

**A STUDY ON ROLE OF ‘NISARG SEWA TRUST’-AN NGO: FOR SUSTAINABLE  
RURAL LIVELIHOOD AND RURAL DEVELOPMENT**

**\*Dr. Jigna Trivedi (Assistant Professor)**

Shri Jairambhai Patel Institute of Business Management & Computer Applications,  
Gandhinagar, Gujarat

**\*\*Prof. Fahmida Shaikh (Assistant Professor)**

Shri Jairambhai Patel Institute of Business Management & Computer Applications,  
Gandhinagar, Gujarat

**ABSTRACT**

NGOs play a complementary role to government in fulfilling the needs of bottom of the pyramid. They are instrumental in lowering the gap between haves and have nots. They act as caretakers of downtrodden strata of society. NGOs carry out varied activities in the field of human rights, health, women empowerment, child welfare, education, women welfare, welfare for blind, tribal up-liftment, vocational training etc. ‘Nisrag Sewa Trust (NST)’ a differentiated NGO which plays a central role in protecting the flora and fauna of the most neglected desert region. The function of NST becomes more reflective and imperative as its functioning is funded by individual donors without any aid of government. NST supplements this role further by actively working for the noble cause of education, environmental awareness, and financial support for education of girls, dissemination of environmental knowledge, literature and promoting camps for removal of addiction. NST operates in a unique niche, when compared to other NGOs. The all time support and full time role played by NST is commendable as it serves the animals, birds, environment and humanity on selfless grounds, which depicts the social service in true sense. The miniature activities of NST are giant enough to cast a gleam on the face of rural desert people. NST is an NGO with a factual and splendid difference.

**KEYWORDS:**

Bottom of the Pyramid, Fauna, Flora, Non Government Organizations, Social Responsibility.

**INTRODUCTION**

India is considered to be a ‘golden sparrow’ as it is blessed with rich flora and fauna, diverse climatic condition and differentiated resources. India is one of the twelve mega-diverse nations of the World which houses genetic diversity, species diversity and habitat diversity (Retrieved from <http://www.anonlineindia.com/conservation.htm>. as on December, 2011). The affluent flora and fauna proves to be a source of subsistence, primary employment, elementary input in

products making for survival of human, animal and birds. The thick and wooded jungles with plethora of flora are a strong back up pillar for fabulous fauna. Selfish and undue exploitation of precious natural resources have created an imbalance in the ecosystem. Despite the umpteen resources India is considered as a land of paradox. We have always encountered growth and development at one end versus underdevelopment at other. We also witness an elite class spending lavishly and a poor class struggling for day's square meal. The 'real Bharat' is portrayed in Indian villages where more than 70 per cent i.e. 732 Million of Indian population thrives in these villages (Jehangir, 2009) and faces a constant struggle for survival.

The gap between the haves and the have nots is widening. To address these lacunae government and NGOs are playing a possible role of welfare entity with the actual objective of social responsibility. Different types of NGOs have tried to tackle the varied problems of society by assuming different roles as donors, helpers and facilitators in sensitive areas of education, health, women welfare, child welfare, women empowerment etc. Their social contribution cannot be underappreciated. NGOs have always assisted in the development and growth of the bottom of the pyramid. 'Nisrag Sewa Trust' (NST) is a differentiated Non Government Organization (NGO) which plays a central role in protecting the flora and fauna of the most neglected desert region. The present paper tries to explore and appreciate the primary and supplementary role of NST. The paper tries to identify the key niche operational areas of NST and its accomplishments. The paper is an attempt to underline the works of NST which is factual and rests on splendid difference.

## **RESEARCH OBJECTIVES**

1. To comprehend the meaning, functions, types of NGOs and literary work on NGOs.
2. To appreciate the work done by NGOs in India and Gujarat.
3. To evaluate the background and functions performed by differentiated NGO- Nisarg Sewa Trust.
4. To evaluate the role of NST towards sustainable rural livelihood and rural development.
5. To highlight the social contribution and accomplishments of NST.

## **RESEARCH METHODOLOGY**

To understand the framework of NGOs, its functions and work, secondary sources of data like books, journals, online and offline articles were collected for the study. Inception and operational mechanism of NST is represented in the form of case study. For this, primary and secondary data sources have been used. Secondary data was collected from the literature such as leaflets, memorandum of association, statements, and letters etc., prepared by NST. This was further facilitated and supported through personal interview by the researchers with the managing trustee of the trust. Exploratory method of research design has been used to study the above mentioned objectives. The work of NST is represented as a case in the forthcoming section.

## **MEANING, FUNCTIONS, TYPES AND LITERARY WORK ON NGOS**

NGOs is a non-profit making, voluntary, service/ development oriented organization, either for the benefit of members or of other members of the population. It is an organization of private individuals who believe in certain basic social principles and who structure their activities to bring about development to communities that they are servicing or trying to better the quality of life especially for the poor or marginalized urban and rural masses. It is established without or with little intervention from the government. It is an organization that is flexible and democratic in its organization and attempts to serve the people without profit for itself (Gupta, 2007). Instead of being defined by “non” NGOs are now referred as Social Benefit Organization (SBO) or Civil Society Organization (CSO) (Retrieved from [http://en.wikipedia.org/wiki/Non-governmental\\_organization](http://en.wikipedia.org/wiki/Non-governmental_organization), as on December, 2011). NGO’s works are quoted as ‘Noble and Yeoman Services’ (Bhose, 2003).

Government plays a role of welfare state. Now- a- days corporate have started taking corporate social responsibility. However all the problems could not be solved in the nation. To shoulder the responsibility with government NGOs fill the vacuum which exists in places where corporate do not reach and government takes time in reaching to the place. NGOs carry out different type of work like environmental, developmental and advocacy. Lack of balanced development and equitable distribution of income has widened the gap between rich and poor. NGOs work actively to address this gap. NGOs are implementers of government scheme aimed at up-liftment of rural people (Ram, 2007). NGOs promote the lives of oppressed, deprived, marginalized, impoverished, downtrodden, hope-lost, helpless, powerless, and deserted and poverty stricken subjects in rural areas (Bhose, 2003).

Based on the activities of NGOs, it can be segregated into various types. Charity NGOs offer food, dress to the orphan and destitute etc. Relief and Rehabilitation NGOs actively come to the rescue and remedy of marooned in times of flood, fire, epidemic diseases, natural calamities or man made catastrophe. NGOs offering services like mobile clinics, hospitals, schools, training programmes, non-formal education, literacy etc are called Service Providing NGOs in areas often overlooked by the welfare state. Economic Development NGOs are predominantly government project holders which endeavour to provide employment opportunities to farmers, women and Dalits. Social Development NGOs have the onus of brining social awareness or social facets of the community. Empowerment NGOs directly work on the question of community organization and empower people through development interventions, education interventions for advocacy of people’s movement. Network NGOs are like umbrella NGOs which unanimously work on micro and common issues like watershed development, medicine, drug abuse, women rights, occupational health etc. Such NGOs operate at grassroots level. Support NGOs play a fatherly role to support and empower the functions of grassroots NGOs. It provides educational, financial, professional, philosophical, retrospect and prospect support to micro grassroots NGOs (Bhose, 2003).

As referred to the work of Milton, Hickey and Bebbington (2006) suggested that first phase of NGOs consisted of identifying poor and their needs, which were eventually responded through philanthropic action and advocacy often linked to other institution for financial support. In the second phase NGOs negotiated space in political and social movements. NGOs developed new strategies and lobbied for its application. The third phase is defined by the growth in recognition for NGOs and their work and their increasing interest in funding activities in relationship with state and development agencies. Often NGOs played the role of micro finance agency. The study revealed the role of NGOs. Werker and Ahmed (2007) explained that various academic studies have estimated the effect of individual projects from the perspective of beneficiaries. Several randomized evaluations of local NGOs have created impact in the life of the people. Quantitative evaluations of the NGOs in general are nonexistent.

Work of Sudarsan Iyengar (2000) highlighted that the State and the bureaucracy by their very nature are not able to design and deliver for the disadvantaged sections of the populations. Therefore, State should give recognition and encouragement to NGO initiatives. Lot of literary work with respect to rural India is found in the area of women empowerment, impact of micro finance, Self Help Group, role of governmental schemes etc. This set of study can be categorized as impact study from the viewpoint of the beneficiaries. But there is hardly any work done in the form of case study with respect to the work performed by specific NGOs of India. Present study tries to fill the void and brings out the qualitative impact of the NGOs work in the form of case study.

## NGOS OF INDIA AND GUJARAT

The number of internationally operating NGOs is estimated at 40,000. National number is even higher. India is estimated to have around 3.3 million NGOs in year 2009 (Retrieved from [http://en.wikipedia.org/wiki/Non-governmental\\_organization](http://en.wikipedia.org/wiki/Non-governmental_organization), as on December, 2011). The details of some of the renowned NGOs and their sector of operation are listed below in Table.1.

**Table.1 Categorization of Renowned NGOs as per Operational Sector**

<b>Education &amp; Vocational Training</b>	<b>Health</b>	<b>Welfare and Human Rights</b>	<b>Environment &amp; Agriculture</b>	<b>Art &amp; Skills</b>	<b>Animals</b>
Sister Nivedita Foundation, Kaivalya Trust, Colorss Foundation, Lokseva Shikshan Vikas Trust, Prabhat-Education-Foundation, Shikshan Ane	Charutar Mandal, Sanchetana Community Health and Research Centre, The Gujarat Cleft and Craniofacial Research Institute, Centre for Health Education, Training and Nutrition Awareness (CHETNA),	Janvikas, Adivasi Seva Samiti Narsinha Dham, Centre For Development (VIKAS), Utthan, Institute of Human Rights Education (IHRE), Ahmedabad Women's Action Group, Andhjan Kalyan Trust, Blind	Centre for Environmental Education (CEE), Clean Ahmedabad Abhiyan, Agriculture Tools Research	Darpana Academy of Performing Arts	SPANNA, ASHA Foundation, Vadodara SPCA

Samaj Kalyan Kendra, Shree Navchetan Andhjan Mandal, SPRAT - Society for Promoting Rationality	PRARABDHA Samiti, Dhruvpath Trust, Gram Seva Trust, Sanjivani Health and Relief Committee(SHRC), The Akshaya Patra Foundation, Vikas Samarthan Kendra	People's Association, Blind Welfare Council, Saath (Initiatives for Equity in Development), Sense International	Centre (ATRC), Ahmedabad Study Action Group (ASAG)		
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(Source: Researchers Own Compilation)

There are 256 NGOs for animals in Gujarat (Retrieved from <http://animalngosindia.blogspot.com/2011/05/animal-ngos-in-gujarat.html>. as on December, 2011). These NGOs mostly provides shelter to animals. Majority of the animal NGOs are 'panjrapole' which is like a cow's hostel. 'Panrapole' are found in most of the villages and cities of Gujarat. 'Panjrapole' are more popular in Gujarat because the state is known for its enormous contribution in green revolution and white revolution. Rural Gujarat apart from agricultural income is mainly dependent on Any Time Money (ATMs) on animals i.e. on dairy farming as a secondary source of income. Apart from animal NGOs there are 206 other NGOs working in Gujarat, with different objectives of social welfare (Retrieved from <http://www.gujarat.ngosindia.com/>, as on December, 2011).

## RESEARCH GAP AND NEED FOR RESEARCH

Based on the above theoretical discussion it can be inferred that different NGOs carry out varied set of activities. With respect to the types of NGOs no definition of NGOs working on flora and fauna has been explored. Plethora of illustrations have been found of NGOs which are working for human development, women empowerment, child welfare, human rights, health, education, women welfare, welfare for blind, tribal up-liftment, vocational training etc. Till date no such example of NGO which works primarily for protecting flora and fauna and secondary for social development goals has been encountered. This gap is vigorously filled only by NST. Such distinguished work of NST strongly motivates the researcher to make an in depth study of NST and identify its impact on the rural livelihood and rural development.

## BACKGROUND OF 'NISARG SEWA TRUST'

The five credible elements on this globe consist of water, air, earth, sky and light. Nature has made the fusion of these precious elements at one place i.e. 'trees'. Sensitivity and sympathy towards environment was inculcated in Shri Dineshbhai Thaker (the managing trustee of NST) right from his childhood. The seeds of environmental sensitivity magnetized him to dedicate his life for protecting the flora and fauna of the desert region. In his late fifties he mooted to live the life in the last ashram i.e. 'Vanprasthashram' (popularly advocated by Hindu mythology) which means living life in the lap of nature. The long cherished dream of a retired school teacher got an

opportunity to sow the seeds of 'Nisarg Niketan' in the year 1999. Shri Dineshbhai personally defined "retirement as life without attraction of material requirements, care free life, life full of happiness and satisfaction, life dedicated to take up social responsibility. He believed that constant, full time involvement in constructive social work leads to the route of meeting Almighty God and proves to be a source of living religious life". He believes in serving the mankind, nature, birds and animals and to attain this goal he went forth with the idea of 'Nisarg Niketan' i.e. 'Nature's Campus'.

The seed of 'Nisarg Niketan' was nurtured by his wife and the chairperson of NST Mrs. Devendraben Bhatt. By profession she too is a school teacher and a resourceful and thoughtful wife who always acted as a supporter and guide in all works of her husband. Her innate hobby of reading environmental and religious book made her always thought provoking to create a natural landscape in which they not only lived in the nature's lap but also did the deeds protecting the nature. She believed that wandering for few days in hilly region would not create any attachment but cultivating a natural environment at residence will always keep one emotionally attached and sensitive to the Mother Nature. Such logical thinking helped her to assist her husband to build a sprawling campus in the desert region.

Shri Dineshbhai believed that trees sustain the life of all living beings and they should be protected, nurtured and grown. Based on this philosophy NST commenced its work with four plausible objectives of protecting environment and biodiversity, protecting flora, protecting fauna and social service to poor and needy. The high profile objectives are carried out in small village of Patan district, Dhonara which is just 15kms away, tucked between Sankeshwar-Becharji highways. 'Nisarg Niketan' is registered as a trust in the name of 'Nisarg Sewa Trust'. The green campus 'Nisarg Niketan' is spread on three acres of land. On his retirement Shri Dineshbhai received the provident fund amount of Rs.8,00,000 he devoted the entire amount to purchase the land and build the campus.

He was strongly determined to build the campus without use of any government scheme or subsidy. Accepting donations from public at the early juncture was not possible as the concept being innovative, people demanded tangible proof of concept i.e. physical existence of 'Nisarg Niketan'. Moreover, the Indian mindset always boosted philanthropic activity in the major identified areas of education, religion, health services, temple construction, orphanage homes, old age homes, for welfare of disabled and deserted people, women empowerment, for education of girls and community welfare. Indian people never developed a notion to donate for a novel and noble cause of protecting the flora and fauna. Despite the constraints of funds, Shri Dineshbhai's strong will power always made a way for him to carry out his activities. The trust started its operational activity in 2002 to protect the diversity of life on our planet like genetic diversity, species diversity and habitat diversity i.e. biodiversity in the desert region of Gujarat. Donations made to NST is deductible U/s.80G(5) of the Income Tax Act, 1961, which depicts its valuable activities.

## GUARDIAN OF FLORA

Flora is the plant life that is present in particular region or habitat or at a particular time. It is a common misconception that all plants can be re-grown after the destruction. For every plant species that goes extinct, up to 30 other species of plants, insects and other animals may also decline. Our native plants and varied species of plants have been declining at an alarming rate. Plants support healthy environment, it provides food, fiber, fuel, fragrance, ornamental value, pharmaceutical value and habitat to fauna. Plants provide clean air, water, hold soil, moderates water and wind impacts and shade the earth. There are 15,000 species of plants found in India (Retrieved from <http://www.anonlineindia.com/conservation.htm>, as on December, 2011). More than 400 species of flora are found in Gujarat (Retrieved from <http://www.mapsofindia.com/gujarat/geography/flora-and-fauna.html>, as on December, 2011).

To protect and save trees the work of cordon fencing was done by the trust. A botanical garden was created by the trust to protect the domestic and 60 other important species of plants. Apart from the local vegetation 60 species of plants were sown, accumulated, grown and nurtured. The selections of these 60 species were made based on the criteria of its easy availability, capability to sustain in water paucity region, its adapting capacity to climatic condition and longevity of plants. The hardworking trustee has an ambition to nurture and enlarge the existing 60 plant species to other 500 to 600 plant species in the botanical garden of 'Nisarg Niketan'. The list of vegetation is described in Table.2. NST also developed nursery.

**Table. 2 Lists of Species of Plants in Botanical Garden of Nisarg Niketan**

Gujarati Name	English Name	Gujarati Name	English Name	Gujarati Name	English Name
Mausambi	Sweet lime	Paam	Palm	Dadam	Pomegranate
Garmala	Pudding pipe tree	Jaasud	Hibiscus	Arjun	Arjun Terminalia
Limbu	Lemon	Karan		Narangi	Orange
Jammun	Blackberry	Kuvarbhathu	Aloevera	Vaad	Banyan
Bordi	Indian Jojoba	Champo	Joy perfume tree	Lilli	Daffodil
Chickoo	Chickoo	Gundo	Indian Cherry	Asopalav	Indian mast/fir tree
Jamfal	Guava	Mogra	Jasmine	Setur	Mulberry
Falsa	Blueberry	Madhumati	Chinese creeper	Kackka	Sagar Ghota
Ambla	Gooseberry	Krushnakamal	Blue Lilli	Karanj	Indian bead/Oil tree
Rayan	Yellow berry	GoraasAmbli	Sweet Tamarind	Badam	Almond
Kharek	Dry Dates	Naagfani	Prickly Pear	Arduso	Ailanthus
Saragva	Drumstick tree	Kena	Yellow	Pothos	Money-plant

			Orleander		
Peepal	Peepal Tree	Khhati Ambli	Tamarind	Cactus	Cactus
khijdo	Mahaar tree	Nilgiri	Eucalyptus	Borsali	Bullet Wood Tree
Subabul	White lead tree	Chanothi	Rosary Pea	Kseyya	Not Available
Mehndi	Heena	Billi	Wood Apple tree	Sankheswar	Not Available
Ardusi	Acanthaceae	Mahudo	Indian Butter tree	Umro	Not Available
Mittolimdo	Curry Leaves	Moneyplant Vel	Money-plant	Poie	Not Available
Ambo	Mango tree	Gulmohar	Flame tree	Vellerize	Not Available
Sharu	Casuarinas	Sonamohar	Not Available	Bogan	Not Available
Kiltoria	Not Available	Techoma	Not Available		

(Source: Adapted from NST's Report)

These plants are grown with three major objective viz. first being protecting the environment so that constant fresh oxygen and shade is available and to avoid expansion of desert. Second objective is of promoting the use of plants for herbal healing purpose. Many villagers use these plants for medicinal purpose, which is often referred as 'Ghar Vaidu'. Third objective of nurturing and growing plants is to provide live demonstration of horticulture and organic farming to ignorant farmers of the region. It provides a live illustration of selection of right type of plants for appropriate climate which proves to be cost effective, highly adaptive and constant income generating. Organically grown fruits and agro produce have never ever been marketed for commercial profits.

## PROTECTOR OF FAUNA

Fauna is the animal life that is present in particular region or habitat or at a particular time. Indian ecozones houses wide range of animals. Unfortunately extensive hunting, large scale clearing of forests, poaching, strong usage of pesticide and ever rising population creates disastrous effect on environment. Only around 10 per cent of country has forest cover of which only four per cent is protected by law within national parks, reserves and wild life sanctuaries (Retrieved from <http://www.anonlineindia.com/conservation.htm>, as on December, 2011). India had setup 80 National Parks, 441 wild life Sanctuaries and 35 zoological gardens in the country (Retrieved from <http://www.indianmirror.com/geography/geo5.html>, as on December, 2011). In Gujarat there are 500 species of mammals, more than 2,000 species of birds, wide range of insects, fishes, amphibians and reptiles (Retrieved from <http://www.mapsofindia.com/gujarat/geography/flora-and-fauna.html>, as on December, 2011).

The planted trees acted as a wall to obstruct hot winds. The trees kept the temperature low and provided habitat to the birds. In the desert region there is shortage of water, trees and secure places for birds and animals so many creatures died due to extreme heat. To provide them safety, security, food, water and peace Nisarg Niketan- the botanical garden acted as the best place. The list of birds and animals which takes shelter in Nisarg Niketan campus is given in Table.3.

**Table. 3 List of Species of Animals and Birds Dwelling in Botanical Garden of Nisarg Niketan**

Gujarati Name	English Name	Gujarati Name	English Name	Gujarati Name	English Name
Mor	Peacock	Tetar	Partridge	Madhumakhi	Honey bee
Popat	Parrot	Lakkadhod	Woodpecker	Chibari	Spotted Owlet
Koel	Cuckoo	Kumbhar yo	Crow-pheasant	Dargido	Common Tailor bird
Kabutar	Pigeon/Dove	Bagla	Crane/Sarus	Ghoo	Dragon
Sugari	Baya /Indian Weaver	Kagdo	Crow	Saap	Snake
Kabar	Myna	Bulbul	Bulbul	Kankhajuro	Millipede \Centipede
Holo	Red Collared-Dove	Fulsugani	Not Available	Dedka	Frog
Chackli	Sparrow	Biladi	Cat	Kachba	Tortoise
Devchakli	Indian Robin	Kaliokishi	Black Drongo	Noliya	Mongoose
Tintodi	Red Wattled Lapwing	Khiskoli	Squirrel	Kachindo	Chameleon
Vinchi	Scorpion	Bhamfodi	Common Sand Boa (Eryx Conica)	Khadchitra	Not Available
Andhadi Chakar	Slender Blind Snake				

(Source: Adapted from NST's Report)

Many reptiles are at the edge of extinct due to excessive use of pesticides, technology in agriculture and cutting of trees. In the botanical garden there is no use of pesticides or any kind of poisonous chemicals or medicines in the campus so the underground creatures have survived in large numbers. This personifies true humanism. Scarcity of water is always an issue in desert. To address this issue trust created many mini water wells 'pashu parab or havada' for animals. Family of birds and burrowing animals grew by width and breadth, which lead to the need of fodder. To provide fodder to birds and animals money was required, which was met through the philanthropy and monetary efforts provided by sensitive nature loving donors.

## SUPPLEMENTARY FUNCTIONS

NST does not lack behind in the social service. It has organized various 'Environmental Awareness Camps' to teach the local people and motivate them to protect the depleting flora and

fauna of desert. It also assisted people to abolish addiction of harmful and hazardous items like tobacco, cigarettes etc by organizing ‘Addiction Removal Camps’. This was treated as a big task to educate people to live a healthy life- truly a humanitarian effort. It provided economic and financial assistance to girls for the purpose of education in the name of ‘girls kelvani’.

It was discovered by NST that in its village and in adjacent villages students were void of educational facilities like electricity, personal and peaceful space at home. To provide education friendly facility ‘Nisarg Jeevan Shaala’ was started in which study centre were run for students free of cost. In the ‘Nisarg Jeevan Shaala’ environmental awareness camps of five days, seven days and eleven days camps were held to instill environmental awareness and explain the importance of all five elements in relation to human beings. Children were taught to live a life associated with nature rather than living in superficial material comfort. At the study centre students strictly obeyed the time table of morning prayers, night prayers and dawn reading. Prayers and perseverance paid students in terms of 95 per cent results. It was known that the operational expenses (like providing meals) for running the hostel was too high, infrastructure bottleneck was felt when the number of students increased. Study room and sanitary facilities proved to be a major constraint. Lack of Infrastructure, sky-scraping maintenance expenses and funds constraints lead to the closure of study centre after the period of three years.

NST made it as a strong point to spread the true literature in people. Sale of good books for the benefit of people was started. Good periodicals were subscribed at ‘Nisarg Niketan’ for cultivating good reading habits among people, so that knowledge of lateral reading can be exchanged vertically. NST constructed a 25’x 25’ hall for mediation, library and mini theatre. Trustee is trying hard to collect the educative CDs on environment, flora and fauna which he plans to show in the mini theatre to the school students who often come on a field visit at Nisarg Niketan.

Charity in kind is also undertaken by NST. Destitute were offered clothes and woollens. Deprived students were offered uniform. In the scorching heat of summer labourers were provided buttermilk, mangoes and onions. They were often provided cooking oil. In kind aids were provided due to cash or kind unconditional donations offered by various generous donors. Unconditional donations helped the trust to operate smoothly.

Rural Livelihood and Rural Development by NST

Through the live demonstration of growing the plants, its cultivation and nurturing, pastoral people are explained the importance of flora in desert region. They are educated on the innovative concept of horticulture and crop rotation in agriculture. Science demonstrates that the seasonal crops grow in the first layer of the soil and horticulture crops grow in the deep layer of the soil without taking away the nutrients of seasonal crops. NST demonstrated that seasonal crops are dependent on rain, so its income is unpredictable like erratic monsoon, whereas the secure crops do not rely on rain, it stays longer for maximum of 30 years, and thus expense of seed plantation is not required for many years. The prime advantage of growing horticulture crop with seasonal crop is it provides secondary source of income to farmers, due to its high commercial value.

Horticulture helps the farmers to obtain twice the yield in the given space of land. Through space management and horticulture farmers can obtain produce in five acres land which is equivalent to the produce of 10 acres land. Generally farmers rely on cattle farming for secondary income source, but unfortunately in desert, milking animals are difficult to rear due to dearth of green fodder, in such critical situation horticulture acts as secondary income source. Through the practice of horticulture farmers can develop nursery, carry out tissue culture and earn multiple income from the same plant. Landless farmers can obtain wages by working round the year in farms where horticulture is being practiced. Many farmers motivated through NST's botanical garden have supplementary adopted horticulture with agriculture in the village of 'Shankeshwar, Khijadyari, Datensana and Padla etc'.

Farmers were made aware of the advantage of organic farming, without the use of artificial insecticide and pesticide. They were explained that the entire nature gets imbalanced to the use of artificial bug killer. Plants are the stepping stone of food chain. If the poisonous insect repellent is sprinkled on the plants it leads to death of the farmer friendly insects and birds when they eat the plants or eat its fruits. When the carnivorous animals eat the herbivorous animals, who have consumed the poisonous plants then even they too face death. On explaining such aggravating effects which not only agitate the healthy food chain but it also creates imbalance in the ecosystem have strongly helped the farmers to turn towards organic farming.

The flora provides food for fauna of 'Nisarg Niketan'. The fruits of the botanical garden are used as food by birds. In fact villagers too take the benefit of the botanical garden free of cost. Fruits and agro produce are given free of cost to nearby schools, hostels, temples, colleges, friends, visitors (at NST) and nearby donors. If there is surplus produce after distribution then it is sold in the market at a negligible cost. The revenue generated from the sale of the agro produce is strictly used for incurring maintenance expense like grains for birds, new tree plantations and electricity expense for drawing water from bore-wells etc. No attempt is carried out to use artificial fertilizer and pesticide with an incentive, to generate high yield of fruits and agro produce, for selling the same in the market to generate huge amount of revenue. This indicates that practices at NST are purely ethical.

The plants grown in the botanical garden are thick and big enough to provide a safe protected place to birds to hide from enemies. The plants in the botanical garden help the birds to build the nest, shelter there and live a care free life. In the garden the existing burrowing animals are provided with water, safety and shelter, which helped them to expand their families. The burrowing animals are farmer friendly and they keep the eco cycle alive. In the botanical garden no external cultivation is done. Entire cultivation of land is performed by burrowing animals. Farmers are explained the benefits of protecting the fauna through the live demonstration in "Nisarg Niketan".

The trust has kept an arm's length from media publicity, but its gate is wide open for field visit of school students of nearby villages. 'Nisarg Niketan' allow the students to look at and

comprehend the live manifestation of flora and fauna in the desert region. NST aims to inculcate sensitivity and love for nature, trees, plants and animals in the young generation. NST aims to change the naughty attitude of young generation from plucking to protecting the nature. In an endeavor to protect and promote environment the close-net personal visitors are gifted earthen nest (for sparrow, pigeon, parrot) so that even they can participate in the noble cause of protecting their surroundings.

## SOCIAL CONTRIBUTION AND ACCOMPLISHMENTS

The donation ranged from meager amount of Rs.100 to as highest amount of Rs.1,00,000. During the period of seven years (2000-01 to 2007) the trust received total donation of Rs.5,88,802. Against the donation received trust has incurred the expenditure of Rs.6,49,543 on various activities. The details of the same are presented in the Table.4. Comparing the amount of donation and expense, trust has a liability of Rs.60,741.

**Table 4. Summary of Funds Deployed for Various Activities**

Sr. No	Activities Accomplished	Total Expenses (Rs.)
1	Earth quake Relief Expenses	1,82,905
2	Tree Rearing Expenses	92,095
3	Nursery and Plantation Expenses	54,550
4	Environmental Awareness and Education seminar	29,456
5	Education Assistance Expenses	64,700
6	Addiction Removal Camps and Health Service Camps Expenses	13,051
7	'Havada' (Mini Water Wells) and Birds Fodder Expenses	23,300
8	Women Training and Development Expenses ('Kaniya Kelvani')	1,23,204
9	Solar Energy Expenses	19,000
10	Water-Land Expenses	2,200
11	Books and Literature Expenses	2,800
12	Circulation Expenses	29,449
13	Famine Relief Expenses	12,833
Total Funds Deployed in Accomplishment of Activities		6,49,543

**(Source: NST's Report)**

In the period of seven years thousands of tons of oxygen is gifted by 'Nisarg Niketan' to the environment, which is responsible for pollution reduction. In nurturing of the flora in 'Nisarg Kiketan' it has used only organic fertilizer, which in a way has helped the burrowing animals to survive and grow. This sets forth an illustration of mercy on living creatures in the fauna. Five 'pashu parab' has been made by the trust. Out of which one 'parab' is in the remote desert area. Ten girls have been provided financial assistance for education. Five girls have been assisted in education and in the period of two years 45 students have taken the benefit of amenities provided in 'Nisarg Jeevan Shaala'. Five environmental awareness camps, seminar on 'Water is Life', Addiction Removal Camps (Tobacco Free) have been carried out by Nisarg Sewa Trust. Fodder and grains for birds and animals have been provided. In the desert area there are few trees only due to which birds are void of shade, nest and shelter. The philanthropy activity of NST has

provided birds with real support. Trust has established 'Pakshi Tirtha' a safe place for birds where thousands of birds live happily. In Nisarg Niketan three times per day about 50Kgs to 60 Kgs food grains is given to thousands of birds for last so many years which cost Rs.2,00,000 to 2,50,000 per annum. For cold water for birds, approximately Rs.40,000 are being spent. Presently there are 2,500 planted trees in the garden of Nisarg Niketan. More than 300 peacocks, 200 parrots, 300 pigeons, cuckoos, bulbul, sparrow, woodpecker, eagles etc are living in the campus of 'Nisarg Niketan'.

## CONCLUSION AND SUGGESTIONS

If the rich biodiversity is supported and sustained then it leads to a balanced life cycle on the earth. A reservoir of animals and plants enables a proper food chain and guarantees an insured policy for the future. Issues of global warming can be overcome if we start protecting the flora and fauna. It is believed that if we seed the plants, protect the animals then it will feed the mankind. NST always believed in the philosophy of serving and protecting the nature for the blessings of Almighty God. More number of such types of NGOs needs to come up to shoulder the true responsibility of subsistence. The selfish mindset of luxury and comfort needs to be transformed, we need to be socially and environmentally responsible citizens. Young children should be sensitized towards environment and adults must be taught to take up the responsibility of protecting and enlarging the environment. We need to dedicate ourselves to grow, nurture and protect the presence of five elements in one body i.e. tree. Our donations habits needs to be diversified for the cause of environment. If we become responsive to environment, then nature will bless us with green life, soothing climate and valuable endowments for our life. Government's assistance is equally required in the form of flexible regulations and grants to be offered to such NGOs. Moreover, active support from government officials would make the operational work smooth for the NGOs. Candidly speaking if we take the responsibility of donating some amount to NST then we can make a big difference to save the society.

## REFERENCES:

- Bhoose Joel S. G. R. 2003. NGOs and Rural Development- Theory and Practice, New Delhi: Concept Publishing Company.
- Gupta, R.K. 2007. NGOs and the State, New Delhi: Mahaveer & Sons.
- [http://en.wikipedia.org/wiki/Non-governmental\\_organization](http://en.wikipedia.org/wiki/Non-governmental_organization)
- <http://www.anonlineindia.com/conservation.htm>
- <http://www.mapsofindia.com/gujarat/geography/flora-and-fauna.html>
- Iyengar Sudarshan. 2000. 'Role of Non Governmental Organizations in Development of Gujarat', Economic and Political Weekly, 35 (35& 36): August-September, p.3236.
- Jehangir S Pocha. 2009. The Marketing White Book- The Marketers' Essential Handbook, New Delhi: Businessworld Publication.
- Miltin Diana, Hickey Sam and Bebbington Anthony (2006). Reclaiming Development? NGOs and the Challenge of Alternatives, Global Poverty Research Group, Working Paper Series- 043, URL: <http://www.gprg.org/>, (Visited 2011, 14 December).
- Ram P. N. 2007. NGOs and Rural Development, in Lal Ramji and Purohit H. C. (ed.), Rural Development and NGO, pp.197-203. New Delhi: Shree Publishers & Distributors.

- Werker Eric D. and Ahmed Faisal Z. (2007) What Do Non-Governmental Organizations Do?, Working Paper Series-08-041, URL: [www.hbs.edu/research/pdf/08-041.pdf](http://www.hbs.edu/research/pdf/08-041.pdf) , (Visited 2011, 15 December).
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