EMERGENCE OF GREEN AMBASSADORS

a study on local biodiversity

KINDER NOT HILFE

CEFHA

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a study on local biodiversity.

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By,
Sushant
Stanza Documentation

Foreword

The following document is a detailed depiction of the joint efforts by the green ambassadors, the community and CeFHA team to evaluate and protect the existing ecosystems that normally support the livelihood security of the people in the area. During our experience in Documenting the process from the initiation of study till date has been a very rich experience in terms of knowledge and practicality of the girth in the situation which we possibly put ourselves in. It was indeed very heartening to see a group of motivated children taking up an enormous responsibility of helping themselves and their communities understand and evaluate the status of present day climate and environment dynamics.

The book also emphasizes on the various capacities the children inculcated from many learned laureates who have taken out time from their busy schedule and helped the study group to meticulously strategize the various components this study required. The training programs of Prof. K.C. Malhotra, Chairman- Ecosystem department of MoEF, have formed the backbone and the basis of technical aspects that show up in the book. It was also very fascinating to have Mr. Rathnam, Social activist to strengthen the conceptual basis of critiquing the efficacy of modern day development. The inputs of Dr. Rajasekhar and Dr. Venkiah have helped the children capacitate with the current day chaos in climate change and also undestanding the floral resources of the area.

This book actually portrays, the various steps the children were involved during the process of the study. It also brings out the learning's by the children during the various events that have been organized by CeFHA in order to sensitize the children and the communities on the isssues of biodiversity and the importance to preserve it. It was a very gallant effort by CeFHA team to actually commission a study and auditing the existing resources in the selected environment to the children, without the committed cooperation and positive attitude of the Staff members the study would not have been as successful.

The objective of this book is to introduce the reader to a range of successful events that were carried out by the children. The areas that are covered in this book are the general awareness and the need to protect the biodiversity, training programs the children were a part of, case representations by the children on the ground reality, the different networks and movements the children were a part of a detailed study of various subjects that portray the biodiversity situation in the selected areas of forests, water bodies and agriculture. The book also evaluates the situation and gives a conceptual understanding basing on the results of the study.

Dr. Sasi Prabha
Director (CeFHA)

Chapter One

1. Introduction

1.1 The Context

Children are the building blocks of the future; it is best left to them to understand the impact and chaos the future climate is going to have on them. It is very important for them to take up activities to understand various dimensions of biodiversity, ecosystems and the impact of climate change on Biodiversity and livelihood security of poor.

Centre for Humanitarian Assistance Trust (CeFHA) has been working in Kotauratla block of Visakhapatnam District, Andhra Pradesh since the last nine years. The reasons for choosing this area for the long-term intervention were the following

- Kotauratla area has thick forests and river tributaries; but during the last 5 years the forest cover has been depreciating and much of the flora and fauna is disappearing in the local areas.
- The communities are experiencing unstable temperatures, erratic rain fall, droughts and the depletion of ground water.
- These factors have severely impacted the livelihood security of a majority of people especially the marginalized people.

Climate change is already impacting Biodiversity and is projected to become progressively a more significant threat. It is also expected that many species will be unable to keep up to the changes caused by climate and as a result will be at an increased risk of extinction. The resilience of ecosystems has been also severely threatened. Determined and appropriate actions will enable the communities to reduce the impact of climate change.

There is an existing river Varaha in Kotauratla which runs from the east to west. This river has a forest cover on its left bank. The forest harbors a wide variety of wild animals like boars, goats, rabbits, stag, reptiles, birds and insects. The floral diversity is also very rich, there are different kinds of trees, shrubs, herbs and creepers. The river in itself has a lot of variety of fish and other aquatic biodiversity.

1.2 Genesis of the Project

CeFHA submitted to Kinder Not Hilfe, Germany (KNHG) a project proposal entitled "Children study project on biodiversity and climate change action" in the year 2009. KNHG sanctioned the project in 2010.

1.3 Project Design

1.3.1 The Objective of the Project were:

- To Capacitate children on Global warming and its effects and ecological rights of children
- To disseminate the ecosystem knowledge and benefits of protecting the forest cover and river water sources
- To sensitize the Children on different ecosystem research and purpose of doing it.
- To protect and strengthen the existing fauna, flora on land as well as in water.
- To help the children understand the impact of water pollution and the importance of neutralizing it.
- To develop evaluation methods of hydrological cycle Focusing on the relationships and Processes within the ecosystems.
- To Use adaptive management practices like diverse agro forestry & agro biodiversity and sustainable management of grasslands.
- To Develop Child Eco Clubs and Restore the Traditional knowledge & intellectual property rights

1.3.2 Project Components with reference to the Activities:

In order to achieve the above objectives a number of activities described below were designed, planned and executed.

A. Capacity building of children:

One hundred children were selected to be a part of the capacity building program. The program was designed to build the capacity of children in various aspects of biodiversity, ecosystems and climate change.
Details of this program are given in chapter 2.

B. Campaigns on Global warming& Climate change

The capacities of the children were built to take up initiatives of spreading awareness on climate change among the local communities. The various training programs that were conducted have helped the children in increasing their technical knowledge, methods of generating awareness and campaigns.

C. Child Eco clubs

Five eco clubs in schools of five different villages have been established. These clubs were established primarily to initiate activities in aspects such as social, educational, health and eco development. The main activities of the eco clubs are

- To motivate the children to keep their surroundings green and clean by undertaking plantation of trees.
- To compost horticulture waste to use it as a manure for school gardens.
- To induce the students to create awareness among public and sanitary workers to stop the indiscriminate burning of waste which causes respiratory diseases.
- To sensitize the children & students to minimize the use of plastics/polythene bags, and not throw them in public places. Also, to encourage the use of healthier alternatives like jute, cloth and paper bags, etc.
- To arrange other awareness programmes such as Quiz, Essays, Painting competitions, rally, role-plays etc. focusing on various environmental issues.
- To celebrate various environmental days, weeks like Vanmahostav, Wildlife Week, Earth Day, and World Environment Day etc.

D. Children Networks & Climate Change Workshops & Exposures

The child networks of 24 villages were teamed up to discuss Child ecological rights and the facts of deteriorating climate and the impacts that could be surfaced in their generations to come. The children were the major participants in the climate change workshops and were sensitized on various aspects of this topic.

"Scientists expect a 3.5° F increase in average global temperatures by the year 2100, resulting in the warmest temperatures in the past million years". - this would trigger many more natural disasters

Emergence of Green Ambassadors

The various capacity building programs (workshops on different topics of biodiversity and climate change, exposure visits, participation in seminars, conferences) were designed and implemented to create and empower green ambassadors in Kotauratla area. Altogether 685 school going children (F-356, M-329) belonging to 24 villages were trained.

The main purpose for creating Green Ambassadors, was that they would undertake campaigns and advocacy programs in primarily Visakhapatnam district

Objectives of the Present Document

This document incorporates a detailed description of the various activities undertaken by the children, the community and CeFHA team, to enable the reader to understand the range of successful events that were carried out by the children. The book describes the various capacity building programs that were initiated during the implementation of the project. The book also gives an idea of the future vision of CeFHA in respect of continuing programs with school children in Kotauratla.

The contents of the book have been organized in four chapters:

Chapter 1: Gives an overview of the genesis of the project, as well as the objective of the book.

Chapter 2: Presents the details of the research studies carried out by the children in documenting both the domesticated and wild biodiversity in different habitats of Kotauratla.

Chapter 3: Gives details of various campaigns organized by the children

Chapter 4: Gives the future vision of continuing work with the children in Kotauratla.

Biodiversity in India! Detailed information of Species

India contains a great wealth of biological diversity in its forests, its wetlands and in its marine areas. This richness is shown in absolute numbers of species and the proportion they represent of the world total.

India has a great many scientific institutes and university departments interested in various aspects of biodiversity. A large number of scientists and technicians have been engaged in inventory, research, and monitoring. The general state of knowledge about the distribution and richness of the country's biological resources is therefore fairly good.

Endemic Species

India has many endemic plant and vertebrate species. Among plants, species endemism is estimated at 33% with 140 endemic genera but no endemic families (Botanical Survey of India, 1983). Areas rich in endemism are north-east India, the Western Ghats and the north-western and eastern Himalayas. A small pocket of local endemism also occurs in the Eastern Ghats (MacKinnon & MacKinnon, 1986). The Gangetic plains are generally poor in endemics, while the Andaman and Nicobar Islands contribute at least 220 species to the endemic flora of India (Botanical Survey of India, 1983).

Threatened Species

India contains 172 species of animal considered globally threatened by IUCN, or 2.9% of the world's total number of threatened species (Groombridge, 1993). These include 53 species of mammal, 69 birds, 23 reptiles and 3 amphibians.

"EMERGENCE OF GREEN AMBASSADORS"

Chapter Two

1. " Documenting Local Biodiversity"

As noted above the main objective of the project was to empower school children in different dimensions of climate change and biodiversity, in order to achieve this, a comprehensive strategy was designed and developed in consultation with school children, communities, school teachers and government officials. The activities planned were:

i. Documentation of local biodiversity
ii. Impact of climate change on biodiversity and livelihoods
iii. Generating awareness among different stakeholders – school children and staff, communities and government personnel and
iv. Future action plan

This chapter however deals only with component 1 and 2 above.Below are described various activities and programs undertaken in respect of the above.

i. Documentation of local biodiversity:
For this the following activities were planned and implemented:

- Capacity Building of the Green Ambassadors
- To identify suitable and appropriate research topics related to biodiversity and climate change
- To develop and design methodologies for undertaking research

Capacity Building of the Green Ambassadors

For building the capacity of Green Ambassadors in biodiversity and climate change a workshop was organized on september 10-11 2010 at Kotauratla, under the guidance of Professor K. C. Malhotra.The approach adopted was interactive and participatory.

The training commenced by explaining the definition and importance of biodiversity to Human beings; it was explained that Biodiversity includes all living forms – plants, animals and micro organisms. Protection of the Diversified biological elements is very important at this conjuncture, to have a well balanced ecosystem of which all the human beings are a part. Bio diversity is very crucial as it strongly affects our social relation. In India alone we have 125,000 recorded species which forms a vast complex web directly or indirectly linking it with the smallest to the largest organism. Apart from the importance that biodiversity holds to humans, another prime reason to conserve the various life forms is their inherent 'Right to Live'. Whereas, in Today's world we see development only through the destruction of nature. These developmental measures may be necessary for the hard hearted city dwellers; but for the soft hearted inhabitants living in rural India, and who constitute to about 74% of the total Indian population, they traditionally believe in protection of all live forms.

"The year 2010 has been declared as the International Year of Biodiversity yet very little has been so far done to halt the global biodiversity loss. According to the current estimates more than 25000 species are driven to extinction every year."

Prof K.C Malhotra training the Green Ambassadorson bio diversity study

Dr Rajshekar demonstrating field documentation

Resource persons training green ambassadors

Why Biodiversity needs to be protected?

- The plants, animals and invisible life forms around us, sustain and improve the quality of air, water and soil for human beings.
- Wild plants and animals constitute a very important part in the dietary system of the rural population. These foods are very important as they are also known as famine foods, and are used when crops fail.
- 3/4th of the world's population is directly dependant on plants and animals for their medicinal needs according to WHO (World Health Organization). Even the GDP is made up of economic benefits derived from wild species and active ingredients from plants.
- Agricultural diversity is very important in terms of providing a variety of food, ensuring that micro and macro nutrients are made available to be a part of the diet of people.
- Fisheries are a very important part of marine biodiversity and it contributes to 100 million tons of food worldwide.
- Climate change is the present hot topic and we are all well aware of the climate change and its various stages of warming and cooling.

The present trend towards climate systems and weather patterns is human induced and we are already suffering the impact of intensification of untimely rainfall, drought, Tsunami, floods, Quakes, cyclones & related health problems.

We are increasing the use of fossil carbon such as coal, oil and gas, which were formed over millions of years. Today the world burns 400 years worth of this accumulated, biological matter every year; which is 3 to 4 times more than that was burnt in 1956. People do not realize that plants are a renewable resource, whereas fossil carbon is not; as it take millions of years to renew the earth's supply of coal and oil.

Before the industrial revolution began, there were 580 billion tones of carbon, which has been released into the atmosphere. That accumulation, the result of burning fossil fuels, is causing the climate change crisis. It is our responsibility to tackle this problem if we are to survive. In this connection, the project has taken a small step to generate awareness in the community through children's Initiative on conservation of Biodiversity.

Biodiversity is the alternative to fossil carbon. Everything that we derive from the petrochemical industry has an alternative in biodiversity. The synthetic fertilizers and pesticides, the chemical dyes, the sources of mobility and energy, have sustainable alternatives in the plant and animal world. These alternatives can also be replaced with nitrogen fixing leguminous crops, vermicompost and vegetable dyes.

Today it is important to create biodiversity ecosystems, because only they offer the potential to adapt to an unpredictable climate and provide alternatives that anyone can afford. It is the time and need to understand the renewable carbon cycle of biodiversity.

The mass extinction of different species is due to humankind's unsustainable methods of production and consumption and according to the World Resources Institute, the biggest cause of extinction is loss of habitat. - This invariably explains the domination humanbeings have on various eco systems benifiting his existence in luxury.

IMAGES PORTRAY DIFFERENT SPECIES

However keeping in view the capacity of the children it was suggested that biodiversity could be studied under the following headings

1. Domesticated Biodiversity
   a. Plants
   b. Animals
2. Wild Biodiversity
   a. Plants
   b. Animals
3. Aquatic Biodiversity
   a. Plants
   b. Animals

1. Domesticated biodiversity:

During the evolutionary history, humans have learnt to domesticate a number of plants as well as animals. This diversity could be studied under the following broad categories:

- Agriculture
- Horticulture
- Ornamental Plants
- Domesticated Animals

2. Wild life Biodiversity:

Wild plants and animals occur both on land as well as in water bodies and therefore could be studied under the following two categories

- Terrestrial, and
- Aquatic.

In respect to climate change being a complex phenomenon, it emerged during the workshop that for the time being it will be sufficient to focus on observing changes that are occurring in the domesticated and wild biodiversity especially among the flowering plants. The focus should be to document shifts in the onset of flowering and the productivity.

To identify suitable and appropriate research topics related to biodiversity and climate change

After detailed deliberations the children identified the following research topics to be undertaken.

1. To document local biodiversity in select villages.
2. To document changes that has occurred in local biodiversity in select villages.

1. To document local biodiversity in select villages:

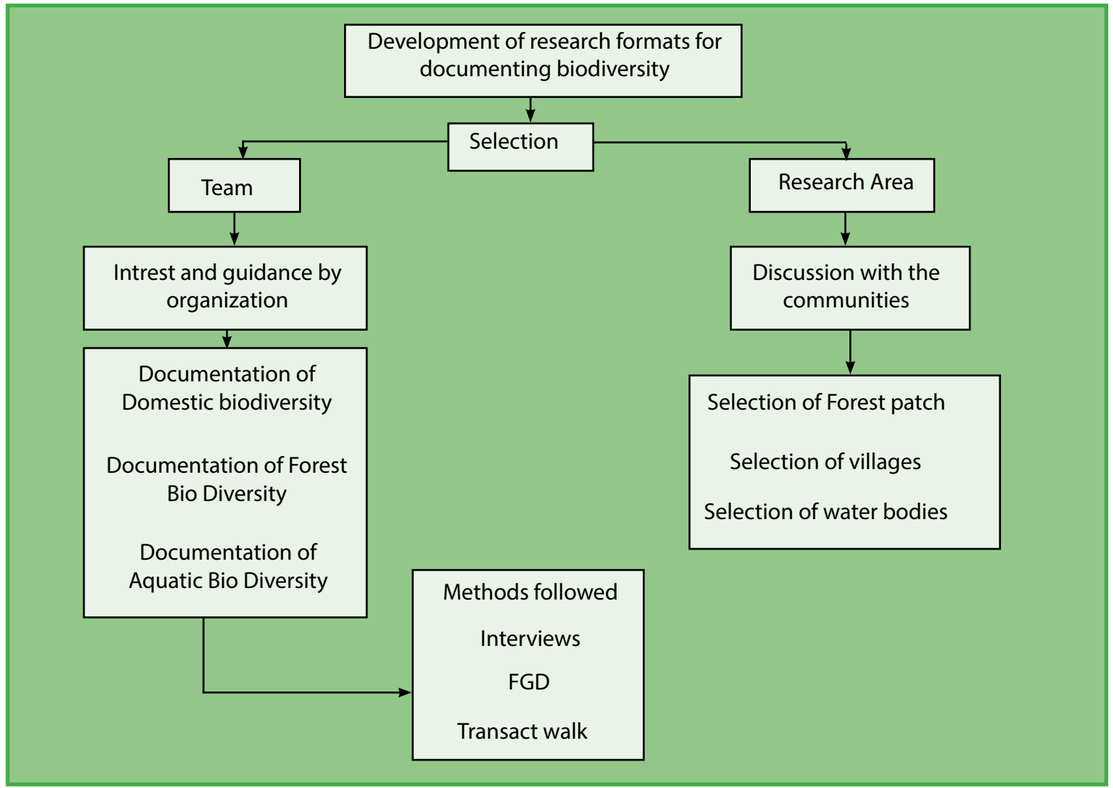
The areas to be covered were domesticated biodiversity associated with agriculture, horticulture and ornamental plants, and animal husbandry. In respect to wild biodiversity it was decided to study both terrestrial and aquatic.

2. To document changes that have occurred in the local biodiversity in select villages:

The areas to be covered were the same as above, but the data could be obtained in such a way as to have indicators that would help for comparison.

"The UN Convention on Biological Diversity has stated that there are some 13 million species, of which 1.75 million have been described. Successful conservation of biodiversity has to be part of the plans for agriculture, fishery, and forestry sectors, and it also requires lot bigger media attention."

METHODOLOGY OF DOCUMENTING LOCAL BIO-DIVERSITY



Development of research design and strategy:

i. Development of Methodology

Development of research formats for documenting biodiversity:

For this purpose, initially based on discussions, the children developed draft formats. These draft formats were piloted in one village, one forest patch and a stretch of a river. Based on the experiences gained the formats were finalized.

For the documentation of biodiversity in the formats developed, the following three methods were chosen.

- Focus group discussions.
- Transact walk
- Interviews with knowledgeable persons.

ii. Selection of Villages

Keeping in view the time available with the children it was decided to undertake the study in

Block – Kotauratla
District – Visakhapatnam
State – Andhra Pradesh.

"Scientists believe that according to the fossil records there have been five historical mass extinctions, and Earth is currently facing sixth mass extinction. Some recent studies suggest that 30% of all natural species will be extinct by 2050 if current trend of biodiversity loss continues in the next few decades."

The following five villages were selected for the study, their geographical location is shown in figure

Sno	Name of the Village	Total Population	Ethnic Composition
1	Gottivada	78 F + 62 M	SC- 33 families
2	Thadaparthy	65 F + 71 M	SC- 32 families
3	Chowduwada	101 F + 107 M	SC- 47 families
4	Allumiyapalem	75 F+ 82 M	SC- 42 families
5	Yasidipalem	40 F + 39 M	SC- 22 families

iii. Selection of Forest Patch:

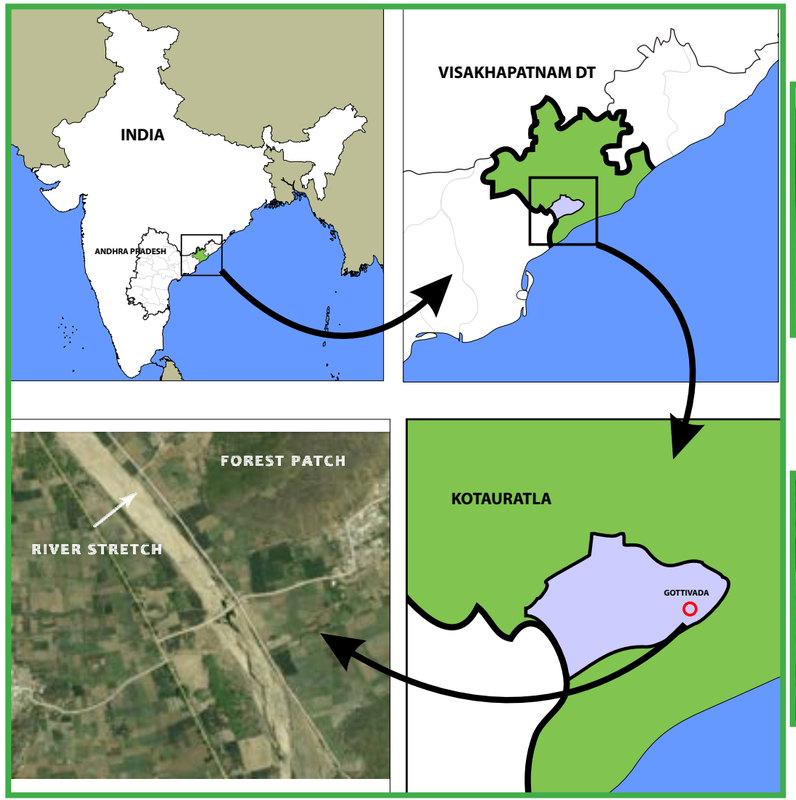
Based on the discussions with the communities and forest department and keeping in view logistic convenience a forest patch measuring about one hectare was selected.

iv. Selection of Water body:

Based on the discussions with the communities and the knowledgeable people, a 500 meters stretch of land that runs along the river "Varaha", that flows from the east to west in the area was selected. See the corresponding figure in the next page

Formation of Different teams:

Based on the capacities and the location, out of hundred trained green ambassadors, forty of these were selected, out of which were 21 Boys and 19 Girls; with their age ranging from 7to 15 years; and streamlined for carrying out the study.
See appendix 1.



The above and below pictures depict the length and the width view of Varaha river

Formation of Team for documenting village biodiversity:

For each village a separate team of 8 students balancing their preference, gender and age were constituted. Out of hundred students 16 children formed a group

These children showed enormous interest in taking part in the study. After detailed discussions, it was decided that these children will document the ornamental plants reared by the residents in Allumiyapalem village. The methodology used was a pre tested format and FGDs.

Formation of Team for documenting Forest Patch:

Out of 40 students, twenty were selected based on their preference for documentation of wild terrestrial biodiversity. There were three main components of the study i.e. documentation of plant biodiversity, documentation of animal biodiversity and interface between wild biodiversity and local communities. Therefore 3 teams were formed as shown in Table 1

Table below gives the details of the team formation

Sno	Component	Team size
1	Plant Biodiversity in the Forest	6 Students
2	Animal Biodiversity in the Forest	8 Students
3	Interface between wild and local communities	6 Students

Formation of Team for Documenting Aquatic biodiversity:

Out of 40 students, twenty were selected based on their preferences and interests to document the Aquatic biodiversity. There are 4 aspects to be studied as shown in table below therefore four teams were formed.

Table below Gives the details of team formation

Sno	Component	Team size
1	Seasonal Variation in availability of water	20 Students
2	Plant biodiversity on the banks of the river	6 Students
3	Animal Biodiversity on the banks of the river	6 Students
4	Aquatic Biodiversity in the river bed	8 Children

Time frame:

Table below gives thedetails of the time frame developed by the research team. All aspects of the study were to be completed in 12 months, starting from march 2010 and ending by march 2011

Sno	Name of Activity	2010									2011		
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Capacity Building of Children												
2	Dev. of research Methodology												
3	Formation of Child Study Teams												
4	Domesticated Biodiversity												
5	Wild Biodiversity												
6	Campaigns on Awaring people												

" Conceptualizing the Plight of Peasants"

1. This part of the study was basically an integral team effort on how the agricultural biodiversity has been affected gradually by the shift of agriculture pattern from food cropping to cash cropping. It also brought to light the affect that the level of changes in climate has caused in this regard.
There have been enough observations made to prove that climate change was one among the major cause of change in the mindsets and practice of the people and depleted soil nutrient standards. Climate change also happens to play a very important role in the decrease of use of traditional crops.
The group first studied extensively on climate change and its impact on basic food crops, which were normally being cultivated for consumption. The immediate observation of the group was the application of industrialized fertilizers. The group also observed the way the corporates have taken over the seed market by introducing high yielding hybrid varieties. This is a very strategic step to again crush the peasant's income mechanism, as the usage of the hybrid seed would encourage the farmers to enter the commercial market by finding ways to double his current yield. This also has parallel constraints which mean more fertilizers to be used, and in turn more water for the crops, exploitation of ground water table and that means more income to the industrialized sectors and the subsequent need of farmers to be dependent on the government and the other industrial corporates in an unbelievable manner.

Results of the Study:

In this section, we present the salient findings of the different components of the biodiversity that were documented in the study.

Documentation of local biodiversity in select villages:

Each team gathered a variety of information regarding the domesticated biodiversity. The method used was primarily conducting a series of Focus Group Discussions (FGD's), Transact walk in the village and conducting interviews with knowledgeable persons.

1. Agricultural Biodiversity:

The research teams gathered information on the various crops that are grown in the village; which includes the area under cultivation as well as the total productivity. Although detailed information is available with the organization, here we report only key findings presented in Table 1 and 2:

- In all the studied villages, people continued growing traditional local varieties of various crops.
- The tradition of using organic manure was observed in all the villages (with some exceptions).
- In all the 4 villages, a crop by the name of "Sammalu" has been discontinued.
- In 2 villages, crops by the name "Budamalu" and "Korralu" have also been discontinued.
- The main reason for the discontinuation of these crops was erratic rainfall.

Table 1 Details of crops grown in the villages

Sno	Name of the village	Name of the crop	Local/Hybrid	Chemical pesticide
1	Allumiyapalem	Cholam (jonnalu)	Local	No
		Ragi (Cholu)	Local	No
		Millets (Korralu)	Local	No
2	Yasidipalem	Rice	Local & Hybrid	Endosulfan
		Ragi (Cholu)	Local	No
3	Tadaparthy	Rice	Local & Hybrid	Endosulfan
		Ragi	Local	No
		Cholam (jonnalu)	Local	No
		Maize (Corn)	Local	No
		Millets (Korralu)	Local	No

Table 2: List of crops Discontinued

Sno	Name of the village	Name of varieties Discontinued
1	Allumiyyapalem	Sammalu
2	Yasidipalem	Sammalu
		Korralu
3	Tadaparthy	Sammalu
		Budamalu
4	Chowduwada	Sammalu

The nation having one of the highest economic growth rates in the world and still 36% of World poor live in India.

2. Horticulture:

For all the villages, the data on various trees grown by the people were gathered. In addition to that, the number of trees present, as well as their numbers ten years back was also gathered. The main findings in all the villages were that the numbers of almost all the tree species and their numbers as is evident from table 3.In the studied four villages the numbers have reduced from 1136 to 503 during the last ten years. Therefore, instead of presenting the data for each of the village, we give data pertaining to village Yasidipalem as an illustration to demonstrate the trend observed.

From Table 3a and Figure 1 it is observed

- 9 tree species are grown in the village
- 10 years back the total number of trees in the village was about one hundred, this has now reduced to 51.
- Pomegranate and Teak were not grown in the village earlier but have been recently introduced.
- In short, the population of horticultural plants in the studied villages has reduced considerably, although the number of species has more or less remained the same.

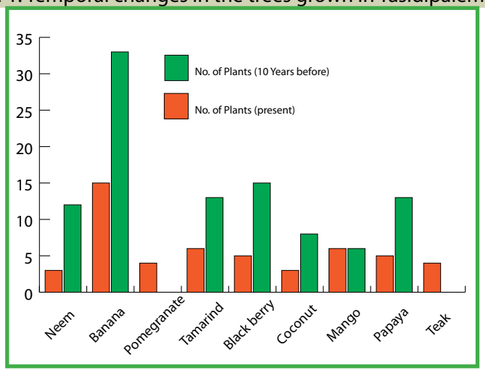
Table 3 : Temporal changes in the trees grown in select villages

Name of the village	No of tree species in total	
	Present	10 years back
Tadaparthy	163	230
Allumiyapalem	211	239
chowduwada	129	667
TOTAL	**503**	**1136**

Table 3a: Temporal changes in the trees grown in Yasidipalem

Sno	Name of the Trees	Plants	
		Present	10 Years before
1	Neem	3	12
2	Banana	15	33
3	Pomegranate	4	0
4	Tamarind	6	13
5	Black berry	5	15
6	Coconut	3	8
7	Mango	6	6
8	Papaya	5	13
9	Teak	4	0

Figure 1: Temporal changes in the trees grown in Yasidipalem



The photographs depict various horticulture plants being developed by children in their respective villages

3. Domesticated Animals:

Data on animals domesticated in the studied villages were gathered. In addition to the number of animals presently found; their numbers ten years back were also gathered. In all the villages it was observed that the number and species of most of the animals has decreased during the last ten years. From the table 4 it is observed that the total number of animals in four villages has reduced from 3510 to 1561 similarly the number of species has declined from 32 to 25 this is illustrated by giving relevant data pertaining to village Yasidipalem as an illustration to demonstrate the general trend observed.

From Table 4a and Figure 2 the following main features emerge

- 9 animal species were domesticated in the village 10 years back and the total number of animals was 420.
- Presently only 4 animal species are found in the village and the total number of animals presently reduced to 241.
- The animals that are no more domesticated are cows, sheep, ox and pigs.
- There are multiple reasons for the discontinuation of these animals. However, climate change might have played a significant role in the present scenario.

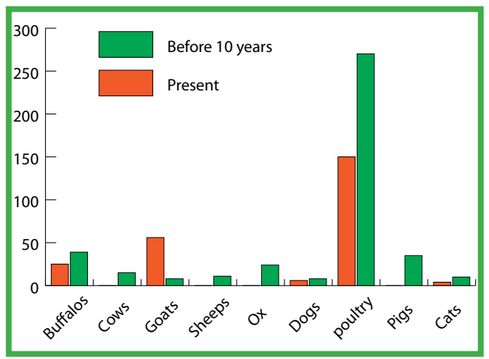
Table 4 : Temporal changes in domesticated animals

Name of the Village	Numbers		Species	
	Present	10 years back	Pre-sent	10 years back
Yasidipalem	241	420	6	8
Thadaparty	226	585	8	8
Chowduwada	560	1715	7	7
Allumiyapalem	534	790	4	9
TOTAL	**1561**	**3510**	**25**	**32**

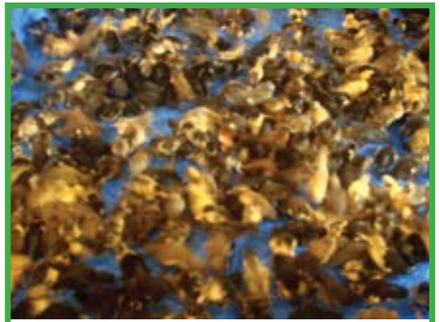
Table 4a: Temporal changes in the domesticated animals in Yasidipalem

Sno	Name	No of animals	
		Present	Before 10 years
1	Buffalos	25	39
2	Cows	0	15
3	Goats	56	8
4	Sheeps	0	11
5	Ox	0	24
6	Dogs	6	8
7	poultry	150	270
8	Pigs	0	35
9	Cats	4	10

Figure 2:Temporal changes in the trees grown in Yasidipalem



children assessing the domestic biodiversity with an old woman



Ducks – as a part of domestic biodiversity by development

children recording domesticated animals

4. Ornamental Plants :

The research team documented the ornamental flowering plants found in the households in the village Gotivada. For each of the species, information was also gathered regarding their use. Results of the study are presented in Table 5 & Figure 3. The main findings of the study are

- 9 different species of flowering plants were observed in the village.
- The flowers from these plants were used for at least 7 different purposes.
- The flowers of 7 species are used for personal decoration followed by 4 species of flowers which are used for religious purpose.
- In short, the ornamental flowering plants play a very important role in the cultural and spiritual life of the local communities in the area.

Figure 3: Ornamental flowering plants and their usages in Gotivada

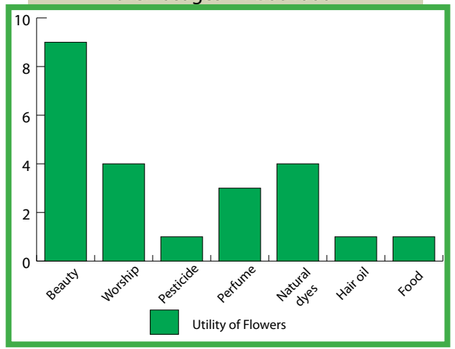


Table 5: Names of the Ornamental flowering plants and their usages in Gotivada

Name of the Flower	Beauty	Worship	Pesticides	Perfume	Natural Dyes	Hair Oil	Food	Total
Marigold	1	1	1	0	1	0	0	**4**
Hibiscus	1	1	0	0	1	1	0	**4**
Rose	1	1	0	0	1	0	0	**3**
Lilly	1	0	0	1	0	0	0	**2**
Jasmine	1	0	0	1	0	0	0	**2**
Sampangi	1	0	0	1	1	0	0	**3**
Pumpkin flower	0	1	0	0	0	0	1	**2**
Kankambaram	1	0	0	0	0	0	0	**1**
Verajaji	1	0	0	0	0	0	0	**1**
Chamanthi	1	0	0	0	0	0	0	**1**
Total	**9**	**4**	**1**	**3**	**4**	**1**	**1**	

Pictures depict the flowers found in the studied village

II. Wild Biodiversity observed in a forest patch:

As noted above, a patch of forest was identified for documenting wild biodiversity. The research team documented the biodiversity under the following categories:

a. Documentation of Trees
b. Documentation of Medicinal plants
c. Documentation of oil yielding plants
d. Documentation of plants used as food by humans
e. Documentation of commercially valuable trees
f. Documentation of wild plants used by animals as food
g. Documentation of temporal changes in a select number of wild animals
h. Documentation of Birds marketed/consumed by humans.

For the sake of convenience, the results of the study have been described separately for each of the categories mentioned above. The methods used for the study were transact walk and interviews with knowledgeable persons including native doctors.

a. Documentation of Trees :

From the data presented in Table 6 the following key observations emerged,

- At least 14 flowering tree species were observed in the forest.
- All of these were used by the local communities for a variety of purposes.
- Most of the species yield timber. Stem and occasionally thick branches are used.
- The flowering periods of each one of the species are also noted; as this would serve as a baseline data to be used in future for studying the impact of climate change on flowering trees.
- In short, it is evident that the wild plant biodiversity is integrated with the livelihoods of the local communities, especially the poor.

India's wildlife is both rich and varied. More than 4% of India's land is under forest cover- there are at least 90 national parks and 482 wildlife sanctuaries. The country is one of the 12 mega diversity areas in the world, in terms of animals."

Table 6 : Names of the flowering trees together with their usages found in the forest patch.

Sno	Name of the the species	Part used	Purpose	Period of flowering
1	Pedda tangedu (Telugu)	Stem	Agricultural implements	April - May
2	Ankudu	Stem	Toy making	June - July
3	Billa	Stem	Beds	June - July
4	Pala kara	Stem	Beds	July - August
5	Neem	Stem	Windows,Door frames	May - April
6	Emasa	Stem	Beds	May - June
7	Gandra	Stem	Windows, Door frames	June - July
8	Sovintha	Stem	Almirah,Beds	June - July
9	Erudu java	Stem	Almirah,Beds	July - August
10	Burugu	Stem	Boat making	July - August
11	Piyapu tree	Stem	Boat making	June - July
12	Lolugu	Stem	Toy making	June - July
13	Soap nut	Nut	Shampoo	November - December
14	Gumidi	Stem	Toy & cricket Bat Making	June - July

b. Documentation of Medicinal plants:

Relevant data regarding medicinal plants found in the forest patch are presented in Table 7; the key findings of the study are,

- At least 14 medicinal plant species were observed in the forest.
- All of these were used by the local communities for a variety of medicinal purposes.
- Different parts of the plant such as bark, roots, seed, sap, fruit etc., are used for preparing medicines.
- It is evident that the wild plant biodiversity provides health security to the local communities, especially the poor.

"Because of the problem of SAFETY with modern system of medicine, there is increasing global interest in traditional and herbal medicines. According to WHO's (WORLD HEALTH ORGANISATION) report, over 80% of world population relies on traditional medicines, largely plant based, for their primary health care needs. India, one among 12.

Bio-diverse countries of the world, is abode of 45000 floral species, out of which 15000 are those of Medicinal Plants. Approx. 85% to 90% of these come from the wild. Department of ISM&H, Ministry of Health & Family Welfare, Govt. of India, has identified 1500 medicinal plants of which 500 are commonly used in the preparation of herbal drugs. 150 species have been categorized as endangered.
Use of plants as a source of medicine has been inherited and is an important component of the health care system in India."

Table 7 Names of the medicinal plants together with their usages found in the forest patch.

Sno	Name of the Medicinal plants	Part Used	Purpose
1	Cheematangidi (Telugu)	Bark	Medicine (Cattles)
2	Erracherathalu	Bark	Arthrites
3	Manga tree	Bark	Head ache
4	Manchi bodda	Sap	Diarrhoea
5	Pedda nepali	Oil	Scabies
6	Nalleru kada	Whole Plant	Cold and cough
7	Pedda karakaya	Fruits	Skin disease
8	Cheema karakaya	Fruits	Cold and cough
9	Kondakasivindha	Root	Asthma,Cough, scabies
10	Chavidi kada	Sap	Swelling
11	Mayathiva	Whole Plant	Swelling (Cattles)
12	Thipateega	Root	Asthma
13	Musiri tree	Seeds	Giddiness, pesticides
14	Black berry	Fruits,Bark &Leaves	Kidney problems

The Pictures in the page depict the important medicinal species that were found in the forest duing the documentation process.

c.Documentation of oil yielding plants

There are 4 oil yielding plants used by the local communities, that are found in the forest (Table 8). The oil of these plants is used for three main purposes, which are medicinal, pesticides and biodiesel.

Oils, oleoresins & extracts from plants are used in a wide variety of ways – in food, as medicine, in cosmetics & toiletry, as ingredients for industrial products, as fuel, and more. By the term "plant oils", it is referrred to oils that are derived from one or more parts of a plant, shrub or tree. Hence the oil could be from the root, stem/bark, leaves, flowers, seeds, fruits and whatever else could be a part of the plant!

Table 8 : Names of oil yielding plants in the forest patch.

Sno	Plants	Part used	Purpose
1	Wild Jatropha	Nuts	Medicine
2	Neem	Nuts	Pesticide
3	Nepali	Nuts	Bio-Diesel
4	Pedda Jatropha	Nuts	Bio-Diesel

d.Documentation of plants used as food by Humans:

Data regarding the wild plants found in forest patch and consumed as food by local communities are presented in table 9,

- 13 plant species were found in the forests that are used as food by the local communities.
- Mostly roots and fruits of these plants are consumed as food.
- It is highly noteworthy that the wild plant biodiversity also provides food security to the local communities especially the poor.

Table 9: Names of the plants consumed as food by local communities.

Sno	Name of the Species	Part used	Purpose
1	Arri dumpalu (Telugu)	Roots	Food
2	Pala dumpalu	Roots	Food
3	Vaka tree	Fruits	Food
4	Alli tree	Fruits	Food
5	Pithigina tree	Fruits	Food
6	Golimi	Fruits	Food
7	Pala tree	Fruits	Food
8	Black barry	Fruits	Food
9	Custard apple	Fruits	Food
10	Pagada	Fruits	Food
11	Nalla geedi	Fruits	Medicine
12	Jujube (Regu)	Fruits	Food
13	Parigi tree	Fruits	Food

e.Documentation of Commercially valuable trees:

A number of trees found in the forest are used for making a variety of commercial products. The names of the trees and the purpose for which they are used are given in Table 10. The following key features emerge from the table:

- there are at least 9 species having enormous commercial value for the local communities
- The stem and the thick branches are used for making a variety of products such as, cupboards, Beds, Boats, Toys etc….
- It is highly noteworthy that many of the wild plants found in the forest provide livelihood opportunities to the local communities, especially the poor.

Table 10 : List of Commercially Valuable trees found in the Forest

Sno	Plants	Part used	Purpose	Period of Flowering Time
1	Ankudu (telugu)	Stem	Toy making	July - August
2	Gummidi	Stem	Almirah,beds, cricket bats	July - August
3	Neem	Stem	Windows, door frames	April - May
4	Errudu java	Stem	Almirah,beds, door frames	July - August
5	Burugu tree	Stem	Boats making	July - August
6	Piyapu tree	Stem	Boats making	July - August
7	Billa	Stem	Beds	July - August
8	Emasa	Stem	Beds, door frames	July - August
9	Lolugu	Stem	Toy making	July - August

" Understanding the importance of Trees, with reference to Climate change".

The group figured that the avian populations were being reduced due to the depreciation of angiosperms and other tall trees where they usually build their nests. Children, in the community discussions in their respective villages and child committees, emphasized the importance of protecting the tree population of the region, so that it would enhance the avian population and also the possibility of pollination. In some of the meetings it was really eye-opening to see these kids talk about the greed that human population needs to audit and respond quickly before the next generations suffer an irreversible change in the environment. Green house gases and trapped heat in the atmosphere was a major concern.

Undoubtedly commercialization has hit the lives of many indigenous communities and also the forest dwellers. Children when they speak, make it very clear that there has been a clear linkage of the forests to global warming issues. This occurrence saw the emergence of the Green Ambassadors, who pose certain valid questions on their livelihood sustenance and also the survival of Human race in future.

f. Documentation of wild plants used by animals as food

In table 11 are listed 15 species of wild trees which are used by different wild animals as food. The parts used as food are Roots, Leaves, Nuts etc… Since these species provide food to the wild animals, it requires a careful management practice that would ensure the prudent use of the species by humans.

Table 11: List of wild plants used by animals for food.

Sno	Name of the Species	Part used
1	Manga tree (telugu)	Root
2	Sugandapala	Root
3	Pala	Root
4	Thunga	Root
5	Bamboo	Leaves
6	Konda relli	Leaves
7	Pula gaddi	Leaves
8	Erra gangli	Nuts
9	Nala thumma	Nuts, leaves
10	Bolusu	Fruits, leaves
11	Parigi	Fruits, leaves
12	Chamanthi	Fruits, leaves
13	Lolugu	Fruits, leaves
14	Neem	Fruits, leaves
15	Pitta marri	Leaves

g. Documentation of temporal changes in a select number of wild animals

Table 12 shows that all the 5 species for which data on temporal changes were gathered, show that the population of all of them has decreased compared to the past.

Table 12 :Temporal changes in select number of wild animals

Sno	Species	Increased/Decreased
1	Wild boar	Decreased
2	Kanusu	Decreased
3	Wild Sheep	Decreased
4	Rabbit	Decreased
5	Fox	Decreased

h.Documentation of Birds marketed/consumed by humans

Data presented in table 13 shows that at least 5 species of birds found in the forest patch are hunted by the local communities, except for the peacock which is not marketed; the rest are both consumed as well as marketed.

Table 13 Birds marketed/consumed by humans found in forest

Sno	Species	Usage	Season hunted	Commercial Values
1	Peacock	Food	Winter	No
2	Wild hen	Food	Winter	Marketed
3	Patridge	Food	Winter	Marketed
4	Raven	Food	Winter	Marketed
5	Dove	Food	Winter	Marketed

The following pictures depict wildlife species

C. Wild Aquatic Biodiversity:

As mentioned above for the study of wild aquatic biodiversity, the river Varaha was chosen. The following dimensions were studied

a. Seasonal Variation in the availability of water in the river
b. Plant biodiversity found on the banks of the river.
c. Birds found on the banks of the river consumed by humans.
d. Seasonal variation in availability of wild animal biodiversity on the banks of the river
e. Aquatic animals found in the river bed.

a.Seasonal Variation in the availability of water in the river:

The team studied two parameters of the water in the river, namely the width of the water and the depth of the water. The observations were made on a 500 meter stretch of the river. The width and depth of the water was recorded at three locations separately for the past 12 months. The results of the study are given in table 14a and 14b and Figure 4

- The water in the river is available from June to November .
- The water starts declining from October onwards, and the river more or less becomes dry during December.
- The width of the river in the studied stretch varied from 15 meters in June to 34 meters in August- September.
- The depth of the river in the studied stretch varied from 0.6 in June to 3.6 in August- September.

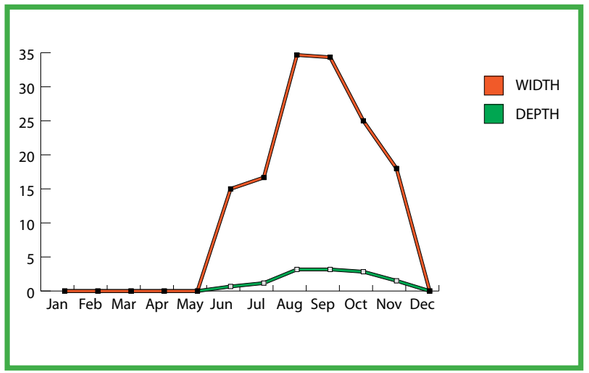
Table 14 a Seasonal variation in the width of the water in the river

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	15	18	35	35	25	18	0
2	0	0	0	0	0	16	17	37	37	28	20	0
3	0	0	0	0	0	14	15	32	31	22	16	0
Average	**0**	**0**	**0**	**0**	**0**	**15**	**16.67**	**34.67**	**34.33**	**25**	**18**	**0**

Table 14 b Seasonal variation in the Depth of the water in the river

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	0.5	1	3	3.5	3	1.5	0
2	0	0	0	0	0	1	1.5	4	4	3.5	2	0
3	0	0	0	0	0	0.5	1	2.5	2	2	1	0
Average	**0**	**0**	**0**	**0**	**0**	**0.67**	**1.17**	**3.17**	**3.17**	**2.83**	**1.5**	**0**

Figure 4 Seasonal variation in Width and Depth of the water



b. Plant biodiversity found on the banks of the river

The plant diversity was observed on the banks of the river over a 500 meter stretch. In table 15, are summarized the list of plants observed on the banks of the river, where 10 different species of plants that included trees and shrubs were found. The local communities used all of these 10 species for a variety of purposes.

Table 15 :Plants found on the banks of the river

Sno	Name of the plant	Part used	Purpose
1	Bodda	Leaves	Leaf plate making
2	Palm tree	Stem, leaves	Roofing
3	Uttika	Stem	Beds
4	Musidi	Seed	Pesticide
5	Black berry	Fruit,stem	Dyes,medicine
6	Palm tree (eetha)	Leaves, fruits	Making mats, food
7	Custard apple	Fruits	Food, pesticide
8	Golimi	Fruits	Food
9	Balusu	Fruits	Food
10	Pittamarri	Leaves	Cattle feed

c. Birds found on the banks of the river consumed by humans

Table 16 gives the names of the birds as well as their interface with the local communities. 7 bird species were often sighted during the study. A majority of these birds, as expected are used as food. A few of those are also used for medicinal purposes.

Table 16 : List of Birds found on the banks of river consumed by humans

Sno	Name of the Birds	Purpose
1	Pala pitta (telugu)	Food
2	Gorinka	Food
3	Guva	Food
4	Raven	Back pain, piles
5	Crane	Food
6	Gorapitta	Food
7	Dove	Food, medicine

d.Seasonal variation in availability of wild animal biodiversity on the banks of the river

The river banks are very rich in wild biodiversity. A large number of birds are often sighted on the banks. The other taxa that are found include insects, butterflies and frogs. Often a number of ant hills are also observed. In table 17 are given the details of wild biodiversity observed during the three seasons – winter, summer and Monsoon. As expected there are seasonal variations in the availability of different species of animals.

"For hundreds of years man has got rid of his waste into rivers and streams, but it was the growth of the industrial revolution during the nineteenth century that resulted in the rivers suffering the greatest pollution they have ever known."

Table 17 Seasonal variation in availability of wild animal biodiversity on the banks of the river

Sno	Species	Winter Season (Oct- Feb)	Summer Season (Mar- Jun)	Rainy Season (July - Sep)
1	Birds	Crane,Thithuka,Gorinka,Guva,Sparrow,Dove,Raven,Gorapitta,Crow,Parrots,	No	Crane,Thithuka,Gorinka,Guvva,Sparrow,Dove,Raven. Crow,Gorapitta,Parrots,Palapitta, Kamsulu,
2	Insects	Caterpillars.Grasswoper.Ants,	No	No
3	Ant Hills	Yes	Less than Winter	No
4	Butterflies	Yes	Less than Winter	Yes
5	Frogs	Yes	No	Yes

f.Aquatic animals found in the river bed :

Information at a species level of aquatic animal's diversity could not be gathered dude to constrain of time and resources. Instead information was gathered at taxa level. In the river bed a diversity of aquatic biodiversity includes Fish, snakes, frogs, crabs, prawns etc… In table 18 are given details of these, together with their seasonal variability. As expected, except during summer season where some of the aquatic biodiversity like fish, crabs, snails etc. reduces drastically; in other seasons all the animals listed in the table are abundantly found.

Table 18 :Names of the aquatic species foun in the river bed

Sno	Species	Winter Season (Oct- Feb)	Summer Season (Mar- Jun)	Rainy Season (July - Sep)
1	Fish	Yes	No	Yes
2	Snakes	Yes	Yes	Yes
3	Frogs	Yes	Yes	Yes
4	Crabs	Yes	No	Yes
5	Prawns	Yes	No	Yes
6	Snails	Yes	No	Yes

Chapter Three

Awareness Campaigns and advocacy:

In this chapter are given the various campaigns organized by the school children in particular green ambassadors collaboration with other agencies, to generate awareness regarding the depletion of biodiversity and impact of climate change on biodiversity and the overall impact of these changes on the livelihood of the people. The campaigns shared the various measures that need to be undertaken to mitigate the negative impact of climate change. The campaigns also included strategies to be adopted by the people to adopt to consequences of climate change.

3.1 Children Movement for Climate Justice:

On 31st October, 2009 Twenty children from Kotauratla have participated in a mega rally at Chennai which focused on justice issues. More than thousand children represented communities of different areas. The children voiced out their opinions and questioned the current development ideology. That was the beginning and the children from then on went on to organize and strengthen their own networks.

3.2 Children Representing the issues of Communities and presenting a memorandum to the Collector:

Green Ambassadors took the initiative of awareness to a new perspective; the children of the group have made their voices heard in the communities where they live in. 11 children of the group also submitted a memorandum to the district collector representing the children as victims of climate chaos.

"Memorandum for "Ecological Child Rights – Children's Voices for Climate Justice"

In the Past Present and Future there have been a lot of hue and cry on the subject "CLIMATE" and its pattern of change. As Human beings are we Responsible? For the adverse impacts that the climate has transformed into, for the enormous health vindications, for the tremendous increase in the rate of Poverty and ultimately the irreparable deterioration of the climate. This has been the hot topic in the international arena be it the Conference of Parties, be it the Kyoto Protocol or even be it the summit of Group 20 countries. Where are we heading to? – A terribly unsafe, unclean and unlivable Environment for Children. It's high time that we the Children on the Globe join our hands together and oppose the complication that have been complied on us by the so called "intellectual adults".

The Process of combating this global crisis on Climate is as always been challenging and as children we need to Persevere hard enough so that we do not repeat the same mistakes again.

Voices of Children (Green Ambassadors) From Kotauratla, Visakhapatnam, (AP)

The following are the few points that we thought to share with our counterparts to face the threat of Climate change and phase out the "Threat" out of our Lives

Facts that have Risen in Recent Past

- Irregular climate has had a direct impact on the nutritional status of Children.
- Increase of child Poverty issues in the near future – This issue has to be addressed as early as possible. {Source: The Hindu- 25 million more children will go hungry by 2050- Global warming set to bring back Malnutrition in developing world}.
- Priority to be given in view of Climatic Changes with respect to child perspective.
- Global geography would be disturbed ultimately affecting the progress of children.
- Food security in terms of calorific food value needs to be addressed.
- Increasing health hazards due to improper nutritional requirements.
- Fluctuating Market Prices to play a major role in procurement of grain, vegetables etc..
- Depreciation of Reserve Food stock is another issue.
- Population increase would affect directly on Food Availability, Land availability,
- Dependency of developing nations on Developed nations would mean "People are at mercy of somebody".
- Fertility of soil would decrease and production of crops would be that much of an issue.
- The wheat produce has already been lowered by a margin of 30% which is enormous when we talk in terms of nutritive conditions of children.

We stand For

- Cleaner, Safer and a Livable Environment for Future.
- Depletion of Poverty.
- Sustained Food security.
- Protection of Forest
- Sustained Agricultural Practices
- Decentralized Energy Options
- Organic food
- Safe Drinking Water
- Climate Change Awareness
- Proper Health & Nutrition standards.
- Car Pooling.
- Bio Fuels
- Communicating the Hazards of Adverse Climatic Changes.
- Biomagnifications and Bio Remediation
- Incorporation of Climate change Impacts/Subject in the School Syllabus

We Condemn

- Green house Gas Emissions and Pollutants
- Man made Global Warming
- Deforestation.
- Economic Crisis
- Genetically Modified Food
- Corporate Level Exploitation of Natural Resources
- Usage of Non-Renewable sources of Energy
- Usage of Non Renewable Wastes.
- Encouragement of Tourism

We the Children of Kotauratla Mandal submit the above Memorandum to the Government and the Leaders of the state& Country to look seriously on the above matters and think about the future of the children of the country, to commit to action on climate change and demand the rich countries should commit to

- Making deep and urgent cuts in their own carbon emissions in line with keeping Global warming with in 2 ° C
- Assisting and helping to pay for developing countries to reduce their emissions, develop cleanly and adapt to clmate change.

Let us unite!!!
In Solidarity,

Green Ambassadors Child Network Members
Kotauratla Mandal,Visakhapatnam,AndhraPradesh,India.
(Signed by 800 children)"

3.3 Networking with other Organisations:

Green Ambassadors also are a part of larger network formed at a National level, which is called as "Children Movement for Climate Justice." These meetings were held at different places and children from many areas have participated sharing their problems and issues. It was a very good initiative that KNH has supported as the children have come up with newer ideas to save earth by collective efforts. Children have represented the voices of their respective communities in many meetings and gatherings. It was very inspiring to see the children speak about the destruction of environment and ecosystems. The children group has blamed the dominant development measures of today's era for this kind of extensive destruction.

3.4 Children Rally in Kotauratla:

The children have organized a mass rally to aware common public on environment friendly approaches. The children collected the plastic bags, shouting slogans and addressing the common public on the deteriorating status of our environment. The children in detail brought about the facts and reasons behind the difficulties in livelihood sustenance. The children shared their experiences during the study on Biodiversity status, and helped many people to compare the present to the past.

3.5 Children Voice their opinions on climate to the Radio and Television:

The group was extensively capacitated with many training programs. The children ably faced the digital media and shared their vows both in the local visual and audio media. The children were covered in almost all the leading News channels were also invited by the popular Radio channel, FM and had an interview done.

3.6 Seed Festival:

CeFHA with the partnership of Green Ambassadors have organized a seed festival at the public library of Visakhapatnam. The main aim of organizing such an event was to educate people on the importance of conserving biodiversity. The seed festival has seen a display of materials more than one could imagine. The representatives of indigenous communities have displayed more than 40 varieties of traditional Paddy and Ragi.

In the festival a workshop was organized on different aspects of climate change. Eminent scholars like Mr. J.B. Rathnam, a renowned climate activist and also a popular journalist, Dr. Venkaiah Professor of Botany, Andhra University, and Dr. P.S. Raja Sekhar, Professor of environmental sciences, Andhra university participated and shared their use on the topic.

Mr. Rathnam highlighted the following

- Ongoing development projects ultimately destroy the balance of existing ecosystems.
- The importance of maintaining optimum balance between animals, insects, birds and the microorganisms is necessary for the environment to maintain its stable nature.
- He shared many case studies depicting the negative impact of climate change on the poor.
- He urges the Green Ambassadors to take this struggle for survival to a different level

Dr. P.S. Rajasekhar shared about various aspects of agro ecosystems and their importance in livelihood security.

Dr. Venkaiah gave an idea about different plant species found in the forests of Visakhapatnam district.

Pictures below depict Green ambassadors taking part in climate justice campaigns

Chapter Four

The Way Forward

The Green Ambassadors look forward to carry out and consolidate good work they have been doing. They would try and build networks amongst the other children, institutions and government agencies in the region, to spread awareness on climate change and preservation of biodiversity to people at large.

4.1 Focus of CeFHA on Green Ambassadors:

CeFHA and the Director, Dr. Sasi Prabha Stanley envisage that the "Green Ambassadors" move forward strategizing their goals and utilize their ability of conducting research.

- To help the group carry out research based activities, confining to Domestic biodiversity in view of time and distance constraints.
- To further empower the group and help them address issues related to biodiversity preservation in the communities involving PRI institutions.
- To empower the group and make them child resource persons to campaign in different villages spreading the message of climate change and biodiversity preservation.
- To further empower the children to take up advocacy with PRIs, administration and government agencies.

4.2. Focus of Green Ambassadors and CeFHA team on the Communities:

Both the organization as well as the Green Ambassadors have essentially worked out steps, and would try to focus on the following

- To propose an eco syllabus for the children in schools and introduce environment education in schools.
- To create awareness among children and communities regarding conservation of water resources and adopting prudent practices related to use of water.
- To create awareness on adapting Sustainable agriculture through organic fertilizers and pesticides.
- To help people understand the importance of protecting the forests and aquatic biodiversity,would sensitise to do so.
- To help the farmers understand the importance of Indigenous seeds and make them aware of protecting and multiplying them.
- To reduce the usage of plastics by self and awaking others on the harsh effects of it.
- To help the communities understand the importance of biodiversity and sensitise people on it.
- To help the communities understand the unsustainable growth concepts by current development strategies and urge the people to take up more sustainable development methods and chose the later over the former.

Green ambassadors to take forward ...

Annexure 1:

S.no	Name of the Child	Sex	Name of the village
1	T. Ananthalaxmi	F	Panduru
2	P. Durga	F	Panduru
3	T. Anjali	F	Panduru
4	Y. Venkatalaxmi	F	Panduru
5	B. Kumari	F	Panduru
6	P.Chinni	F	Panduru
7	B. Gopi	M	Panduru
8	P. Nagendra	M	Chowduwada
9	G.R.Vamsi	M	Chowduwada
10	M. Padma	F	Chowduwada
11	M. Demudu	M	Chowduwada
12	P. Kumari	F	Chowduwada
13	Marthi Sai Ganesh	M	Chowduwada
14	G.Sirisha	F	Gottivada
15	G. Hemalatha	F	Gottivada
16	G. Sravani	F	Gottivada
17	P. Nanaji	M	Gottivada
18	M. Anand	M	Gottivada
19	G. Poorna	F	Gottivada
20	K. Anandabharathi	F	Gottivada
21	M. Chinna Babu	M	Thadaparthy
22	G. Durgaprasad	M	Thadaparthy
23	C. Laxminarasimha	M	Thadaparthy
24	M. Lova Jyothi	F	Thadaparthy
25	C. Lavakusulu	M	Thadaparthy
26	G. Lovaraju	M	Thadaparthy
27	S. Sivakumar	M	Thadaparthy
28	G. Marinithalli	F	Allumiyyapalem
29	M. Papa	F	Allumiyyapalem
30	D. Ramalaxmi	M	Allumiyyapalem
31	V. Satyavathi	F	Allumiyyapalem
32	G. Gavararaju	M	Allumiyyapalem
33	S. Srinu	M	Allumiyyapalem
34	V Satya Sravani	F	Allumiyyapalem
35	D. Durgaprasad	M	Allumiyyapalem
36	M. Satyanarayana	M	Allumiyyapalem
37	M. Joginaidu	M	Allumiyyapalem
38	V. Srinivas	M	Allumiyyapalem
39	M. Rajyalaxmi	F	Allumiyyapalem
40	D. Srinu	M	Allumiyyapalem

List of staff participated :

Sno	Name	part of
1	Mr Murthy	Wild biodiverity
2	Mr Gopal	Aquatic biodiversity
3	Mr Srinivas	Domesticated biodiversity
4	Mr Suresh	Agriculture biodiversity

Climate justice is children's responsibility now,
Green ambassadors would lead the way

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