. Some examples include:

- "Now, I am more serious about my leadership. As we know that leadership is very important in our life. It gives us a way to walk our path. My thinking is that we should participate in this program and try hard to change our environment. Now I lead my class with much ease and told them the profit of this program."
- "After participating in ESRO project last year, I feel some change in myself. In my 10th board examination days, all the youth were afraid for their science exam when I knew about the problem then I led like a leader all the class and encouraged them not to afraid from the exam."
- "My participation in ESRO project changed my leadership skill. Now, I can give suggestions, make decisions (that are right) and I have the ability to be a leader and give or tell right way for saving our environment."

**Gain in Communication Skills:** The youth also mentioned positive changes in their communication skills. Some of them said that they had been hesitant in expressing themselves in front of adults. This program helped them overcome this reticence. For example:

- "I am able to express myself in front of others [after participating in the ESRO programs]."
- "I have become more fluent in speaking; more confident." "I can see many changes in myself, I can communicate in better way than before and my learning skills were improved too. I also learned how to change our society"
- "First time I see that I am unable to speak in front of a crowd. I was ashamed of myself, but I feel proud that I can speak something that I am able to stand there."

The youth also reported improvements in their active listening skills. For example, one youth connected listening and leadership skills,

• "My leadership skills have changed very quickly. I do the work firstly; [sic] I listen to the problems of people. Then the next step is that I start working on them."

**Awareness--Environmental Issues:** The ESRO adults presented information on various environmental issues and engaged the youth in several hands-on activities. Due to this learning and engagement, the youth reported an increase in their awareness of environmental issues. For example, "Since I have started working with the ESRO team, I have become more aware about my environment. I have stopped wasting electricity and water and told others to do the same."

The youth reported learning about the following aspects of environment that they learned from this program:

- 1) Importance of nature and safe environment,
- 2) Responsible use of natural resources,
- 3) Dangerous effects of plastic bags,
- 4) Current levels of pollution,
- 5) Current state of deforestation,
- 6) State of Rivers, and
- 7) Depletion of Ozone layer

**Responsibility--Environmental issues:** The ESRO programs not only helped the school youth raise awareness of various environmental issues, they also helped them take responsibility and modify their own behavior in relation to these issues. The youth shared,

- "I started conserving water and started taking care of our environment. I close the water tap. So these small changes are taking place in me as a result of working with the ESRO team."
- "After taking part in this program I have started planting more and more trees. I have started raising my voice against pollution."
- Another illustrates that the attitudes of these youth are changing, but they are also making other people aware of the issues, "I can see many changes in me after working on this program because now I am more aware towards cleanliness and I don't throw garbage anywhere and I also try to aware other people. By this program I understood the real meaning of education."
- "I learned how to manage or reuse our surrounding material"

The findings show that the youth are taking responsibility for conserving water and trees and helping keep their surroundings clean. They also learned how to reduce wastage and reuse some of their things.

**Team Work:** Collaboration is a key element Y-APs—collaboration among youth, among adults, and between youth and adults. As a result of working with other youth and adults on various projects, the youth learned how to work in teams. Examples of this are evident:

"I see many changes in myself after working on this program with ESRO team such as
co-operation, team spirit, hard work, and awareness about natural resources and learned
more about our society."

• "I have learned to work in collaboration. I have also learned to problem solve."

Youth learned 1) how to work in teams, 2) how to collaborate with other youth and adults to work on a certain issue, and 3) how to organize their time better so that they can participate in ESRO run activities.

**Gains in Academic Work:** Many youth cited improved communication, both written and oral, because of their participation in the ESRO program. Participating youths shared:

• "I scored very well in my 9th grade examination. My study habits have improved."

Three youths specifically talked about their gains in English communication.

- "I improved my English language and writing."
- "After connecting with ESRO team, my English got improved. I want to continue working on it."
- "Since joining this program, I have started focusing on my English learning skills. My English pronunciation has improved."

**Engagement in Social Justice Issues:** The youth also mentioned that their participation empowered them to stand up for social justice issues. Examples included:

- "I can stand up for social justice without being afraid. I can tell my opinions without hesitation. I am getting better at planning. I can help support my country and make it strong."
- "I am aware and working for my locality more. Now I am more sensitive. Now I can take stand for myself. I can speak up even if in any case I am wrong."

**Overall Learning in Y-APs:** Several survey responses by the youth summarized the experience of the Y-APs:

- "I have learned several things with ESRO: 1) Knowledge about health and environmental protection, 2) dedication to work and improved social interactions with peers and friends."
- "I have become a hard worker. I have started helping people more and more. My dreams
  are coming true. I have started focusing more on my studies after interacting with ESRO
  team members."
- "I have developed more confidence and I am better at communication now. I can also stop people who are involved in deforestation."

# Youth Leadership Views

When asked, "What does youth leader mean to you", their responses fell into three main categories:

- 1) Reasons for youth be leaders,
- 2) Characteristics of youth leaders,
- 3) Responsibilities of youth leaders.

## Reasons for Youth to be Leaders

The youth in the evaluation study provided various reasons for why youth should be leaders and why they should learn to take more responsibilities toward environmental and social issues in their communities.

- They are the future of their country; hence, they should work to improve the future living conditions.
- They are young and able to take more risks than older people.
- They have new and fresh ideas that they are able to bring to the table.
- Adults listen to youth more than they listen to other adults. That is why it is important for
  youth to become leaders and lead the projects on environmental and social issues.

As one youth summarized it, "I think the youth has the talent to explain their opinion and to express their feelings. The youth is full of confidence and has the power to solve the increasing problem of the environment."

# **Characteristics of Youth Leaders**

The youth in the study provided a list of characteristics of youth leaders that we summarize in the table below.

- Confident
- Value education
- Responsible toward themselves and others
- Role models
- Responsible towards the environment
- Belief--they can change the attitude of others
- Delegation of work to others

- Fearless
- Active listeners
- Unbiased toward certain classes and castes
- Knowledgeable about the village
- Decision-making abilities
- Strong persuasion skills
- Respectful

#### **Responsibilities of Youth Leaders**

According to the youth in the study, the youth leaders should be able to handle multiple responsibilities. Below we delineate those various responsibilities that the youth thought that the youth leaders "should be capable of or willing to perform".

- Environmental Protection: They should stop water pollution and care for our environment. They should also create awareness about environmental issues among people.
- **Fighting against Corruption:** Youth leader should help or fight for removing corruption from various systems in the country.
- Education for All: The youth leaders should value education and help people in getting their education. They should also advocate free education for all.
- Fighting against Discrimination: The youth leaders should evaluate the ways social
  stratifications based on caste, class, religion, and gender divide us as a society. They
  should make a conscious effort to fight against the discrimination that is prevalent due to
  these differences.
- Civic Engagement and Advocacy: The youth leaders should engage in peaceful protests
  to advocate for policies that support cleaner environment and positive social health of the
  society. They should be able to advocate for people, who are not able to voice their
  views.

As one of the youth summarized it, "The youth leader should try to utilize each person according to their abilities. Youth leader is one who is modest as well as mature. Should go towards the bright future by holding the golds of past. Should not only speak but the first one to work on it. Should be an ideal for all of us."

# Youth Engagement in Environmental and Social Issues

When asked why youth should be involved in environmental and social issues, the youth in the study came up with a variety of responses. Almost all those who responded to this question agreed that youth should be actively engaged in these issues. Some of the reasons included:

- Country of Youth: According to one youth, "India is a youth country. If youth were aware and actively participate in environmental and social issues then the mind of people will change and they become aware."
- **Future Citizens:** Youth will be future adult citizens. Therefore, this is the right time to get involved and take charge of our problems.

- Youth versus Adults: One of them said, "Because nobody listens to adults. They listen to youth more, so we should participate." Often times adults are set with their ideas about environmental issues and worry less about their future as they have lived most of their lives. On the other hand, keeping the environment clean and protected is a matter of youth's future. According to one youth, "I think that we [youth] should participate in such issues because we can make our parents, friends, neighbors, and relatives aware about environmental issues. We can also persuade them to protect our environment. We need it for our future and our children's future. Such involvement also keeps youth updated with this knowledge."
- Knowledge Enhancement: Youth learn about these issues in school and through ESRO team interactions. Their knowledge base is much stronger and hence they might feel comfortable in applying it to solve real life issues. According to one of the youth, "When youth participate, they become aware about various issues. They take ownership in solving problems. When they become aware, people cannot take advantage of them and misinform them. In those cases, we can prevent many social problems."
- Practical Knowledge of Subject Matter: By participating in environmental and social issues, youth get practical knowledge of what they learn in their courses. Such as one youth said, "I learn many things from the ESRO team like do not use poly bags and do not pollute our environment."
- Positive Engagement: Participating in environmental and social issues can guide positive
  engagement; hence, youth will stay away from getting in problems. That way they can gain
  more strength and make good decisions.
- Moral Responsibility: Protecting and conserving the environment for future generations seem like a right thing to do. According to one youth, "It is our moral duty to protect our environment. Earth is our mother and we should protect her from abuse."
- Creating Awareness: Youth should participate in more programs like this one; the ESRO
  team should organize more programs like this one so that more and more people become
  aware and participate in such issues.
- Protecting Resources for Future: As said earlier, protecting environmental resources is also a matter of securing the future. According to one of the youth, "if we do not start participating now, the current generation will deplete all the resources and we will not have nothing in future. We should get involved."

# **Best Aspects of Working with the ESRO Team**

The youth articulated specific aspects of working with the ESRO team that they liked. Below, we present the data by themes, their description, and examples from the data.

**Empowering Youth:** Many youth liked the Youth Adult Partnerships (Y-APs) aspect of this program. They felt empowered that the team considered them important and worthy of collaboration. "I like best about working with the ESRO team on environmental and social issues that they are working with youth who have the ability to change the world."

Hands-On Activities: An overwhelmingly large number of youth mentioned liking the hands-on activities that were part of the program. In Indian Education, with increased performance expectations, the pedagogical approaches are not practical oriented. The youth liked the opportunities for hands-on experiences that the program presented to them. Some examples included, "I like the activities which are conducted by ESRO team. Encouraging activities which helps us in building up the confidence." "The best part about working with ESRO is the nukkad natak [street play] which is done in villages and inter-school speech competition on environment." "I like best when we started the rally in our village on water conservation." "I like when I educate people about social issue by performing program on stage"

**Incentives from the ESRO Team:** The youth in the study appreciated the fact that the team provides incentives and organizes various activities and competitions to encourage more participation in hands-on activities. Some examples included, "They encourage everyone to work hard to keep the environment clean. They give prizes and reward to the youth who work hard for more encouragement." "They involve people of all age groups so the opinion of all age groups come out. They give rewards and encourage youth to do better in school, in society and for environment."

**Dissemination of Knowledge by the Team:** Some youth reiterated that they became aware of various environmental and social issues in their communities due to their participation in this program. "I like that team spread awareness about pollution and cleanliness. I like that the team make us realize the importance of education and provide necessary information on environment."

**Inspiration to Change Society:** Youth felt inspired by the fact that the adults trusted them with taking on responsibility to address different environmental and social issues in their

communities. "The best thing about ESRO team is that they encourage youth to save the environment. In the team, Rana Sir is best person as he knows how to deal with youth or other people."

Positive Attitudes of Team Members: The youth in the study appreciated the ESRO team members' positive attitudes, which helped them feel respected and valued as an important part of the program. "They [the team members] all are very responsible and very good in nature; they never impose on us to do anything, they always listen to us carefully and then solve our problems and encourage us to do something for our environment. Another youth shared, "They treat all the people equally. They all are very encouraging and they have lots of knowledge about environment."

International Recognition of the Work: The youth appreciated receiving occasional recognition from various international entities, Humboldt State University among them. "I like that our work got recognized in USA. I find myself grateful to be part of it." Another youth talked about the visits of Japanese youth, a retired teacher, and her family from the US. "I like the team encourage and motivate kids. And the people comes from foreign country as well."

**Team Work:** The youth in this program liked that they got to work in teams, which boosted their confidence and interpersonal skills. "Working with the ESRO team on environmental and social issues is the best work which I have ever done. The best thing about this program is that sometimes when we start individually and then it became a team to support us for our nature is really an appreciated work."

# Youth's suggestions for ESRO Y-AP Programs

An overwhelming majority of youth responded that they would not change anything in the working of the ESRO programs. "Everything is perfect according to me. Need no change", were very common responses. However, below we present the suggestions the youth provided by themes, their descriptions, and examples.

Expansion of Program Activities to Additional Communities/Different Populations: The youth suggested that the ESRO team reach out to more community members. Youth complained that sometimes it is challenging for them, as young people, to convince community members to take care of their environment and surroundings. They thought that sometimes it would require either adult intervention or more tools for them to convince some community members to protect

the environment. The youth also thought that the team could reach out more to underprivileged youth, especially those who live in dire poverty and are not able to go to school. "I want to make a request to ESRO that ESRO should conduct programs in villages also and not in schools but in communities." "Better if this team could work for/with underprivileged youth." "One thing that I feel could change is that they come to our schools. They should rather come to our village and plan something for the community members with them."

**Increased Frequency of School Visits:** The youth felt that the program activities should take place more frequently in their schools. "ESRO team should come at least three times in a year."

More Hands-On Activities: The youth also noted that there should be more hands-on activities, specifically those requiring participation that is more active. They also would like to get more involved in designing these activities. Some examples included, "They should include those types of activities and competition which will help in improving our language and will help in removing our hesitation." "More involvement of youth in designing activities" "I think they should include more lessons/activities on water, electricity, population problems." "We should work for our society during that program even if it means making our hands dirty for a while."

Community-Wide Recognition of Youth: The youth articulated that they would like the community to recognize their accomplishments and this would motivate the community members to get involved. A few youth would also like to speak about their experiences in front of community members after their awards ceremony. "ESRO team should give awards in front of village people." "Should have given the chance to speak after the award ceremony."

**Ideas on Incentives:** The youth in the study suggested that the ESRO team could use different incentives in the program to encourage youth engagements. Some suggestions are apparent through the following quotes. "ESRO team should give gift to kids which is connected to environment like compost for plants or seeds." "Next time when team members come then they should give plants to every kid to plant it." "ESRO team should promote planting tree to villagers and reward the family with a gift."

**Use of Media:** Two to three youth suggested that the ESRO team reach out to a wide range of people via different modes of media, such as TV, radio, or news articles. "ESRO team should educate people about water pollution through TV or radio"

Garbage Cans/Recycling Bins in Schools and Communities: The youth suggested, that the ESRO team should help raise money to put garbage cans/recycling bins in their communities and schools. "I want to add one thing that ESRO team should do is that they should put or place dustbins where more garbage is thrown."

**Expansion of Youth Participation in Teams:** The youth in the study suggested that the ESRO team should include more youth in their schools and communities in hands-on activities. "I think ESRO should add more and more youth to their team. It would encourage people village to village not only school to school."

Change in Selection Criteria: Some youth suggested that the team should expand the selection criteria, which one of them alluded to as narrow and restricted to general knowledge questions, instead of asking more opinion type questions. This might help in selecting individuals, who are not only knowledgeable but also passionate about working on environmental and social issues. Another idea was to give youth more than one chance to show that they are capable of being on the team. "With general knowledge questions, opinion type questions should also be asked. Instead of just speaking survey and practical should also take place in choosing youth on the team." "Kids who are rejected, they should get another chance because it might be possible that those kids are having good thinking."

Clarity of the Projects: According to some youth, not all participants were at the same level of understanding, even those selected by the teams. Some youth needed more clarity regarding what they were supposed to do than others. "Many of the youth remain confused about their study subjects and aim [group activities]. So, I suggested to ESRO team to aware the youth about the study at the level of their interest and aim."

**Dissemination of the Survey Results:** Some youth suggested that the ESRO team should disseminate the survey results to make people more aware of various environmental and social issues in their communities. "I suggest ESRO team that they should use this survey to make people aware about various environmental issues."

**Additional Issues for ESRO Team to Address:** Some additional issues that the youth would want the ESRO team members to work on in future are: 1) Girls' education; 2) Women safety; 3) Sports involvement; 4) Elderly people issues; 5) More cultural activities; 6) Population explosion issues, and; 7) Involving younger youth in the program.

# Change in Families, Schools, and Communities

The youth also reported the changes in their families' attitudes, schools, and communities due to their participation in the ESRO programs. We were able to capture more immediate and profound changes in youth. However, the youth noted that the changes in other contexts were much slower, but moving in a positive direction. As this quote from a youth puts it, "Since I participate in this program it change my thinking toward the social issues and environmental problems. My family has also become aware by this program and my school is the member of this program. I have tried to spread these things among my community." Some of the changes that youth noticed in the following three contexts are as under:

#### **Families**

The changes that the youth noted in their families are as follows:

- Families' supporting their youth for their participation in the ESRO program
- Families and friends learning from listening to youth's experiences
- Youth advising their family members about various social and environmental issues
- Family members asking more questions about the program
- Families understanding the importance of education better since their youth are learning about real life issues
- Family members starting to use water and electricity more judiciously
- Family members becoming more aware about not littering

Some examples of youth statements included:

- "In my family, I have seen a big change that people used to waste a lot of water because they were unaware. Now I have become aware and I try to make everyone aware about saving water."
- o "In our home, we put two dustbins. One biodegradable and other one non-biodegradable."
- "Now even my parents start using cloth bags instead of poly bags, sometimes it happens but we are trying to get rid of it."

## Schools

The changes that the youth noted in their schools are as follows:

- · Schools organizing programs around social and environmental issues
- Holding discussions around environmental and social issues in classes
- Increased focus on cleanliness

- Increased motivation among other youth (who are not participating directly in the ESRO program)
- Schools planting many more trees
- Schools (youth, teachers, and staff) using water and electricity judiciously

# Some examples from the youth included:

- "Our school youth used to waste water but after getting connected with ESRO, we
  have stopped wasting water and have understood the importance of water. It is an
  important resource that we should save."
- "In our school, we made a garden with the help of ESRO team."
- "I have seen many changes in my school. Many of our teachers encourage us to clean our school surroundings.""
- "We have stopped using poly bags in our school."
- "In our schools, youth have realized the importance of healthy food and safe environment."

### **Communities**

The youth reported to start conversations with their community members about social and environmental issues, "I have also started talking to people in my community and village about social and environmental issues." Some youth report modest progress, "I have been able to influence my community members to some extent about cleanliness." Among the positive changes are:

- Increased mutual assistance in the community
- More awareness around social and environmental issues

Some examples of changes included,

- "I have seen many changes around me. Usually people used to spread litter before and now my neighbors come and clean it."
- "In my neighbors most of people do not throw the dust in canals [water bodies]."

As might be expected, changes in the community were slower. As one youth put it, "Not everyone in the community, but some people have been influenced by our conversations with them. But I am pretty sure if we continue with these efforts, one day people will understand the value of water as a resource"

# **Message for Other Youth**

Due to limited resources (i.e., time and money) and big class sizes (40-50 youth in each class), it was challenging to involve all the youth. However, the youth, who participated in the study, had several messages for their fellow youth. Below are some examples in their words.

- "I would like to encourage my fellow peers and other youth. Sometimes they are shy to speak. I would encourage them to speak on environmental issues. I would want to make them educated. I would also create awareness around environmental issues: plant more trees, use water judiciously."
- "We should stop using poly bags or anything for that matter that cannot be decomposed. We should use water judiciously and plant more and more trees."
- "Do not spread litter; plant one to four trees a year; keep the school clean."
- "Money is something but not everything. There are more important things in life like character, awareness, discipline, satisfaction, etc."
- "We should not waste petrol and try to walk as much as we can. We should do more street plays so that we can make girls and women aware about environmental issues."

# Youth's Ideas for Implementing Change in their Communities

When asked what changes they would like to see in their villages, many of the youth's responses were in the vein of "I want to see my village educated and aware toward the general problems like wasting of water and misuse of electricity. I want to see my village clean in itself". Other messages included, "To help each other. To reduce wastage. To manage our garbage", and "I like to see some changes in my village like girls should be allowed to stay and take their decision themselves and everybody should keep their environment neat and clean". The youth also suggested that it would require more collaborative work to educate people about social and environmental issues and help them change their attitudes. The youth offered different ideas for implementing these changes in their communities.

**Education to Create Awareness:** The youth suggested that there should be educational programs implemented directly into the communities to make people aware about various social and environmental issues. Some examples of such responses included,

- "We would achieve them by making people aware about those problems. And tell them the importance of these things";
- "Every parents should be made aware about girl education and give permission to all girls for study";

- "Firstly I have to change the thinking of people about environment, save water, pollution and many more."
- "We can improve the communities by giving them knowledge. We can make them aware. We can run programs at various places to make them aware. We can tell them the realities of the environment and future."

More Hands on Activities to Create Awareness: The youth in the program also talked about the importance of providing more hands on activities or demonstrating the advantages and disadvantages of various activities that villagers are involved in. Youth statements included;

- "We can make some efforts like make small program in my village and make them aware.
   By showing them the results of those things what they are doing and danger for their life."
- "I could also do things like Nukkad Natak [Street plays] and also rallies [to make people aware]."
- "Motivation is the best way to achieve my target. I think if I encourage them and talk to them and try to explain benefit of doing good thing and by showing through hands-on activities. I hope that they will be support me and change their attitude."

**Presenting Role Models:** The youth in the study also realized that they have to present themselves as role models in their communities before they could ask the community members to change, as illustrated in the following example: "I would like to start with myself. I will present myself as a role model. I will teach people that we need to keep our hygiene to avoid spread of diseases." Another example was, "It means by changing yourself first. I will pick a broom myself. When people see me, they will come and change themselves."

Collaboration with Political Leaders: The youth in the study also suggested that they should collaborate with people in leadership positions in their communities so that they can get political support to implement various strategies with more buy in from people. As one of the youth said, "I will also collaborate with the village chief for the roads and tree plantation." Another youth said, "I would like to say these problems to our village chief and request him to improve our village and [help] solve these problems." One of the youth also suggested electing youth as chief of their village, "If people agree to you we should have a youth chief in our village so that he or she can understand the current perspectives and work to find solutions."

**Collaboration with Community Members and ESRO Team:** The youth participants viewed the ESRO team in high regards and felt that the team could help youth collaborating with their community members. For example, one of the youth said, "I can achieve this [change] by

organizing the programs related to education and environment under ESRO's guidance to engage my community members." Many youth viewed the collaboration and unity among community member a key for success around these issues. This quote by one of the youth illustrates the importance of collaboration to make change in communities, "By people's support. If people will support us then definitely, we can improve the communities. A single person cannot change/improve his communities." Another such example included, "Firstly we should believe in unity. Because if we will work as a group then we can do anything which we can change alone. So to improve our community, we have to be in group."

**Fundraising/Empowering them by Providing Resources:** The youth also reflected that they needed more monetary support to start some of the development work in their villages. Statements from youth included:

- "We should collect money/funds and support the construction of roads, hospitals in our villages. Our workers and we should work together to clean our villages."
- "We can improve our communities mostly the poor communities by providing them all facilities like education, electricity, and transport. We should not ignore or hate them. We should include them in the social program so that they will understand the meaning of education and we should encourage them towards education."

**Promoting Traditional/Simple Way of Living:** The youth also suggested that we should try to go back to traditional way of living, which were more environmental friendly. Some examples included:

- "Using manual bikes than using motor bikes"
- "Instead of using submersible pumps, we should resort more to the use of hand pumps"
- "Using handmade shopping bags instead of using plastic bags"
- "Reusing things as our ancestors used to use"
- "Try to do most of our work during day light"
- Using manual labor to construct ponds rather than using big machines."

**Education, an Important Conductor of Progress:** The youth in the program articulated that it is important for community members to get their education to become aware. They emphasized that if everybody in younger generation can get their education and the communities in the future will improve drastically. Youth shared:

• "Education is a good path for humans to move forward. I will make my villagers aware that they should educate their children. This is how they are going to understand the importance of education. They will be able to help improve the environment."

• "We should make children and youth aware about getting their education. I believe that education is the only medium that can help us make our country develop in various directions. My eyes are on stars so I do not need stairs. I just need courage and awareness."

**Opening Spaces for Positive Engagement:** The youth viewed that opening spaces for youth and community members for their positive engagement might help improve the communities. For example, some youth suggested that it would require more focus on organizing different sports activities in villages. In words of one youth, "We can improve our communities by improving medical facilities and coaching centers."

**Advocacy for Social Change:** The youth also talked about writing letter to the leaders and politicians to help making social change in their communities. One such responses included, "We write a letter to government for this change. I tell everyone about this. My thought and my first step for this and I participate in "Swatch Bharat" Mission."

**Follow-up Programs to Monitor Change:** The youth in the study also talked about sustainability of these programs. They viewed that the success of any programs in terms of creating community awareness or changing the community lies in the fact that there should be more follow-ups to see if the change continues to happen. In words of one of the youth, "there are many ways to change this type of thinking but the villagers can't understand. They understand only for one or two days and next day they do their work like before." This statement suggests that such programs will be more sustainable if there is a continuous follow up.

**Challenges in Community Change:** The youth also reported challenges in trying to convince their family and community members in supporting environmental friendly practices. One such example is, "I want to help my elders persons because I am a youth and nobody listen to me and ignore me. For an instance, they listen to me and ignore me but after I come back, they repeat their steps of damaging environment." This statement also shows the need for continuous messages that these communities need.

## **Important Role Models**

The youth reported the role models in their lives. Table 6 below presents the percentage of youth who named particular role models (the total does not come out to 100% because some youth listed more than one person as their role models). The right-hand column contains their reasons for the selection.

Table 6.

Role Models for Youth

Role Models	Youth	Reasons for Modeling		
		"Educated and experienced"		
Immediate and Extended Family Members	37%	"Tell me the difference between right and wrong"  "Have overcome struggles in their life"  "Provide me support (financial, academic)"		
Leaders (Narendra Modi, Dr. APJ Kalam, Kiran Bedi, Malala Yousafzai, Chaudhary Charan Singh)	24%	"Social work as a teenager (Malala)"  "Inspiration for women (Kiran Bedi and Malala)"  "Fight for the right of education (Malala)"  "Great working skills (Modi)"  "Overcame obstacles to reach his position (APJ Kalam)"  "Making good impression in the world (Modi)"  "Worked for farmers" (Chaudhary Charan Singh)		
Teachers	21%	"Help prepare for our goals" "Present themselves as role models"		
Freedom Fighters	18%	"Fought for social justice" "Helped us get freedom" "Inspiration for women to be brave"		
ESRO Team Members	7%	"Inspire us to work towards environmental and social goals"		
Sports Personalities	5%			
Nobody in particular	5%	"I learn different things from different people"  "I get inspired by myself"  "Women who are brave"  "A person who saves water"  "A person who is good in technology"		
Spiritual Leaders	2%			

Approximately 37% of youth mentioned their family members—mothers, fathers, uncles, aunts, and grandparents—as their role models. About 21% of youth looked up to their teachers. Family members and teachers constitute 58% of role models in these youth's lives. We could focus more on identifying more community based role models, who could guide the youth in right directions.

# **Importance of Education**

We asked the youth, "What is the importance of education in your mind?" Below we present the themes that emerged out of the data:

# Education.....

- · Brings freedom
- Builds confidence
- Earns our respect from people
- Empowers everyone, especially girls
- Helps bring positive change in the world; differentiate between animals and humans"
  (Figure of speech used in literal terms); express our feelings; fulfill our social
  responsibilities; learn about other perspectives and we become more open minded;
  become responsible citizens; gain knowledge; distinguish right from wrong; solve our
  day-to-day problems; stay away from anti-social activities; teach illiterate people who did
  not have the opportunity to get education
- Includes not just the academic aspect but also the social aspects of learning
- Involves lifelong learning
- Is a privilege that will always be with us during good and bad times
- Is something that expands and multiplies if we share with others
- Makes us more aware of water and environmental issues
- May lead to successful employment and careers (sometimes lucrative careers)
- Opens up more opportunities beyond your surroundings
- Provides satisfaction
- Provides us knowledge about our culture, traditions, and world
- Provides us strength to fight for social justice
- Should help us apply our knowledge to real life situations
- Should not have any age bar. People should get their education at any age.
- Teaches mannerisms
- Teaches us about our constitution

Summing up, one of the youth said, "Education helps building the character; it helps in unity; it opens up our minds. We should do Yagya for self-development and development of society. Education helps in mental exercise. Education provides us success. We should worship three Gods: 1) Indra Devta for hard work, 2) Braspati devta for seeking company of wise people and

God, and 3) Som devta for humility while conveying our message to other people. Only then, we can build our nation."

One notable thing that came out of youth's responses that should be addressed here is that about 7% of youth responded that education differentiates between humans and animals. This is a figure of speech, but the youth have used it in literal sense. As a part of recommendation, it would be important to educate youth on the reasons we need to be respectful to people who are not educated due to their circumstances and the ways we could be more inclusive. Moreover, the elders in the communities can share their ancient wisdom with the younger generations. Please refer to Ms. Namita Purohit's recommendations in the coming sections on "Traditional Knowledge System".

In the next section, we report the data from the school adults who participated in the study. These adults included, teachers and administrators

# **Findings: School Adults**

# **Experiences of Working with ESRO Team**

The school principals and teachers appreciated the work of the ESRO team members. "ESRO team is engaged in a really good work", said one of the principals. Another participant similarly said, "That was really a dream come true to our school. We really got superb experience with this program." More responses included, "Excellent experience; very energetic team; ESRO understands the problems in this area better than anyone else". Following are the reasons the school adults articulated for their satisfaction with the ESRO team's work.

**New Ideas, Opinions, and Perspectives:** The teachers noted that they had the opportunity to learn about new ideas and perspectives through this work. "We got to know about various new ideas, opinions around environment conservation and various ways to protect our environment", said one of the teachers. Another teacher said, "ESRO is a very good organization and working with that team we learned about how to save environment and how to tell their youngsters to protect the environment."

Change in Attitudes: The participants reported change in their attitudes towards environment. They also reported that the program also affected the participating and non-participating youth positively. As one of the teachers put it, "ESRO team has changed my and my youth's attitudes about our environment greatly and positively. The team is working good in the field of environmental changes for humanity." Another teacher said, "We feel great pleasure working with the ESRO team in our school. The youth see sensitively with nature objects and working to save environment." Not only the teachers reported change in theirs and youth's attitudes, they found this program important to teach the value of natural resources to the community. As one of the teachers said, "When we join the ESRO team, we get opportunity to make people aware of our society about our environment and tell them how we can protect our natural resources like water, plant, etc."

**Youth's Motivation:** The teachers also reported an increase in youth's motivation as a result of working with the ESRO team. One of teachers said, "It was an excellent experience. It gave youth a high motivation to save water during the program. I appreciate it." Another teacher reported, "Working with the ESRO team has a great experience as this encourages the youth about environment and how to make our environment safe and pollution free."

**Continued Collaboration:** The teachers in the program said that they would like to continue working with the ESRO team in future on various projects. As one of the teachers said, "I am feeling very good with the ESRO team in my school. It is a divine experience. I want to continue to work with this team."

# **Expectations and Hopes from Youth**

When we asked the teachers about their hopes and expectations from the youth, their responses included:

- Understand the value of environment and the resources (i.e., water, energy).
- Develop social responsibility toward the issues of environment and society.
- Communicate with community members in helping them realize their social responsibility.
- Be more aware about various evils of the society. "They can do a lot to change the future of the nation".
- Youth are young, energetic, and keen learners; hence, this would be an ideal work for them
- Youth should respect their elder and behave nicely with their youngsters.

# Changes in Youth, Teachers, and School

According to the school personnel, following are the changes that occurred because of this program.

## Youth

- Youth show enthusiasm in participating in co-curricular activities.
- A sense of teamwork has developed.
- They have confidence to express their views.
- Our youth are taking great interest in environmental studies.
- Youth seem to understand the importance of water.
- Youth teach their community members the importance of conserving water.
- High School youth take pride for being part of the ESRO team.
- Youth are more organized. "They come to school well dressed and clean."
- They do not throw paper pieces here and there and always switch off fans and light, when not needed.

## **Teachers**

- There is a change in teachers' attitudes. They are helping a lot on this project.
- Teachers are helping to plant trees and save water on school grounds.
- Teachers are motivated to talk about environment in their classes.
- Teachers get professional development opportunities by participating in this program.

### **Schools**

- Through this program, the school community learned to preserve their school environment. "They started to plant more trees."
- · Two schools have their own community garden.
- · The school environment was getting healthier.
- More and more staff members were involved in making the school environment green and clean.

# **Challenges in Participation**

When we asked the school personnel about the challenges that they faced in their school's participation, they came up with a list of challenges.

- **Difficult School Buy In:** Most schools in this study were on board; however, some schools were more enthusiastic than others were. There were a few schools, which were not willing to participate and took longer to be on board.
- Evidence Based Program: Some teachers thought that it was difficult to prove the benefits of the programs to some community members. There needs to be more evidence-based programs to help get the community's support. "If we can show them, through this report, what we are doing is meaningful, that will help a great deal", said one of the teachers.
- Difficult Community Buy In: Some community members, especially where there is lack of education do not understand the value of the program. They have difficult time understanding why it is important to save water. As one of the teachers said, "Some illiterate people raise their voice against us they answered that water has no price. May be due to our firm determination, we will be able to change their mind." Sometimes it is even difficult to carry on a conversation about these issues to the community members. Another teacher said, "The first challenge was to spread out my thoughts among people. I was in doubt, 'would they listen it carefully or avoid me?'" Another teacher said, "Many

challenges come like if we talk they [community members] don't listen carefully. It is very hard to teach them that how much water environment is very important to us so don't waste it. Things can be changed like don't use plastic bags, prevent wastage of water and don't use electricity when it is not needed." One of the teachers articulated the same challenge as many youth had reported, "Lack of unity among people and lack of follow up". This teacher said, "Lack of maturity. Lack of unity in villages. People listen but not following properly. If everyone try to follow at least one rule, then maybe we can be changed."

- Lack of Youth Engagement: Sometimes due to heavy course work, some youth are not ready to participate. As one of the teachers said, "First challenge is the amount of school work and the classes' distribution over the say; secondly, some youth are not ready to participate mentally and create indiscipline and disturb other youth." Another teacher talked about the lack of time on parts of youth to guide others, "Some of them do not understand the responsibility. Some of them have not had any time to guide others. Some youth may not understand the language better. We need to create more programs that could reach all levels of youth."
- Lack of Funding: Even though the team supports some of the activities, the cost of supplies and organizing activities could be a challenge for many youth.

## Parents' Perception of the Program

The teachers also reported the mixed parents'/guardians' perceptions about this program.

**High Enthusiasm:** In general, the teachers reported high enthusiasm on parts of parents. As one of the teachers said, "Parents are happy; they permitted their wards to participate in this type of programs." Some parents are also noticing changes in their youth with which they are pleased, "The parents are very happy knowing a drastic change in their youth by this program."

**Increased Awareness:** By their youth's engagement in this program, parents are becoming more aware about various social and environmental issues. One of the teachers said, "Parents are getting aware about the current situation. Demo [demonstration] of the problem is really fruitful to them."

**Changed Attitudes:** Some parents have actively shown changes in their attitudes. For example, one teacher said, "Some parents are involved who understand the meaning of environment. All of them use paper bags and encourage their youth and others to use them". They said, "Don't throw dirty water in channels. Besides use this [dirty] water to water the plants."

Parents' Support for their Youth: Some parents actively support their youth by listening to what they have to say. For example, as one teacher said, "When a child stops his/her parents from wasting water, they feel proud for their youth." Another teachers said, "Those who are involved, they encourage us and youth to do so." Another teacher said, "They try to make the youth strong and they provide them time and money as far as possible." Parents of one school, in fact, applauded the efforts of the ESRO team and conveyed the message through a teacher, "We need your motivation." Another teacher said, "No parents participated in this program, yet they motivated youth to participate and to take a step ahead for saving their environment."

Lack of Parents' Interest: Many parents did not take these activities seriously. Academics hold a higher place in their minds compared to the programmatic activities. In the words of one of the teachers, "A few parents are involved in this program. They think that this is only a youth's activity so they do not take it seriously." Another teacher said, "Only a few parents discuss these points in school. For them these are secondary activities." According to another teacher, "The parents of youth do not support the youth in study and other activity. People want everything by shortcut; they do not believe in hard work."

# **Desired Qualities of Youth Leaders**

In words of one of the teachers, "Youth have the power to change the mindset of the world by their determination and hard work. Only need to guide them carefully." The teachers also discussed various qualities of youth leaders, which are as follows:

- Able to deliver positive results
- Enthusiastic and energetic
- Confident
- Responsible
- Honest
- · Able to lead others
- Aware about current social and environmental issues
- Keen to find different solutions to one problem (divergent thinking)
- · Motivate others to be on right path and inspire younger youth

## **Roles Appropriate for Youth**

There were many roles that youth could play in the program. According to one of the teachers, "Through this program, youth have gained valuable information. Only a person with lots of enthusiasm can accomplish this." One of the other teachers said that "Youth are now a days

going a step ahead. No matter what role you give them, they maintain and manage it very beautifully and without any difficulty." The teachers in the study thought about the following roles for the youth as appropriate in future.

- Youth could lead the awareness campaign in their villages.
- Youth could familiarize themselves with the dangers of depletion of natural resources and should be able to tell the same to their parents and community members.
- Youth could use the motivation from the team and school to spread their work in communities. "They can infect the community members with their enthusiasm."
- Youth can lead the next generation.
- Youth could go to slum areas to teach people about the issues.

## Suggestions for the ESRO Team

The school personnel suggested some solutions for the ESRO team to make this effort more meaningful in future.

**Regular Team Members:** The team needs consistent members. As one of the teachers noted, "I feel that this work is for the betterment of environment and awareness. I appreciate this organization, but there is a need of improvement. There should be more regular and more members in the team."

More Support to Youth: Depending on the level of the youth participating in the program, the support should be adjusted. Some youth know less than others, hence needs more support than others. The youth also need substantial tools while taking the messages related to environmental sustainability to the community. According to one of the teacher, "Youth need more exposure to spread this message in area. Every youth is doing best as they can do in this area. It is important to provide more tangible tools to spread more awareness about the programs."

**Adding More Programs:** According to the teachers, everyone in school could use more educational and learning programs in future after their initial exposure to some of these programs. "More educational and learning programs are required because youth and teachers; both are changing and try to change the surroundings also."

**More Hands on Activities:** "We should do more Nukkad natak and make it more interesting. We should make people in villages more aware."

**Guest Speakers to Improve Engagement:** "ESRO needs to do work to make interest in this program. There should be one to two good motivational speaker with sense of humor."

Engaging a Community Leader in the Programs: "Sometimes people think that the things that team is talking about may not be worthwhile. We should engage one or more community leaders in these programs so that the community can listen to him or her".

**Youth Guiding Youngsters**: Some teachers suggested that the high school youth in this program are capable of teaching younger classes about various social and environmental issues.

**Incentives/Accolades:** Youth could use the incentives or other forms of validation of their work with communities. One of the teachers said, "I think that the youth are very eager in this program. They like its activities. The prize method also increases the youth for leading. They like this program to grow well for future." The teachers thought that keeping some incentives would keep the youth's interest.

Equity in Group Work: The teachers think that the ESRO team could divide work more thoughtfully among the participants. As one teacher said, "There should be a group of at least 5 youth with our leaders. Each group of youth must be given a different project, assignment, or practical so that youth can understand the value of team work." Some youth in the groups need more guidance.

**Different Clubs in the Schools:** Different clubs could be started in schools so that youth work in group to figure out multiple solutions to the current social and environmental issues.

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# **Findings: ESRO Adults**

We used the Likert Scale type survey with some open-ended questions to elicit the experiences of ESRO team members. Table 7 illustrates that most of them found it valuable to be involved in this program; 60% strongly agreed and 30% agreed that working with youth was their central philosophy; all of them felt connected to youth in school. They also collaborated with school principals and teachers. Most participants felt excited about being part of the program. They felt good about themselves that they were making important contributions to the program and that they were able to connect with the youth in the program.

The table also shows that 80% of adults responded that they found it challenging due to time commitments, but it gives them satisfaction to work with youth. Ninety percent (90%) of adults thought that due to their participation in this program, they started to get along with youth better. Most of them agreed that they saw lot of potential in school youth in making positive changes in the communities around social and environmental issues. About 90% of the adults strongly agreed or agreed that they had learned organizing skills by working in this program. Ninety percent (90%) felt productive when they were able to share their skills with younger generation. All of them felt better about themselves because they were being productive. The table also demonstrates the changes in the adults due to their participation in this program: increased respect for youth, improvement in communication skills, challenges (especially around time management that they face in this work, and their satisfaction level.

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Table 7.

Experiences of ESRO Adults with the Program

Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Feel connected to the youth in school				50%	50%
Collaborate with school principal and teachers in school.			10%	60%	30%
Working with youth is central to my work philosophy.			10%	30%	60%
Very important to me to be involved in this program.				20%	80%
This program is a good place to be.				10%	90%
There are many things happening in this program that people feel good and excited about.			Y	50%	50%
Youth and adults really seem to like each other and have fun together.		5	10%	30%	60%
I am making an important contribution to the society.	0			10%	90%
Face many challenges in this work.	10%	10%		50%	30%
My work gives me a lot of satisfaction.				20%	80%
I feel that I have started understanding youth better.			10%	50%	40%
I see a lot of potential in school youth in making change in their communities.			10%	40%	50%
I have learned many organizing skills.			10%	50%	40%
I feel productive when I share the knowledge and skills with younger generation.			10%	30%	60%
I see this work as an opportunity to make a difference in my community.			10%	10%	80%
Feel better about myself because I help others.				30%	70%
I have started respecting youth more.			10%	20%	70%
My communication skills have improved.			10%	20%	70%
It is difficult to maintain balance between my paid work and this work.	20%	10%	10%	50%	10%
This work provides me satisfaction.				30%	70%

# **Role that ESRO Adults Played**

The ESRO team members reported playing different roles in the program including guidance and support to colleagues, delivering information, official logistics, providing motivation to youth, and supporting their colleagues. As one of the elderly team members said, "My role, as a senior citizen, is to show way to my colleagues and peers." Another member said, "Based on my knowledge and my understanding, my role is to make youth of next generation aware about water conservation, environmental problems and human values and cultural values."

One of the team members reported that his role was that of a motivator. "My role is to encourage youth through singing. I compose songs on environment and teach youth about its importance through that." Due to the participation in this program, some members feel that they have been learning a lot. One such example is, "I feel I was a learner during the program. I could learn from kids as much I could learn from my colleagues." One team member also helps organizing Hawan<sup>2</sup> ceremonies in the schools.

# Ideas to Make the ESRO Program More Effective

### Youth

- We need more discipline for youth. Even though our activities are fun, they should be ready to learn.
- Taking care of social and environmental issues is hard work. The youth should be prepared to that hard work.
- They should respect each other, teachers, and adults who go in their schools to organize these activities.
- We should include more youth; we should make them understand the importance of this program.

# **ESRO Adults: Reflections**

- The participants identified a higher need for cooperative work with community members.
- Identify various problems in a particular area and work towards them
- "We should also start sustainable programs for youth so that besides academics they should learn things to sustain their lives."

<sup>&</sup>lt;sup>2</sup> Hawan is derived from the Sanskrit word "Homa", which means a ritual. Usually Ghee (clarified butter) and aromatic herbs are burned to cleanse the environment.

- Regular interactions with youth is important.
- The members need to be more informal so that youth feel more comfortable with them; the program activities need to be more engaging.
- "We should think about creating more economic sources to sustain this program"
- "We should focus more on better organization (even though it is good but we can make it better)"
- The team believes that they should do more and more Hawan to keep the environment pure. This is questionable. There is no peer-reviewed science on this concept.
- The team would like to expand their collaboration with other institutions. Summing up in a participant's words, "There should be a solid project such as people in Western part of the world who has learned from last 100 years of neglecting their environment due to modernization. We, on this side, should learn from them that we should get aware before time. Humboldt State University can play an important role."

#### **Schools**

Below are some of the future directions that the team members came up with collectively.

- If school administrators, managers, and people in school participate in this program, it would be more meaningful and fruitful.
- In addition to school education, we should also focus on sports, cultural programs, and modern education. We should organize more group sports activities in schools. We should organize different walkathons in schools.
- In collaboration with schools, we should talk and engage youth for their personality, moral, and intellectual development. We should enhance critical thinking in them.
- We should encourage parents and guardians to participate in this program.
- We should also focus on health education through yoga and pranayama in schools.
- We should spend more time per school. We should record youth's performances with videos.

# Social and Environmental Issues in Baghpat Area

The ESRO team members also identified various social issues (the problems that affect the peace, harmony, and smooth working of a society) and environmental issues prevalent in the area. These issues are listed in table 8.

Table 8.

Social and Environmental Issues in Bagphat Area (ESRO Adults)

Social Issues	Environmental Issues
Alcohol and substance abuse	Air, water, and sound pollution
• Dowry	Blockage of drainage system
Girls education	Broken electric system
Health inequality	• Climate change: "Sometimes, we get lots
Illiteracy levels are high	of rains; other times, we face a lot of
• Income inequality and lack of education,	draught. We used to have this specialty
cleanliness, and technical education are	that we used to have equal amount of
some of the issues	rain, summer, and winter."
Inequality of youth's resources	Deforestation
Lack of awareness about different issues	Diminishing ponds
Lack of education in schools; no	<ul> <li>Excessive use of pesticides</li> </ul>
university level education	Increased religious waste
Lack of respect for teachers and parents	Increased vehicle smoke
Negative approach towards social and	Lack of cleanliness
environmental issues	<ul> <li>Lack of plantation of trees</li> </ul>
No schedule for power cuts; it all affects	• Litter
youth's education and the time students	Low water table
can devote on their homework	Overuse of plastic bags
People also tend to fight with each other	Polluted water
Politicians use social issues to their	Water and electricity wastage
advantage	
Population explosion	"One day the availability of drinking
"People are getting lots of money and	water can become problematic."
their spending power has increased,	
which increased consumerism and	
therefore, consumerism. But the	
development in their thinking is limited."	

# **Desired Changes in Community**

We asked the ESRO team members about the desired changes they would like to see in their communities as some of the outcomes of their future programs. Below, we summarize the themes that emerged out of our data.

Changing People's Mindset: The team members mentioned that it would be great if the mindset of people could change. As one of the participants shared, "If people can unite together and have more discussions around social and environmental issues rather than politics, wouldn't that be great?" Another said, "we need to change the mindset of people to bring positive changes in their communities, and education is a big part of it." One team member said, "I want to see people of my village progressing and they should also create more sustainable resources. We should encourage them towards this direction."

Creating Awareness in the Communities: The team members viewed the importance of making people aware about various social and environmental issues. They thought that it was the first step towards changing their mindset. For example, one of the team members said, "We should educate people towards these issues." Another participant said, "Each person in the village should be educated. Each person should be aware about cleanliness and health."

Infrastructure in Villages: The team members viewed that the facilities such as school, transport, and health system needed improvements, so that people did not need to go to towns for everything. "It will ease off some of the load on the cities", said one of the participants. Another team member said, "We should have a health center in our village and we should have a good transport system in village and town." Other team members said that it is important to have more ponds and clean drinking water to maintain good environment in the villages. One of the teammates said, "We should clean the ponds and grow more and more trees and plants in our villages. Ponds and river cleaning is important. We can create beautiful parks around ponds. We should save our energy sources in villages."

Better and Affordable Schools: As one of the participants said, "The city schools are expensive and not so well disciplined. They are not close to their culture. They are also far away from humanity. We still teach the lessons of humanity in our villages", the team members thought that since the schools in villages are equally important, there is a need to get more resources to make the education high quality so that people do not move to big cities for their education. One of the participants was concerned about the schools in villages become less affordable, "The village education has grown expensive; schools have monopoly and do not listen. We should have stricter policies to control this monopoly." One team member said, "We can also open

professional education center in the village and we should also create technical education through our primary schools."

Character Building among Youth: The teammates talked about the character building work that they have been doing in school: talking about cultural values, respect for each other, respect for women and girls, yoga, and Hawan, etc. They would like to continue doing it. One of the participants said, "In villages, we focus more on moral values, respect for elders, and good behaviors. We should start programs where moral education could be taught and poor youth's education could be supported by their community members."

Creating a Chain of Like-Minded People: Many team members viewed that they should keep connecting and collaborating with likeminded people. Making people aware and motivating them to work for these causes is important. "We want to connect with people and motivate them to work with us on this project," said one of the participants.

One of the participants summarized it as follows, "Moral, social, and economic change is my expectation."

As one of the team members said, "Since many centuries, nature has been providing us with many resources. In the face of modernization, we are risking our environment and creating lots of social and environmental problems. This earth is our home and all human beings and all living animals are part of our family. Even a small animal provides something to this earth and makes it better. We should cross these boundaries and take care of all our social and environmental contexts throughout the world. It is a global issue, not a local."

# **Suggestions from ESRO Team Members**

The team members reflected on the changes they can make for their future work.

- Creating committees to work on different issues
- Exploring ways to engage parents, guardians, teachers, and community members
- Selecting fewer schools to work with intensive treatment.
- Doing some focused work on environmental issues (Plant more trees, avoid submersible pumps, have toilets, mortuaries in the area, access to clean drinking water, keep the dead animals away from water bodies,
- Focusing on community health (Yoga, nutrition, Hawan)
- Encouraging supportive policies and laws

- Engaging governments, schools, scholars, NGOs to form a big alliance.
- Broadening the reach to more parts of the community and youth body to encourage them through speeches, drama and literature.

"I think that we must create a model to inspire others. It will help to multiply the effect."

One participant summarized, "We are not aliens from another planet. We are from earth. We should protect our home. Earth has played a role in our birth and development. Our ancestors have lived here. Our future generations should have the right to live here. We should protect the environment and make it even better for our future generations. We do not have any alternative."

### **Program Outcomes**

We categorize the program outcomes into four categories: Self (ESRO Adults), youth, schools, and communities.

### Self (ESRO Adults)

- Increased Enthusiasm: Some examples of increased enthusiasm among the ESRO team members are as follows: "I am also started feeling like a "78 years old young man". "My thought process has changed. I feel new energy and enthusiasm because of working with this program. Through this program we are working in schools with youth and teachers, we are filling them with new thoughts and increasing their level of education." "We feel energized and our mind feels young. We should all take responsibility to support youth in our country."
- Increased Engagement: "I feel that I am getting more interested and engaged in the environmental and societal problems and I have started taking interest in solving them."
- **Positive Connections with Youth:** "I have started exploring the ways to connect with youth." "The feeling of dedication has improved."
- Increased Knowledge: "We have seen many changes in ourselves and team members.

  We always study ourselves first as a team before going to schools. Our knowledge base has also improved."

#### Youth

According to the ESRO team members, there were noticeable changes in the youth. However, these are self-reports and should be used cautiously.

- Increased Youth Engagement: "Youth pay attention to what we say."
- Increased Knowledge: "The intelligence level has also increased among youth due to this competition."

#### **Schools**

The ESRO team members noted many changes in the school's environment. Some themes and examples of the themes are as under.

- Increased Discipline in Schools: "Many schools have done remarkable job, beyond expectations. The discipline in schools has increased."
- Increased Engagement in Teachers: "Teachers have also become aware and started taking more interest in their youth. More practical experiences, workbooks, and more use of sports goods have been witnessed." "We see a change in youth and school staff if we are conducting programs in their schools for more than 2-3 times."

#### **Communities**

The ESRO team members acknowledged that the changes in the communities were slower. However, they had observed some changes over the two years into the program.

- "20% people have become aware. Youth and parents are enthusiastic."
- "I hope that due to this program we will be able to see more changes in our area; our nation will get good citizens and patriots."
- "Through this program, the villagers have become more aware. We have started saving water."
- "People have started following some of the suggestions that our team has given us and they are also contributing in protecting environment."
- "Youth and villagers have become aware around polluted water and we have started using RO [Water filtration system] in our area."

One team member summarized it as, "If we change, youth change, and they bring change in their families and communities, our country could be changed for good."

### Why should Youth be involved in Social and Environmental Issues?

According to the ESRO team members, they work with youth for several reasons. They think that young people, especially those who are in high school, are perfect group of individuals to work on social and environmental issues.

- "Youth is the backbone of our country. Since they are responsible, they are likely to participate with much enthusiasm."
- "If we are able to influence youth, we will fulfill our mission". "If we are able to create awareness among 5 youth in one school, we will be successful as they are future citizens"
- By engaging in something meaningful, they will be able to protect themselves from risky behaviors and take care of others.
- By conserving water and environment, and cleaning their home and surroundings, youth can set examples.
- "This is our goal that we should increase the character of people, patriots, and youth
  who are high character. Our youth are tomorrow's future. We should help our youth to
  improve on various fronts."
- Youth awareness and motivation will definitely help in improving the environment.
- "Youth can bring positive changes in villages and towns by engaging in different issues. We progress, villages progress, ultimately our country will progress."

# **Conclusions**

This research began with two evaluation questions:

- 1) What are the outcomes of youth-adult partnerships for adult mentors and youth?
- 2) How did youth involvement in community development affect youth, schools, and their communities?

Based on the Y-APs and 4-H research, we hypothesized the following outcomes for youth, adults, schools, and communities. Below are the findings concluded based on these hypotheses.

### Youth

### Recognize their responsibility towards the community and make connections

The ESRO programs not only helped the school youth raise awareness of various environmental issues, they also helped them take responsibility and modify their own behavior in relation to these issues. There is a clear indication that through this program, the youth in the study have realized that they have social and environmental responsibility towards their communities. The youth indicated many barriers in fulfilling those responsibilities but there is a clear sense of understanding.

### Develop a sense of self-efficacy and empowerment — "they can"

Due to their participation in this program, youth reported increase in confidence level and improvement in communication skills. Some of them said that they had been hesitant in expressing themselves in front of adults. This program helped them overcome this reticence. Many youth reported that they felt valued by the ESRO adults and were empowered by the fact that the adults trusted them to take on the responsibility towards their society. The team members encouraged these youth to build confidence by showing their self-worth and recognizing their efforts through various awards and accolades. One youth said, "I liked it that I was praised for my efforts. I have started to talk to people about the water pollution. I have also stopped wasting electricity." Another youth shared that "I got an award of 'Environmental Hero' by the ESRO team."

# Develop leadership skills by working closely with adult mentors, while still taking charge of the situation

The youth have started to build leadership skills due to this work. Youth learned 1) how to work in teams, 2) how to collaborate with other youth and adults to work on a certain issue, and 3) how to organize their time better so that they can participate in ESRO run activities. Many youth reported increased confidence in leading group activities. However, youth reported either needing more guidance from their adult partners or not getting the opportunity to take charge of the activities. Clearly, the youth were at different skills and knowledge level. The team will need to adjust their support accordingly.

### Develop civic competence through public speaking and group facilitation

Many youth reported that it is their moral responsibility to engage in social and environmental issues in their communities. Many of them had overcome the fear of public speaking through this program. Being involved in activities like nukkad Natak (Street play), songs, advocacy for water and electricity conservation, they learned to speak about social and environmental issues. The youth also mentioned that their participation empowered them to stand up for social justice issues. For example, a youth said, "I can stand up for social justice without being afraid. I can tell my opinions without hesitation. I am getting better at planning. I can help support my country and make it strong." Another example from one of the youth illustrates this lesson, "I am aware and working for my locality more. Now I am more sensitive. Now I can take stand for myself. I can speak up even if in any case I am wrong."

### Improve their academic outcomes

Many youth cited improved communication, both written and oral, because of their participation in the ESRO program. A majority of youth reported that after participating in the ESRO team program they started to participate in more class activities, cared about their school, became interested in going to school, started to get along with their teachers better, and tried harder in school. The majority of youth (79%) reported changes in their grades.

### **Adults**

### Understand the importance of youth in community work

There are clear evidence in school administrators/teachers and ESRO adults' data that they understand the importance of youth in community work. According to the school personnel in the program, the youth could fulfill many roles to make this program a bigger success in

future. According to one of the teachers, "Through this program, youth have gained valuable information. Only a person with lots of enthusiasm can accomplish this." Similarly, ESRO adults also agreed that youth should be engaged in social and environmental issues, "Youth are the backbone of our country. Since they are responsible, they are likely to participate with much enthusiasm". The team also believe that engaging school youth is important because they are the future citizens, "If we are able to create awareness among 5 youth in one school, we will be successful as they are future citizens." The adults also think that "by engaging in something meaningful, they [youth] will be able to protect themselves from risky behaviors and also take care of others."

### Learn community-organizing skills

There are no clear indicators in qualitative data where the ESRO adults have talked about learning community-organizing skills. In the numerical data, 90% of adults agreed that because of this program their organization skills improved a lot. This could be lack of appropriate questions addressing this particular area.

#### Develop a reciprocal sense of respect for the youth

There is clear data on that the mutual respect has increased among adults and youth for each other. Many youth reported the ESRO team members as their role models. The ESRO team adults have also reported that because of this program, their respect for youth has increased (40% strongly agreed, 50% agreed).

### Develop leadership and facilitation skills

The ESRO adults have indicated that due to this work, their knowledge about school and environmental issues has improved. There is an increase in enthusiasm. However, there is no clear data on development of leadership and facilitation skills among ESRO adults.

#### Develop a bond with younger generation through knowledge sharing

There are clear indicators of adults feeling productive because of this program. The connection between youth and adults have changed both groups. One of the elderly member of the team said, "I am also started feeling like a "78 years old young man". Another person said, "My thought process has changed. I feel new energy and enthusiasm because of working with this program. Through this program we are working in schools with youth and teachers, we are filling them with new thoughts and increasing their level of education." Yet another member said, "We feel energized and our mind feels young. We should all take responsibility to support youth in our country." Some adults are exploring the ways to bond with younger generation, "I have started exploring the ways to connect with youth."

### **Schools**

### Spread the effects of community work through youth presentations in schools

The schools have supported the program; the youth who participated in the program involved other youth in school in their activities. Some schools encouraged the involved youth to present their work in front of their peers. Some teachers reported, "Through this program we have learned in our school to preserve our environment. We have started to plant more and more trees."

### Encourage uninvolved youth to get involved

The award ceremony for youth who participated in the program is conducted in front of the whole school, which might encourage uninvolved youth to get involved. However, our data does not clearly indicate that the schools encourage uninvolved youth to get involved. The youth also made suggestions for the team to change the selection criterion for the youth participants. One of the recommendations for this program should be to run in fewer schools but with almost every student in those schools participating in the program.

### Encourage schools to incorporate more hands-on experience in their curriculum

Some schools are actively incorporating more hands-on experience in their curriculum. For example, two schools have already started their gardens on the school grounds that the participating youth maintain. Many schools have started encouraging their youth to participate in science fair. However, these changes are slower and will need more programmatic support in future.

### **Communities**

# Positive change in the community because of Y-AP and youth involvement in community development work

As one might expect, the change in the community is at the slowest rate among all the groups. People have started to hear what youth have to say, but there are many challenges, such as lack of awareness, lack of civic engagement, lack of unity among different political parties on social and environmental issues. Many youth have suggested that the ESRO programs should also engage communities in their future programs.

# Limitations

- The study has many limitations. The youth in the study were selected on competitive basis; therefore, the sample was already selective and biased towards those who were somewhat advanced than their counterparts in terms of their knowledge, skills, and academic engagement. Hence, the findings of this study may not be generalizable to other groups.
- The youth filled out the survey in the presence of the researcher; while the benefits
  included the translation of some English words and clarification on questions that were
  difficult to understand, the interviewer's presence might have influenced the responses
  with the social desirability bias (a response bias that is the tendency of participants to
  over report "good behaviors" and underreport "bad behaviors" as per social norms).
- About 65% of data was translated from Hindi to English. While we took many safeguards (bilingual first author), some of it might have lost the affect in translation.
- This study is based on a cross sectional sample. It would be more meaningful to follow up the participants for many years to see the long-term impacts.
- Most of the data is self-reported. Hence, the findings are based on the face value of the
  participants. Self-reported data may introduce threats to validity such as memory recall
  and possibility of biased responses.
- Even though the retrospective pre post design (pre and post administered at the same time) has value in terms of avoiding the response shift effect<sup>3</sup> that can be seen in surveys that are administered separately as pre and post, the desire in showing the larger learning through the program can produce a positive bias.

Despite the limitations, the study has many strengths and the findings lead to many recommendations.

<sup>&</sup>lt;sup>3</sup> Response shift effect is the phenomenon when the participants' knowledge is not as clear/robust as they think and they tend to rate themselves higher at pre, but when those concepts/knowledge become clear as a result of intervention, the shift is not that big at the time of post intervention.

# Recommendations

Based on the responses and ideas from youth, school and ESRO adults, we make the following recommendations.

Fewer Schools, Intensive Treatment, and Community Involvement: The ESRO team should select fewer schools in future, where intensive, more frequent treatment could be provided, more and more uninvolved youth should be involved, and community members should be engaged in future work. ESRO can involve all age groups, teachers, and school staff. If the team can create 2-3 model schools/communities, this could "infect" other schools and communities to learn and compete. Smaller quantity of schools will enhance the quality of treatment.

Formal Environmental Education Curriculum: Seventy two percent of youth (72%) disagreed with the statement that "the dangers of pollution are not really as great as government, the media, and environmental groups would like us to believe". However, 20% of them agreed with this statement, which indicates that the program should contain more information on environmental issues and that delivery of the content might be improved. Given the current U.S. withdrawal from the Paris Treaty on the Environment, it is even more of a global imperative to teach future generations about environmental issues. It is important for the team to create a formal environmental education curriculum to be used consistently in all the schools. It would also be useful in controlling the treatment bias. This could be accomplished by collaborating with Central Board of Secondary Education in India or programs like Environmental Science and Management at Humboldt State University.

Pedagogical Change for Community Service: Currently, service learning and community volunteering are not part of school curricula in Northern India. It is suggested that Indian youth could benefit greatly from experiential community work (Hairston, 2004). In return, their communities could benefit from a better understanding of the societal and environmental issues that concern youth and from the skills and enthusiasm that youth contribute to society. Community volunteering should be assessed on a point system for college applications. For example, more weight should be given to the applicants, who have shown a certain number of hours in the community service. This could become part of courses like Civics, Political Science, Environmental Science, and Social Studies.

**Enhancing Engagement:** To keep the program delivery interesting and engaging, the team could think about using different medium—besides power point presentations, posters, charts,

music, art murals, and audios. The team could invite periodic guest speakers to make the program interactive and engaging.

More Hands on Activities: Throughout the study, youth, teachers, and ESRO adults agreed that hands on activities were very important. However, some youth reported that the team members decided the activities for them. This could be due to the use of hands on activities for the first time through this program. The team can utilize this feedback in planning future activities. The team will need to use scaffolding as a way to guide students—providing them enough support to carry out the activity but to the extent where youth do not loose their independence. One of the principles of Youth-Adult Partnership is to trust the youth's decisions.

Leadership Development among Youth: The ESRO team and the collaborating schools should continue to engage youth in community engagement programs. The youth believe in their power that they could make people listen to them due to their strong persuasion skills to affect change. Youth also believe that such responsibility also enhances their knowledge and awareness. This is in congruence with research on the relationship between youth engagement and growth in their leadership skills and knowledge base. Based on the characteristics of the youth leaders listed by the students, the schools in the area can initiate youth leadership programs where the goals can be set for them to achieve the skills such as decision-making, communication, confidence, unbiased attitudes, etc.

Resorting to Community Supports: Many youth in the study have provided the suggestion that the community leaders should be involved in the programs. We also need to assess the resources and supports that are available in the communities. There are many community members who might have migrated to cities or outside of country for their employment. The team could reach out to them for providing support. Moreover, many of the community members can serve as role models for these youth. Approximately 37% of youth mentioned their family members—mothers, fathers, uncles, aunts, and grandparents—as their role models. About 21% of youth looked up to their teachers. Family members and teachers constitute 58% of role models in these youth's lives. We could focus more on identifying more community based role models, who could guide the youth in right directions.

**Trainings for Volunteers:** It would be useful to provide professional development trainings to all the volunteers; the roles will need to be clarified. The training is important for the consistent delivery of the content to all the schools. The volunteers can utilize the trainings such as technology use, presentation skills, community organizing, etc.

# **Future Directions**



#### Ms. Namita Purohit

Namita Purohit is a Trainer, Counselor and the Founder of <u>Bhakti Women</u> and <u>Build Worthy</u> organizations. She is passionate about investing in human development through her work as a trainer, a coach and a thought partner for leaders in all seasons and occupations. She believes in the 360-degree development of people to enable them in becoming high impact change agents. She has worked with diverse professional men and women from global organizations and crosscultural teams and has assisted them in their growth. Earlier she has worked for Microsoft, USA and has won the Gold Star Employee

Award during her stint there. Namita has trained over 3000 people in 2016-2017 alone. Her training pedagogy is based on a bedrock of higher values derived from western and eastern sciences along with the wisdom from world cultures. <a href="linkedin.com/in/namitapurohit">linkedin.com/in/namitapurohit</a>. Below are Ms. Purohit's comments and recommendations on this report.

It is heartening to see the impact of the commendable work done by Professor Meenal Rana - Humboldt State University in partnership with ESRO towards Youth Adult Partnerships in community engagement. The current goals and methods to help youth take leadership in community development and in addressing environmental concerns are very well articulated and carried out in the program.

It would also be nice to see educational programs around "Traditional Knowledge Systems (TKS)" and culture to assist the youth-adult partnerships in addressing Environmental Concerns, Water Conservation and Management, Farming, Gender Equity and Equality and Educational Systems. While we encourage youth to embrace a culture of transformation, their transformation also needs to be informed by India's rich cultural roots and traditions. Their knowledge of TKS can serve them as a point of reference for all future action in leadership and in social and environmental responsibility.

India's scientific TKS are well suited for the ecological and economic betterment of the world as these technologies are holistic, eco-friendly and allow sustainable development without harming the world. India's TKS are also well suited to provide proper solutions for Self- Identity Formation, Social Interdependence, Social Responsibility, Gender Equity and Equality among other issues that the Humboldt-ESRO partnership is attempting to address through its youth program.

The existing training and outreach infrastructure provided by the partnership may also include trainings based on TKS. This will enable them to become clear about their cultural identity and develop a critical thought process in mapping relevant solutions into their local socio cultural ethos based on TKS and/or modern solutions. I believe this is an important aspect that may be covered in the development of the youth.

Table 9.

Education and Activities

Program	Description	Intended Outcomes
Holistic Personality Development	Self-Awareness and Emotional Management: Help youth understand their own nature and needs using modern and traditional systems of knowledge.	The closer they understand their roots and their value as guiding principles for their life, stronger their identities will be; greater their confidence will be in expressing themselves.
	Holistic Personality Development at the Physical, Emotional and Spiritual standpoint would be the hallmark of this training program Sanskaras (Cultural Ethos) as	Having a greater understanding of their own nature will help them make better choices in the occupations they choose, leading to a balanced and happy person.  The well situated their identity and
	Guiding Principles: Helps them shape their minds and conduct  Vision Plan Preparation: After the	occupations will empower them beyond measure to become catalysts of change to the societies they belong.
	above training they learn how to develop a vision plan for themselves in terms of the path they wish to take, the	
	identification of skills and mentorship needed along the way, measurements of success and the values they wish to be mindful of.	
Social Responsibility : A perspective from the Indian Ethos	Help students understand how the concept of social responsibility and gratitude is embedded in our traditional systems-recommended methods of expression of gratitude towards our parents and ancestors (Pitr rin), teachers and sages (Rsi Rin), the Lord (Braham rin) and the different demigods (Dev rin) include environmental and social responsibility.	The students are trained to move from a narrow view of their self as individuals towards an expanded view of the self that is a product of the efforts of numerous people and therefore one needs to give back.
	The concept of loka sangraha in	

	TKS: how our existence is meant to benefit every living entity by our actions, thoughts and words.	
Gender Roles : Equity and Equality	For effective leadership in the community it is important we also train youth in their understanding of male and female roles in Indian culture and traditional world cultures, where women were equally empowered as men.  It is important to include important events in the world history like industrialization, the second world war, etc. including their impacts on people's lives and impacted gender roles and duties.	Help them have a proper perspective in dealing with issues of gender oppression.  Equip them with proper information and critical thinking to have engaging dialogues with adults in changing their attitudes towards gender roles and expectations when they are able to present it from a traditional cultural standpoint as well.  Will equip them with a proper mature understanding of their own role in a marriage and their family unit.
Yoga Wisdom	Pranayama and Asanas (Yogic Exercises)	Helps them have strong bodies and minds with an enhanced ability to deal with all types of situations peacefully.

Table 10.

Examples of Adult to Youth Knowledge Sharing

Program Description	Expected Outcomes
Trogram 2 company	Expected outcomes
Since 53% of the sample in the study comes	1. Help youth develop respect and appreciation
from a farming background it would be nice	for the wisdom carried by the adults.
to have knowledge based programs around	<b>2.</b> Help youth overcome the misconception that
the following shared by adults with the youth:	people educated through modern system are
	educated and "others are like animals". When
a. Traditional and local wisdom in	they understand the vast pristine practical
agriculture- seeds, soil, weather	knowledge of the adults in TKS it will help
prediction, water management,	them develop deeper respect and appreciation
storage systems, seasonal planting,	for the adults and TKS.
co-planting.	<b>3.</b> The knowledge is transferred to the next
b. Traditional wisdom in cattle care,	generation thus training them for their future
breeding, and the importance of	occupation. It helps them build respect and
indigenous breeds. This has been done	confidence for future work.
very successfully by Bansi Gir	4. Migration to cities or moving away from

#### Gaushala

- Traditional and local wisdom in water management: Water usage, natural conservation systems, purification systems among others.
- How ecological responsibility is embedded in agriculture according to TKS
- e. Traditional arts knowledge transfer of those arts that are prevalent in that region. Also proper techniques to equip them with marketing and business skills for sustainable living.
- f. Traditional health remedies with medical authorization: <u>BAIF</u> has done some good work in this field.
- one's roots comes with a huge emotional and psychological cost. Once they learn to appreciate the wisdom of local sciences and occupations it might inspire them to continue living closer to their roots leads to greater personal success and the growth of local communities.
- 5. Self-Employment through the use of local knowledge and skills protects them from dependencies on the job market. It also protects them from any anxiety and stress that comes from layoffs as we can now see in the IT industry: Surging Layoffs plunge techies into depression

# **Program Vehicles**

The above trainings could be provided through hands-on experience, workshops, plays, practical demonstrations, field trips, etc. to make the learning fun and interactive.

# **Future Directions**



**Dr. Vikas Baniwal**Assistant Professor
Department of Educational Psychology
Delhi University

Dr. Baniwal is an ardent supporter of ESRO team activities. He provides consultancy on their website, presentations, and media coverage. He also provides editing on the content used in ESRO documents (i.e., reports, letters, etc.). His teaching and research interests include Research

Methodology, Educational Philosophy, and Educational Psychology. Reflecting on the project and its findings, Dr. Baniwal recommends the following future directions:

- Youth may be involved in the content development of future intervention programs/lessons about social and environmental issues.
- 2. Youth engagement about inter-religious issues may be useful in the present context.
- 3. E-Newsletters on the ESRO website may help in sharing success and struggle stories.
- 4. The organization may establish an experimental space for trial and testing of innovative practices and techniques for environment conservation and protection.
- 5. Youth exchange programs within and outside India may inspire young learners to take up the cause of environmental protection.
- 6. Some form of local seminar or symposium or round-table may help engaging local leaders and change makers.
- 7. A documentary about the project may help in information sharing and extending the program with partnerships with other organizations.
- 8. Some content in form of graphic stories or other interesting format may be developed to disseminate complicated ideas to younger youth.

# **Future Directions**



Ms. Gail Dube

Gail Dube is a retired history and English teacher and principal who worked for twenty-two years for the Mattole Unified School District in Northern California. She completed Tier I and II of her Administrative Credential at Humboldt State University and continues to take classes there through Osher Life Long Learning (OLLI) and Continuing Education. She is a member the California retired teachers association,

Cal RTA.

Gail Dube, along with her daughter visited India in March-April 2017, when the ESRO team invited her as a chief guest for the award ceremony of the students involved in the program. Gail presented on different works in progress around environmental sustainability in the United States and in India. Below are her notes/recommendations for future directions.

The comments from students and teachers contained in "An Evaluation of the Youth Adult Partnership in Community Engagement in Northern India" were thoughtful and contained many suggestions for improving the program. A reoccurring comment was "we need to do more hands on activities." This is a natural next step. It is good to raise people's awareness of environmental and social justice issues, but even better if people can see actions that improve the situation. "I truly hope that this collaboration between Humboldt State University and ESRO continues to be fruitful. In future, University students can be involved in this program. Engaging university students and staff will help facilitate this much needed next step of creating solutions to the environmental challenges of India", said Dube. Reading these comments sparked many ideas, which are shared as under.

The following is a list of suggestions for projects that students or schools could pick to do:

 Research what other organizations in India are doing in the areas of ecology management, wastewater management, solid waste management, agricultural management, and energy management. Some organizations or publications to research are:

Chintan; Environmental Research and Action -http://www.chintan-india.org 4

<sup>&</sup>lt;sup>4</sup> One group, which is working with waste management and many other ecological activities, is the Chintan; Environmental Research and Action. Several slides in my power point presentation talk about their activities. They are eager to work with schools.

Ganga Action Parivar (GAP) - <a href="www.gangaaction.org">www.gangaaction.org</a>, Facebook.com/gangaaction<sup>5</sup>
The Soil Guide to Ecological Sanitation<sup>6</sup>
Chetna Organic<sup>7</sup>

- 2. Create a presentation to share what other organizations are doing to help solve these problems.
- 3. Discuss the benefits and practicality of starting one of these projects and contact the organizations for information and help.
- 4. Research about water catchment systems, solar ovens and solar light. Decide if any of these systems could be useful at the school or in the villages.
- 5. Research and create a pamphlet comparing the advantages and disadvantages of organic gardening and the use of pesticides.
- 6. Build a compost bin at school and use the compost in the school garden.
- 7. Based on a quote from the document, "ESRO team should promote planting trees to villagers and the families with a gift." I was told that small trees could be donated to ESRO. Sell these trees for a nominal fee for people to give as a gift for special occasions, or to plant by their homes. Plant these trees around each school. Plant these trees along a creek bed, along a road near the school, or around homes to provide shade. Use the trees as awards to students, staff and community members.
- 8. Gather seeds from trees and start a nursey at school.
- 9. Start a school garden. Gather seeds from each different kind of plant to use in next year's garden. Share extra seeds with other schools. Give extra seeds to families to plant in their gardens. Sell seeds. Exchange seeds with other schools.
- 10. Start a reselling of textbooks and school uniforms for a small fee, while educating the benefits of reusing.
- 11. Organize a gathering in each village where students live. Students share their experiences with ESRO, show their certificates, and maybe even make suggestions to their village specific. See if a student representative might be able to attend and participate in village councils.

<sup>&</sup>lt;sup>5</sup> Ganga Action Parivar (GAP) is an organization at Parmarth Niketan Ashram in Rishikesh that is addressing these management issues. They provide filtered water inside all of the buildings and another filtered water source outside the ashram for public use. This eliminates the need for many plastic bottles. They built an ecological toilet at the local school and another one in the ashram. They have recycling bins in the buildings. They encourage sustainable agriculture that does not pollute the river or environment. They encourage people to plant trees, not cut them down. GAP's first three "T's" are toilets, trash and trees

<sup>&</sup>lt;sup>6</sup> The seven parts of *The Soil Guide to Ecological Sanitation* are on the two flash drives I left with Sanjay Rana and Ravindra Singh. The detailed plans are included on how to build and maintain these eco/san toilets. Students could read this guide and see if it could work in India or if the toilets they built at Parmarth Niketan would be better.

<sup>&</sup>lt;sup>7</sup> Chetna Organic is a group in Odisha that is working to enhance sustainable livelihood options for smallholder farmer families by collecting and savings seeds in pottery containers.

- 12. The report mentioned the inclusion of elders and younger students numerous times and these two groups should be included whenever possible.
- 13. Arrange transportation for elders to attend ESRO activities. Ask them to tell stories about the history of the land from their childhood and the changes they have witnessed over time.
- 14. Design hands on activities for younger children, i.e., younger students plant the seed in the pots that older students prepare. Older students develop art projects around environmental issues to do these with younger students, i.e. draw pictures of trees, clean water, or ways to recycle water. Make a school mural showing a healthy environment.
- 15. Once students have learned from an organization like Chintan how to recycle trash, they can set up their own recycling at their school. Students could then select an area near their school that is littered with trash, pick it up and recycle the trash. Students could also select a part of a stream, a part of the road, or another appropriate area to clean up trash.
- 16. Hold a trash-a-thon where students get pledges of money from merchants or residents near the area they were going to clean up trash. Be sure to take the before and after photos and put them in the newsletter.
- 17. Build a recycling toilet for a school or a village and come up with a way to maintain it. The July 2017 issue of National Geographic has an article, "A Place to G.," It talks about the need to build eco-friendly toilets in India and other countries. (Parmarth Niketan Ashram in Rishikesh built an eco-friendly toilet at the ashram and another for the local high school.)
- 18. My school used to have a watershed day every year. We used to invite students from all of the schools in our watershed to come to one school and participate in activities about protecting our river. ESRO students could organize a similar event; they could plan the day's activities for the younger student and then be the teachers for these activities.
- 19. Put up a suggestion box.
- 20. Students write about what changes they saw in themselves, their families, schools, and communities because of ESRO. Some of these could be included in the newsletter.
- 21. Finding meaningful work for villagers, especially women, is important. For example, a man in eastern India made a distiller that turns the pine needles into cooking gas. He exchanges containers of the gas for the needles the local women collect. They no longer have to gather wood. Instead, they gather pine needles, which also aid the forest.
- 22. Sew shopping bags from recycled material (clothing, i.e. old T-shirts) and sell them for a nominal fee for people to use instead of plastic.
- 23. Share the results of projects with other schools and community at an end of the year celebration. Be sure to invite the village elders to come.
- 24. Students at my school designed a mentor project that they completed the last month of school. The structure of our mentor projects might be useful. Students work with a staff member to

write up a proposal describing the purpose of the project, the process they will follow to complete the project, and the expected outcomes for the project. Students present their written proposals to a small committee that either approves them, or makes suggestions of improvements students need to make to their proposals to have them approved. Students then meet periodically with their staff adviser to discuss how their projects are doing. Students keep a journal about how their project is going, read by their staff advisor. The students present the information on their projects.

# **Future Directions**



Ms Alka Tomar, President, Centre for Environment Communication (CEC)

Ms Tomar has been conducting research, developing strategic mobilization approaches, capacity building programmes and implementing projects on range of developmental issues for nearly two decades. She has worked with a range of stakeholders and established innovative credible platform for

discourses with civil societies, media, youth, educators, students, policymakers, corporates, defense, jail inmates, and filmmakers. Formally as Founding Director of various environmental initiatives, she has been responsible for project planning, design, and management on various contemporary green issues. Ms Tomar has conducted research, feasibility studies, process documentation, monitoring & evaluation and implemented CSR programmes for UNICEF, UNESCO, Plan India, MDWS, Delhi Government, GIZ, several state governments, corporates and others.

She is the President of Centre for Environment Communication (CEC), an organization working to create awareness, appreciation, and behavioural change on sustainability issues. With a commitment to proactively raising awareness on environmental issues, CEC promotes engagement via activities seeking to engender positive behaviour change among people towards their natural environment.

Her doctoral research focuses from Stirling University, Scotland is on "Communicating Climate Change". She is also 2012 US International Visitors Leadership Programme (IVLP) Fellow. Ms Tomar is also member of IUCN Commission on Education and Communication. Ms Tomar has been trained as trainer for Gender empowerment programmes. Also she is the member of the complaint committee on sexual harassment of women at work place of IFFCO. She has more than 30 research papers/ articles to her credit and produced nearly 20 publications on range of issues. She has been in the jury and panel of various film festival, competition, award process. Based on the report review, following are Ms. Tomar's recommendations.

# Recommendations

 Involve youth in mobilizing community to take ownership of tangible properties and engage with them in its operation and maintenance such as adopting trees, water bodies. Youth are effective motivators with their enthusiasm, drive and fresh perspective and the best segment to achieve such tangible examples of ownership which will ameliorate the community conditions and lifestyle.

- 2. Identify activities which instill social values and a spirit of acceptance of all. Towards this, setting up village welfare committees involving youth and people from different segments of the community will help them to see that ideas, skills, and talents are not the prerogative of a particular caste or community and can come from anywhere.
- 3. Develop their capabilities as an effective support system for the elderly in their community. Activities must be identified to develop a youth body who can help especially the elderly with their needs such as filling up of certain forms, understanding schemes for their benefit and the like.
- 4. Sensitize youth towards removing entrenched gender attitudes especially towards girls and women. It is not enough to educate the girl child. A complementary atmosphere where the men in the society understand the need to recognize the potential of the girl child is needed to inculcate a spirit of respect for the girl child. Youth can be effective carriers and motivators of such change.
- 5. Set up youth clubs to motivate their understanding of the changes around so that they are not vulnerable to corrupt and dishonest practices. The youth clubs will hold regular discussion and debate sessions. This could be done as inter-school and intercollege events, too.
- 6. **Strengthen the moral fabric of youth** by involving them in events which focus on ethics, morality, values.
- 7. **Provide effective sports avenues to utilize their energy.** Engaging in sporting activities keeps youth away from anti-social activities.
- 8. **Action-based approach:** School engagement should be intensified with the focus on innovative hands-on solutions, to be taken at the level of the school and the students.
- **9. Reinforcing and consistent messaging:** Messages and information on the issues must be reinforced with strategic messaging programmes being undertaken at regular intervals.
- 10. **Creating Green Ambassadors:** At the level of youth and children, identifying and mentoring a select group to the next level is very important. This will build a cadre of enthusiastic and self-motivated individuals who will carry forward green and other social initiatives on their own.

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# **Appendix-A**

**Photographs of Youth Activities with ESRO Adult Partnerships** 













Street Plays (Nukkad Natak) on Various Social and Environmental Issues









School Youth Participating in Science Exhibitions and Presentations on Social Issues









Rallies and Advocacy Projects Run by Youth with Adult Guidance





**Guests at Award Ceremony for School Youth** 



Youth Engaged in Debates, Rallies, Poster Presentations, and Songs



# Appendix –B

### **ESRO Team Members**



# Hari Om Tyagi, President, ESRO

Mr. Tyagi has been working with ESRO since 2013. His responsibilities include maintaining and monitoring group activities. He works on writing proposals for various projects. He facilitates meetings and supports his colleagues in their work. He completed his Masters in Environmental Science from Gurukul Kangdi and his MPhil in Pollution Control from Nagaland Global University. As an environmentalist, he would like to see

the following change in India: along with agricultural and industrial development, he would like to collaborate nationally and internationally on environmental and sustainability issues. He would also like to see Environmental Education as a part of curriculum in schools in India.



# Sanjay Rana, Chief Functionary, Founding Member, ESRO

Mr. Rana, along with the ESRO president, looks after the organization's functioning, field work, and administration. His passion is to make changes in the society at baseline level—"if you teach the kids, they will bring a bigger change." He volunteers a lot of his time in organizing, with other volunteers, many programs around social and environmental issues in schools of Baghpat area. He graduated with a BA from Delhi University. He would like to see change in people's attitudes towards environmental

issues. He hopes to see some positive changes in environmental and sustainability policies in the coming years.



# Arun Malik, Technical Advisor, ESRO

Mr. Arun Malik is a teacher by profession. He creates all the presentations of educational programs of ESRO and delivers them in the schools selected by ESRO. He also takes care of the written work, especially in English for official purposes. He completed his Bachelor's in Science in 2000. Following that he got a Master's degree in English and his teacher's credentials (Bachelors of Education). Personally, he

hopes that youth should be able to develop a wider approach towards education as well as life.

### Devendra Kumar, Secretary, ESRO

Mr. Devendra Kumar's role in the organization is to support the functioning of ESRO. He earned a MSc in Organic Chemistry from Chaudhary Charan Singh University, Meerut, and a Masters in Philosophy in Pollution Control from Global Open University, Nagaland, India.

He is an accredited Functional Area Expert from Quality Council of India/NABET in the field of Water Pollution Monitoring and Prevention and Control. He worked on "National Environmental Awareness Campaign", by conducting many awareness programs for water/biodiversity conservation. He also works to study "Recycling and Integrated Management Practice to Control Electronic Waste from the Environment. He engages in business development activities for Environmental Division, communication with clients/partners, assessment of proposal specific resources requirements, and site identification survey.



### Bijendra Singh, Executive Member, ESRO

Mr. Bijendra Singh is a farmer in village Lasarra of Meerut district. He grows to feed his family. He likes to work for ESRO team as a volunteer because he thinks that they are likeminded individuals. "I would like to see changes in my community, so does ESRO. I go to the programs wherever they invite me to help". He tries to contribute to this work through his time and efforts. He would like to see more respect and support for farmers in the communities.



### Pitam Singh Verma, Consultant, ESRO

Mr. Pitam Singh Verma is a retired police inspector from U.P. police. He is a yogi, who teaches yoga to youth and adults. His goal is to give back to his community. He organizes "yajna" with ESRO team when he goes in schools. He engages school youth in character building and environmental and social issues. When people ask him how he feels about being active in his community, he says, "I feel like an 80 years old young boy. My hope for young generation is to live a life by which their grandchildren feel grateful. Save some resources for them."



### Ravinder K. Singh, Technical Advisor, ESRO

Mr. Ravinder Kumar is an organic farmer, a consultant in energy conservation, sustainable product design and pre-launch product quality testing. He actively volunteers as a technical advisor for the ESRO team. He feels passionate about the idea of engaging school youth in meaningful activities, where real life learning happens. He is a graduate in Biology, Technology (Electronics and Telecommunication); he also earned a diploma in Media, Public Relation and Effective Communication. He contributes his skills with the team members and school youth.



### Rakesh, Treasurer, ESRO

Ms. Rakesh makes sure that the finances of the organization run smoothly. Her background in Sociology helps her understand various social issues that our society is grappling with these days. She advises the team on gender and women empowerment issues. Her hope is to see the team successful in their endeavors.



### Devendra Rana, Volunteer, ESRO

Mr. Devendra Rana is a farmer by profession. He retired from a Community Organizing work where he used to help farmers, youth, and other community members seeking employment. He has played an instrumental role in helping farmers get forgiveness from their loan debt. He helps ESRO organization in their activities because it is a passion of his to see the communities thriving. Despite his ill health, he gets energized by this work.



### Harpal Singh Arya, Volunteer, ESRO

Mr. Harpal Singh is a Physical Education teacher. He considers himself a social worker who wants to bring change in the community by engaging youth in his efforts. He goes to various villages with the ESRO team and helps them in organizing their activities. He expects that youth should engage in health, environment and show enthusiasm in solving various environmental issues. He enjoys how people view this program very positively and look forward to their visits in their schools.



# Rajendra Tomar, Volunteer, ESRO

Mr. Rajendra Tomar is a retired teacher from an Inter College. His family responsibilities are fulfilled, so he has no obligation towards his children. But he sees his responsibilities towards school youth and his community. Therefore, he joined the ESRO team as a volunteer and he helps school youth and the ESRO team in organizing various youth activities. His wish is that more and more people should come forward to support the program.



# Satyaprakash Singh Chauhan, Volunteer, ESRO

Mr. Satyaprakash Singh is a retired teacher from High School. He used to teach Science and Math in school. He believes that there is a value to practical knowledge for youth—instead of rote memorization of facts, if youth get a chance to use hands on experiences, it would be great. This is exactly what ESRO is doing in schools. His expectations from the younger generation is that they engage in improving the conditions of their communities.



# Rampal Singh, Volunteer, ESRO

Mr. Rampal Singh is a retired principal from a High School. "It is my responsibility as a senior citizen to teach my younger generation about the social and environmental responsibilities. I think school youth are the best people to send this message as they are young, more open minded, and easy to mold. They also have great ideas. We have to understand that our resources are limited and one day they will deplete", says Mr. Singh.



### Charan Singh Malik, Volunteer/Song Writer, ESRO

Mr. Charan Singh Malik is a retired staff member from the India Revenue department. He volunteers with the ESRO organization in schools. He is a song writer and likes to write about social and environmental issues as well as about India in general. His goal is to motivate the school youth by using music. He hopes to see them taking responsibility for their environment and engaging community members in improving the communities.



### Prahlad Tomar, Technical Advisor, ESRO

Mr. Prahlad Tomar is a head constable in the technical section of crime branch, Delhi police. He provides technical assistance to the ESRO team in their programs. His work hours are at night, so he volunteers for the ESRO team during the day. "It feels good to do something for the youth of my community. I am really impressed to see their engagement in this program", says Mr. Tomar.



#### Dr. Omvir Singh, Volunteer, ESRO

Mr. Omvir Singh is one of the senior citizens in the team; he guides his younger colleagues on various programming aspects in school. He also organizes hawan when needed. He also gets a chance to interact with youth in schools. "The team is doing great work and I am their cheerleader", says Dr. Singh.



#### Prakash Singh Malik, Volunteer, ESRO

He is a resident of village Silana, district Baghpat (India). He is a farmer who has started to grow his crops without chemicals (i.e. insecticides and pesticides) in 2004. He grows wheat, sugarcane, sorghum (jowar), vegetables for his family's consumption, and fodder for his animals. His farm is organic certified. He uses his creativity to make compost by using food, plant, and animal waste. Omprakash Singh believes that lack of "good food in the region is one of the underlying causes of health issues, such as arthritis, diabetes, breathing problems, and cancer. "We are eating mere chemicals with our food; it changes our genetics and we are not only harming our bodies,

we are also passing this curse to our next generation", said Malik.

In his time outside of farming, Omprakash Singh volunteers with the ESRO NGO team by going in different villages and schools to educate youth about environmental and social issues.

# **Appendix-C**

#### **Youth Participation Survey**

This survey is being used to get your ideas about the program run by Environmental and Social Research Organization (ESRO) and Child Development, Humboldt State University collaboration, in your school. It is not a test and there are no right or wrong answers. Please take your time and be sure to answer each question based on what you really think.

Please do NOT put your name on this survey. Your answers are completely private.

1) Please check the box below that is closest to how you feel about this program.

Items	Yes	Kind of	Not Really
a) There are interesting activities in this program			
b) I learn about new things due to this program			
c) I like being a part of this program			
d) I tell my friends about this program			

#### 2) Please check the box below that is closest to how you feel about ESRO staff members

Items	Yes	Kind of	Not Really
a) Staff are encouraging			
b) Staff present useful information			
c) Staff expect me to try hard and do my best			
d) Staff help me feel important			
e) Staff help me believe that I can change my			
community			
f) Staff gives me lots of support			
g) Staff ask me to plan, choose and lead activities			
h) Staff treat all youth fairly			

### 3) Working with ESRO team on Environmental and Social Issues has helped me to $\dots$

Items	Yes	Kind of	Not Really
a) Improve my grades in school			
b) Improve my grade in language arts (reading/writing)			
c) Improve my grade in math			
d) Improve my grade in science			
e) Try harder in school			
f) Spend more time doing my homework			
g) Participate more in class activities			
h) Become more interested in going to school			
i) Care more about my school			
j) Get along better with my classmates			
k) Get along better with my teachers			

### 4) Working with ESRO team on Environmental and Social Issues has helped me to ...

	Items	Yes	Kind of	Not Really
a)	Spend more time volunteering or helping others in			
	my community			
b)	Spend more time looking for opportunities to help			
	others in my community			
c)	Feel a stronger connection to my community			
d)	Feel better about myself because I help others			

#### 5) Working with ESRO team on Environmental and Social Issues has helped me to $\dots$

	Items	Yes	Kind of	Not Really
a)	Know more about people of other cultural			
	backgrounds			
b)	Know more about people of other economic			
	background			
c)	Try harder not to judge people based on their skin			
	color			
d)	Try harder not to judge people based on their			
	economic background.			
e)	Be more aware that I sometimes have ideas about			
	people that are not true (incorrect or mistaken)			

### 6) Working with ESRO team on Environmental and Social Issues has helped me to $\dots$

Items	Yes	Kind of	Not Really
a) I know more about my own cultural background			
b) I feel more connected to my family's cultural			
traditions			. 32
c) I feel more pride in my own culture.			
d) I have more respect for members of my own			
community			

### 7) Working with ESRO team on Environmental and Social Issues has helped me to $\dots$

Items	Yes	Kind of	Not Really
a) I get along better with people of my age			
b) I am better at making friends			
c) I am better at telling others about my ideas and			
feelings			
d) I am better at listening to other people			
e) I work better with others on a team			
f) I make better decisions			
g) I am better at planning ahead			
h) I am better at setting goals			
i) I am better at solving problems			
j) I am more of a leader			
k) I am better at taking care of problems without			
violence or fighting.			

## 8) Working with ESRO team on Environmental and Social Issues has helped me to ...

Items	Yes	Kind of	Not Really
a) Better say "no" to things I know are wrong			
b) Stay out of trouble			
c) Stay away from tobacco			
d) Stay away from alcohol			
e) Stay away from drugs			
f) Stay away from violence and fighting			

### 9) As a result of working with ESRO team on Environmental and Social Issues......

Items	Yes	Kind of	Not Really
a) I care more about other people			
b) I care more about the feelings of other people			
c) I am better at standing up for what I believe			* X
d) I tell the truth more often even when it is hard			
e) I am better at taking responsibility for my actions			
f) I am more interested in community and world			
problems			
g) I am better at speaking up for people who have been		IA	
treated unfairly.			

# 10) Working with ESRO team on Environmental and Social Issues has helped me to $\dots$

Items	Yes	Kind of	Not Really
a) Feel better about myself			
b) Feel I have more control over things that happen to			
me			
c) Feel that I can make more of a difference			
d) Learn I can do things I didn't think I could do before			
e) Feel better about my future			
f) Feel I am better at handling whatever comes my way			

### 11) As a result of working with the ESRO team on Environmental and Social Issues....

Items	Not	Some	Often	Yes	Quite a
- 01	at all				Bit
a) In the house that I live, we make effort					
to reduce electricity usage.					
b) In the house that I live, we make effort					
to reduce water usage.					
c) I make an effort to cut down on					
driving to save petrol.					
d) I prefer to ride on my cycle or a public					
bus rather than a car to get somewhere.					

e) I plant at least one tree in a year			
f) I keep using my things (books, clothes,			
play material) for long period of time.			
g) I prefer to buy second hand books to			
save papers, costs, and trees.			

#### 12) As a result of working with the ESRO team on Environmental and Social Issues......

Items	Disagree	I am not Sure	Agree
a) I feel that people will have to change			
their buying habits and way of life to			
correct our environmental problems			
b) I believe that government should take			
action to solve our environmental		Ca	
problems even if it means that some of			
the products that we use now (such as			
polythene bags, plastic, Styrofoam,			
etc.) would have to be changed or			
banned.			
c) I think that government should place			
higher taxes on products that cause			
pollution in their manufacture or			
disposal, so that companies will be			
encouraged to find better ways to			
produce them.			
d) I believe that government should take			
steps to deal with our environmental			
problems, even if it means most of us			
pay higher prices or taxes.			

# 13) As a result of working with the ESRO team on Environmental and Social Issues, I am aware that......

Items	Disagree	I am not Sure	Agree
a) In general, pollution has increased in the			
India in the past 20 years.			
b) India needs growth to survive, and that is			
going to require some increase in			
pollution.			
c) Some of our religious practices pollute		10	
our natural resources.			) `
d) Pollution in our country is killing many			
birds and animals.			
e) The dangers of pollution are not really as		0.7	
great as government, the media, and			
environmental groups would like us to			
believe.			

# 14) As a result of working with the ESRO team on Environmental and Social Issues, I am aware that......

Items	Disagree	I am not Sure	Agree
a) There will probably be more shortages in			
the future, so Indians will have to learn			
to be happy with fewer "things."			
b) Some of the resources are scarce and we			
may soon deplete them.			
c) The drinkable water on our earth is a			
very small percentage of our water			
resources.			

15) When you are older, do you expect to own more possessions than your parents do now, about the same, or less?
☐ Much less
☐ About Same
☐ Much more than parents
16) Compared with your parents, what is the smallest amount that you could be content or satisfied to own?
☐ Much less
☐ About Same
☐ Much more than parents
17) Having lots of money is important to you in your life.
☐ Not important
☐ Somewhat Important
☐ Important
☐ Extremely Important
18) What changes do you see in yourself as a result of working on this program with the ESRO team?
19) What does it mean for youth to be leaders?

0) W	hat do you like best about working with the ESRO team on environmental and socia
iss	ues?
1) If	you could change one thing at ESRO what would it be?
1) Ha	ow old are you?
	13 years
	14 years
	15 years
	16 years
	17 years
	Older than 17 years
	Q1
) <b>\</b> \	hat do you want to become when you grow up?
<i>2)</i> **:	aat do you want to become when you grow up:
	<del></del>
3) Ar	e you a girl or boy?
	Girl
	Boy

24) Father's occupation:
25) Mother's occupation:
26) Do your grandparents live with you? Yes/No
27) How many siblings do you have?
28) Academic Percentage in 8 <sup>th</sup> grade:
29) Academic Percentage in 9 grade:
30) Academic Percentage in 10 <sup>th</sup> grade:
31) Name of your school:
51) Ivaine of your school:
32) Name of your village:
32) Ivalile of your village:
33) Does your village has access to drinking water?
33) Does your vinage has access to drinking water:
34) Do you have electricity in your village?
54) Do you have electricity in your vinage.
35) What are some of the social issues in your village/town?
36) What are some of the environmental issues in your village/town?
37) What are some of the changes that you would like to see in your community/in your
village/town?
38) How would you like to achieve them?

39) What did you learn from participating in the ESRO project last year?
40) How has the participation in ESRO project last year changed your leadership skills?
10) 110 ii iii die participation in 2520 project last year changed your reduction p sinns.
- 0,5
41) \$\$704 b
41) What has changed since you participated in the project? In you? In your school? In
your family? In your community?
<i>O</i> 1
42) We are hoping that you will be able to serve as mentors for the next cohort. What are
some of the things that you would like to tell the next round of youth? What are some of
the suggestions for ESRO team?
43) Who are your role models? Why?

44) What is the value of education in your mind?	
477 177 41 1 1 4 4 4 1 1 1 4 1 4 1 4 1 4	
45) We think that youth should actively participate in environmental and social issue	S.
What are your thoughts?	
46) How can we improve our communities? Thoughts? Ideas?	
40) 110 w can we improve our communities. Thoughts: fueas.	
1.60	

# **Appendix-D**

ESRO/Child Development, HSU Interview Protocol for

School Principals/Class Teachers
Tell me about your experience working with the ESRO team in your school.
What are your expectations and hopes for your youth as they go through this
program in learning about environmental and social responsibilities?
70
What are some of the changes you see as a result of the ESRO team involvement in your school, in youth, and in teachers?
What are some of the challenges that you face in participation? What are some of the things that can be changed?
20
What are some of the perceptions of parents of youth who are involved in this program?

7.	What roles do you think are appropriate for youth in this program?
3.	What are some of the social issues in the villages/towns around your school?
).	What are some of the environmental issues in the village/town around your school?
l <b>0.</b>	What are some of the changes that you would like to see in these communities, villages, and towns?
	. 6
11.	We think that youth should actively participate in environmental and social issues. What are your thoughts?
	Demographics
	Demographics

13. What is the HIGHEST level of education you	have COMPLETED? (Choose ONE best
answer)	
Not yet graduated high school	
High school diploma	
☐ Vocational training or certificate	
Some college	• •
☐ Bachelor's Degree	
☐ Master's Degree	
Doctorate	
	>
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# **Appendix-E**

### **ESRO Team Survey**

Please share your thoughts about your work with schools in this area. Please check the answers for the following items. There is no right and wrong answer.

How much do you agree or disagree with the	Strongly	Disagree	Neutral	Agree	Strongly
following statements?	disagree				agree
1. I feel connected to the youth in school					
2. I collaborate with school principal and					
teachers in school.					
3. Working with youth is central to my work					
philosophy.		Ca			
4. It is very important to me to be involved in					
this program.		$\mathcal{O}$			
5. This program is a good place to be.					
6. There are lots of things happening in this					
program that people feel good and excited					
about.					
7. Youth and adults in this program really seem					
to like each other and have fun together.					
8. I feel that I am making an important					
contribution to the society.					
9. I face many challenges in this work.					
10. My work gives me a lot of satisfaction.					
11. As a result of this program, I feel that I have					
started understanding youth better.					
12. I see a lot of potential in school youth in					
making change in their communities.					
13. As a result of this program, I have learned					
many organizing skills.					
14. I feel productive when I share the knowledge					
and skills with younger generation.					
15. I see this work as an opportunity to make a					
difference in my community.					

16. I feel better about myself because I help					
others.					
17. With this work, I have started respecting					
youth more.					
18. As a result of this work, my communication					
skills have improved.					
19. It is difficult to maintain balance between my					
paid work and this work.					
20. This work provides me satisfaction.					
21. What role do you play in this program?					
		5			
22. List three things that can make your exp	erience moi	re enjoyal	ole with so	chool you	th.
	willogog/tow		vou worl	?	
23. What are some of the social issues in the	vmages/tow	ns wnere	you worr		
23. What are some of the social issues in the	vinages/tow	'ns wnere	you worr		
24. What are some of the environmental issue					a?

	What are some of the changes that you would like to see in these communities,
	villages, and towns?
	mages, and towns.
	How would you like to achieve them?
	What has changed since you participated in the project? In you? In the schools? It your communities?
	your communities?
	your communities?
	wour communities?  We think that youth should actively participate in environmental and social issues
	wour communities?  We think that youth should actively participate in environmental and social issues
	your communities?  We think that youth should actively participate in environmental and social issues
	your communities?  We think that youth should actively participate in environmental and social issues
	wour communities?  We think that youth should actively participate in environmental and social issues
	wour communities?  We think that youth should actively participate in environmental and social issues
	We think that youth should actively participate in environmental and social issues What are your thoughts?
•	We think that youth should actively participate in environmental and social issues What are your thoughts?

Demographics
What is your gender?
Male Female
- Annual - Annual
What is the HIGHEST level of education you have COMPLETED? (Choose ONE best
answer)
Not yet graduated high school
High school diploma
☐ Vocational training or certificate
Some college
Bachelor's Degree
Master's Degree
Doctorate
$O_1$

# **Appendix-F**

#### Parents' Permission

Evaluation Proposal Yuva Shakti (Youth Power): Youth Adult Partnerships (Y-AP) in Community Engagement in Northern India

Dear Parent,

My name is Dr. Meenal Rana. I work as an Assistant Professor in Child Development at Humboldt State University, Arcata, California, USA. I am working with Environmental and Social Research Organization (ESRO). As you may be well aware, ESRO is organizing various environmental and social programs in your child's school.

We are interested in learning about your child's experiences regarding their participation in different programs organized by ESRO. We request your permission for your child to participate in this study.

If you give permission, your child will be asked to participate in a 30-45 minutes survey with short and open ended questions. The participation is voluntary (which means your child can choose to not participate or may stop participating at any time). The child can say no to any question at any time.

We will not use your child's name on the survey or share any information on the survey with anyone. The data will be kept in a locked filing cabinet in my office at Humboldt State University, Arcata, California, for three years after study closes.

There is no direct benefit to your child from participating in this study. But they will have an opportunity to share any information that they like to share. This information will help us improve the program in future. There are no money or gifts for this participation. There are no risks involved in the study.

<u>Please let your school principal know if you DO NOT want your child to participate. If you do not tell them, we will consider it as your permission.</u>

Contact information for questions and concerns. If you have concerns or questions about this

study, please contact me

Dr. Meenal Rana

219 HGH, #1 Harpst Street,

Humboldt State University,

Arcata, CA 95521

Email: Meenal.rana@humboldt.edu

Phone: 001-707-826-5855.

If you have any concerns with this study, contact the Chair of the Institutional Review Board for the Protection of Human Subjects,

Dr. Ethan Gahtan, at eg51@humboldt.edu or 001-707- 826-4545.

If you have questions about your rights as a participant, report them to the Humboldt State University Interim Dean of Research,

Steve Karp, at karp@humboldt.edu or (707) 826-5169.

Cc: School Principal

#### Youth's Participation Permission

Evaluation Proposal Yuva Shakti (Youth Power): Youth Adult Partnerships (Y-AP) in Community Engagement in Northern India

Dear Youth,

I am interested in learning about your experiences working on different programs related to environment and various social issues organized by Environmental and Social Research Organization (ESRO) in your school last year.

Your parents are okay with you participating in this survey.

If you agree to participate, you will be asked to participate in a 30-45 minutes survey with short and open ended questions. The participation is voluntary (which means you can choose to not participate or may stop participating at any time). You can say no to any question at any time.

Your name will not be used on the survey; your personal/school information will not be shared with anyone including the ESRO team, teachers, and parents. The data will be kept in a locked filing cabinet in my office at Humboldt State University, Arcata, California, for three years after study closes.

There is no direct benefit for participating in this study. This information will help us improve the program in future so that the organization can provide better programming in your school. There are no money or gifts for this participation. There are no risks involved in the study.

You can provide verbal permission before participating in this study.

**Contact information for questions and concerns.** If you have concerns or questions about this study, please contact me

Dr. Meenal Rana 219 HGH, #1 Harpst Street, Humboldt State University, Arcata, CA 95521

Email: Meenal.rana@humboldt.edu

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If you have questions about your rights as a participant, report them to the Humboldt State University Interim Dean of Research.

Steve Karp, at karp@humboldt.edu or 001-707-826-5169

#### **ESRO Adult Informed Consent**

# Evaluation Proposal Yuva Shakti (Youth Power): Youth Adult Partnerships (Y-AP) in Community Engagement in Northern India

Dear Colleague,

I am interested in learning about your experiences working with school youth's experiences regarding their participation in different programs facilitated by your organization. If you agree to participate, you will be asked to participate in a 30-45 minutes survey with short and open ended questions. The participation is voluntary (which means you can choose to not participate or may stop participating at any time). You say no to any question at any time. Your name will not be used on the survey; your information will not be shared with anyone. The data will be kept in a locked filing cabinet in my office at Humboldt State University, Arcata, California, for three years after study closes.

There is no direct benefit from participating in this study. This information will help us improve the program in future. There are no money or gifts for this participation. There are no risks involved in the study.

You can provide verbal permission before participating in this study.

**Contact information for questions and concerns.** If you have concerns or questions about this study, please contact me

Dr. Meenal Rana 219 HGH, #1 Harpst Street, Humboldt State University,

Arcata, CA 95521

Email: Meenal.rana@humboldt.edu

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If you have questions about your rights as a participant, report them to the Humboldt State University Interim Dean of Research,

Steve Karp, at karp@humboldt.edu or (707) 826-5169.

# School Principal/Teacher Informed Consent Evaluation Proposal Yuva Shakti (Youth Power): Youth Adult Partnerships (Y-AP) in Community Engagement in Northern India

Dear Principal/Teacher,

I am interested in learning about your experiences working with 9<sup>th</sup> and 10<sup>th</sup> graders last year, who participated in different programs related to environment and various social issues organized by Environmental and Social Research Organization (ESRO) in your school.

If you agree to participate, you will be asked to participate in a 30-45 minutes survey with short and open ended questions. The participation is voluntary (which means you can choose to not participate or may stop participating at any time). You can say no to any question at any time.

Your name will not be used on the survey; your personal/school information will not be shared with anyone. The data will be kept in a locked filing cabinet in my office at Humboldt State University, Arcata, California, for three years after study closes.

There is no direct benefits from participating in this study. This information will help us improve the program in future so that the organization can provide better programming in your school. There are no money or gifts for this participation. There are no risks involved in the study.

You can provide verbal permission before participating in this study.

**Contact information for questions and concerns.** If you have concerns or questions about this study, please contact me

Dr. Meenal Rana 219 HGH, #1 Harpst Street, Humboldt State University,

Arcata, CA 95521

Email: Meenal.rana@humboldt.edu

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