

## ROLE OF NGOS IN SUSTAINABLE DEVELOPMENT AND NATURE CONSERVATION: A CASE STUDY ON SOCIETY TO SAVE ROCKS, HYDERABAD, INDIA



**Mahender Reddy, G.**

*Society to Save Rocks, NITHM, Hyderabad*

*Email: mahendergarinella@gmail.com*

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**Abstract:** Deccan plateau is the large plateau in India, making most of the southern part of India and Hyderabad is the biggest city in the plateau, whose rocks provide unique spectrum of geoheritage and geo diversity from the oldest (nearly 2.5 billion years) to youngest spectacular granite rock formations. These graceful boulders in a variety of shapes and sizes have withstood the vagaries of nature and its elements for ages. These geomorphic expressions are the part of rock-scape and are potential sustainable sites of biodiversity. The floristic-faunal elements and medicinal plants invariably associated with the rock sites. These formations are in danger and disappearing due to unsustainable development, rapid urbanization and mindless development. To prevent the indiscriminate destruction of this natural geological heritage, a group of artists, environmentalists and photographers from Hyderabad formed a registered society called Society to Save Rocks in Hyderabad. This article will explain about the geological heritage (granite rocks), its importance. The main objective of the articles is to know the role of Society to Save Rocks in promoting, protecting and preserving spectacular rock formations of Deccan and sustainable development of heritage city Hyderabad. Study is conducted by collecting both primary and secondary data and data is analyzed using appropriate methods.

**Key words:** Sustainable Development, Geological conservation, Rocks, society to save rocks, Deccan.

### INTRODUCTION

The theoretical framework for sustainable development evolved between 1972 and 1992 through a series of international conferences and initiatives. The UN Conference on the Human Environment, held in Stockholm in 1972, was the first major international gathering to discuss sustainability at the global scale. The conference created considerable momentum, and a series of recommendations led to the establishment of the UN Environment Programme (UNEP) as well as the creation of numerous national environmental protection agencies at the national level. The recommendations from Stockholm were further elaborated in the 1980 World Conservation Strategy collaboration between the International Union for the Conservation of Nature, the World Wildlife Fund (WWF), and UNEP which aimed to advance sustainable development by identifying priority conservation issues and key policy options. The term, sustainable development, was popularized in *Our Common Future*, a report published by the World Commission on Environment and Development (WCED) in 1987. Also known as the Brundtland report, *Our Common Future* included the

definition of sustainable development: “development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). Sustainable Development (SD) implies economic growth together with the protection of environmental quality, each reinforcing the other. Sustainable Development, thus, is maintaining a balance between the human need to improve lifestyles and feeling of well-being on one hand, and preserving natural resources and ecosystems, on which we and future generations depend (Centre for Environment Education, 2007).

According to Centre for Environment Education, that we need to develop the ability to make a choice which respects the relationship between the three “Es” economy, ecology and equality model. If all the three “e’s” are incorporated in the national goals of countries then it would be possible to develop a sustainable society. Models help us understanding the concepts of Sustainability better. Achieving Sustainable Development thus, requires more effective, open, and productive association

among the people themselves. Models help us gather, share, and analyze information; they help coordinating work; and educate and train professionals, policymakers, and the public in general. The model on sustainable development called 'Egg of Sustainability' was developed in 1994 by the International Union for the Conservation of Nature, IUCN (Guijt and Moiseev, 2001). It illustrates the relationship between people and ecosystem as one circle inside another, like the yolk of an egg. This implies that people are within the ecosystem, and that ultimately one is entirely dependent upon the other. Just as an egg is good only if both the white and yolk are good, so a society is well and sustainable only if both, people and the eco-system, are well. Social and economical development can only take place if the environment offers the necessary resources: raw materials, space for new production sites and jobs, constitutional qualities. Ecosystem is therefore to be regarded as a super coordinated system to the other dimensions of the triangle or prism models: social, economical, and institutional. These latter can only prosper if they adapt themselves to the limits of environmental carrying capacity (Centre for Environment Education, 2007). Sustainable development draws much of its resonance, power, and creativity from its very ambiguity. The concrete challenges of sustainable development are at least as heterogeneous and complex as the diversity of human societies and natural ecosystems around the world. Sustainable development thus requires the participation of diverse stakeholders and perspectives, at multiple levels, from local to global, within and across activity sectors, and in institutions of governance, business, and civil society to redefine and reinterpret its meaning to fit their own situation. Thus, the concept of sustainability has been adapted to address very different challenges, ranging from the planning of sustainable cities to sustainable livelihoods, sustainable agriculture to natural heritage conservation (Kates, 2005).

The Rio Declaration on Environment and Development listed 18 principles of sustainability. In this one of the major principle is that Nations shall cooperate to conserve, protect and restore the health and integrity of

the Earth's ecosystem. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command. Peace, development and environmental protection are interdependent and indivisible (McKeown and Rosalyn, 2002). The Earth Charter Principles had been in development since the year 1997, completed in March 2000 and launched in The Hague, Netherlands, on 29 June 2000. The Earth Charter principles cover various aspects such as environmental responsibility, peaceful coexistence and respect for life, democracy, and justice. The major principles related to environment are respect Earth and life in all its diversity. Secure Earth's bounty and beauty for present and future generations. Earth's ecological systems and biological diversity, a preventive and precautionary approach as the best method of ecological protection, and compassionate treatment of all living beings.

In Rio+20 conference, Future We Want, noted that valuable contributions of non-governmental organizations could and do make in promoting sustainable development through their well-established and diverse experience, expertise and capacity, especially in the area of analysis, sharing of information and knowledge, promotion of dialogue and support of implementation of sustainable development (Non-Governmental Organizations, 2013). Non-governmental organizations play a vital role in the shaping and implementation of participatory democracy. Their credibility lies in the responsible and constructive role they play in society (Agenda 21: Chapter 27)

**Need and role of NGOs in Nature Conservation:** Man's concern for natural environment has always been a point of consideration but the serious concern about the issue of resource depletion and degrading environmental ecosystems began after the Second World War, when industrialization started vigorously. Population explosion, ever increasing thirst of consumerism and advancement in human life and life style posed a serious challenge to the very survival of the human species. Environmental problems thus,

have become critical. The protection of environment and conservation of resources has emerged as the focal point of nations. (Gupta, 2012). Every person, organization and institution has an obligation and duty to protect it. Environmental protection encompasses not only pollution but also sustainable development and conservation of natural resources and the ecosystem. Today, the necessity of environmental awareness and enforcement is more demanding and urgent than ever before. (Agarwal, 2008). The emergence of Non Governmental Organizations represents an organized response by civil society especially in those areas in which the state has either failed to reach or done so inadequately. The importance of public awareness and NGOs involvement in environmental protection is acknowledged worldwide (NGO watch 2013). NGOs are Non-Governmental Organizations are usually referred as, organizations which are not part of government though could be funded by the government (Sandhu, 2012). Non-governmental organization (NGO) is a legally constituted, non-governmental entity set up without participation or representation of any government to pursue and implement a specific project (defined as Operational NGO), or defend and promote a specific cause (defined as Advocacy NGO) (World Bank, 2009). The primary objective of these organizations is public service. The number of NGO operating on a global basis such as Rotary International and Oxfam is estimated at 40,000 (Anheier *et al.*, 2001). As per one estimate, there are more than 3.3 million NGOs in India in 2009 (Shukla, 2010). In India, for an entity to become an NGO, it has to register either as a Trust, Society or a private limited nonprofit company, under section-25 Company of the Indian Companies Act, 1956.

The NGOs vary in their goals and strategies. Groups of charity nature may organize public campaigns to raise fund for their activities (Ng and Choi, 2010). Environmental NGOs typically take up causes related to the environment such Climate Change, Air Pollution, Deforestation, Ozone Layer Depletion, Waste Management, Biodiversity and Land Use, Energy, Conservation, Environmental degradation, Land Degradation Some of the Prominent examples of Environmental NGO working in

India are Greenpeace India, Awaaz, CERE India, Conserve, Foundation For Ecological Security, Exnora International, Goa Foundation, WWF India and Winrock International India, Bombay Natural History Society, Centre for Environment Education (CEE), Friendicoes, Society for the Eradication of Cruelty to Animals (Directory of NGOs. 2013). All of these NGOs in India are working in different capacities of environment. Most of them are working in areas like floral, faunal conservation, pollution control, water and soil conservation. A NGO can be extremely useful in assisting the government in the development of geopark and the promotion of geological conservation. The example of Hong Kong demonstrates the flexibility, efficiency and professionalism of a NGO which reinforces the government's determination to make possible the establishment of a geopark in Hong Kong (Ng and Choi, 2010). Most of the nature conservation authorities of both private and the government, in India, are bound by their primary interest in protecting the ecological components of the environment, but concerns for geological conservation and promotion is very limited. The NGO's task is therefore significant in arousing public awareness and interest in geological knowledge. It also creates the need of protecting and conserving the geological heritage, a more sensible usage of the available geological resources for sustainable tourism.

#### **The Deccan and its Geological (Granite)**

**Heritage:** The Deccan Plateau is a large plateau in India, making up most of the southern part of the country. (Jadoan and Atar Singh, 2001). The three large cities in the Deccan are Hyderabad the capital of Andhra Pradesh, Bangalore the capital of Karnataka and Pune. Other major cities include Mysore in Karnataka, Coimbatore and Salem in Tamil Nadu, Nagpur and Hyderabad was a major capital for the Deccan. (The Deccan Plateau, 2013). The Deccan region has variety of ecosystems ranging from tropical rainforests to low rainfall arid zones, hot springs, soda lakes and marshes which must be sustaining unique microflora typical for each region. (Harsha, 2000). The eastern Deccan plateau, called Telangana, is made of vast sheets of massive granite rock, which effectively traps

rainwater. Under the thin surface layer of soil is the impervious gray granite bedrock. (Geography of Deccan Plateau, 2013).

The granite rocks of the Deccan Plateau are amongst the oldest in the world. Geologists date these rocks 2,500 million years back. That is the time when the earth's crust solidified. Molten magma then pushed upwards from the interior and hardened under the crust into domes and sheets of granite. Horizontal and vertical cracks developed. When, slowly, the top layers of the crust eroded, and these very hard granites were exposed, they weathered over millions of years into their present forms. This happened along their horizontal and vertical cracks during - what is called - onion peel weathering (or spheroidal weathering), rounding the stones - and the bizarre formations resulted (Society to Save Rocks, 2013). Granite rocks of the Deccan Plateau are 60 times older than the Himalaya Mountains (Aparna Menon, 2011)

These rocks are amongst the oldest rocks in the world and form the basement of all the younger rocks formed after them in the region. The gneissic rocks of Peninsular India, which lie exposed in parts of Andhra Pradesh, have weathered over million years to produce the rock formations that we observe today. The weathering and sedimentation has also prepared the ground for living organisms to live there. Most of them harbour micro flora and fauna and many are known to support water conservation by generating waterfalls, springs and streams and recharging ground water through subterranean passages. They are also responsible for formation of lakes and other water bodies. Unfortunately, most of them face rapid destruction from quarrying for metal or stones for construction. Their destruction will mean a loss of not only a rich heritage having intrinsic as well as recreational and tourist value but also of natural features having botanical, zoological and geological importance that may hold the key to our future environmental health (Project Proposal, 2013).

## **OBJECTIVES AND METHODOLOGY**

Aim and objective of this study is to highlights the role and impact of NGOs on environmental conservation and sustainability in general. The other objective of the study is to know what is

geological heritage, conservation, Deccan heritage and the role of Society to Save Rocks in promotion and conservation of Deccan's geological heritage. This study is descriptive and case study method because

Both primary and secondary data was used for the study. The techniques generally used are observation method and interview method by participating in different activities of the Society and secondary data consists mainly from books and news letters published by Society, government reports, news clippings, news and society website. Data is analyzed using appropriate methods.

**About the Society to Save Rocks:** The Society to Save Rocks aims to preserve and protect the spectacular ancient granite formations of the Deccan Plateau, India - a natural wonder of stony ridges and hillocks shaped into picturesque balancing forms. To prevent the indiscriminate destruction of this natural, historical, and environmental heritage, a group of artists, photographers and environmentalists from Hyderabad has been working for the protection of this rocky landscape since 1992.

The idea behind the society was to survey and monitor rock sites of Hyderabad city that were under threat of being decimated and to lobby for their protection with the government. The society was finally registered in 1996 and called Society to Save the Rocks (Swati Sucharita, 2011). Since then, the Society to Save Rocks has expanded to include many other citizens, from students to housewives to businessmen and bureaucrats. The Society wants to impress upon landowners, developers and the government that our beautiful granite boulders could be preserved in houses, gardens, colonies and park areas (Society to Save Rocks, 2013).

## **Role of Society to Save Rocks in geo conservation and sustainable development**

**Awareness-Raising, Campaigning:** To make the general public more aware of the treasure that is our rocky landscape, the Society to Save Rocks is working on its extensive awareness and education programme: The continuous successful networking with the print media has been reinforced by presentations in the electronic media: a 'Rockumentary', co-

produced by the President of the Society, Narendra Luther, as well as features on All-India Radio and other TV channels have been aired at different occasions. A painting, essay and poetry competition was arranged for school children. A widely reported workshop for painters and sculptors from all over India has highlighted the artists' concern for the Deccan's beauty. Exhibitions of photographs and paintings bring wider exposure. A photo book "ROCKITECTURE" written by the Society's President N. Luther was published by the Department of Tourism, Hyderabad. A play titled "Rollicking Rockscape", written by member R. Rajamani, was staged for and with children at the open-air theatre of Shilparamam. A concert by the Delhi fusion group "Indian Ocean" in January 2004 has brought hundreds of young and not-so-young people out to the picturesque Durgam Cheruvu to see for themselves the magic of the rock landscapes around Hyderabad. This was the fifth concert arranged in rocky surroundings - a spectacular backdrop to Indian classical as well as modern music. Another cultural programme, in March 2005, combined a play by the Mumbai Company Theatre "The Blue Mug" and a jazz concert by the Hyderabad group "Charminar Jazz Collective" - a treat for theatre, jazz and nature lovers. A marathon of Rock Events: the 16. December 2012 saw 120 visitors flock to the rocky campus of Hyderabad University to enjoy a multitude of programmes on this sunny Sunday morning. The Society to Save Rocks invited participants for: Early morning Rock Walk, Rock Quiz, Rock Photography Contest, Rock Drawing Workshop, Rock Poetry Contest, Rock Balancing. On February 19, 2006, to mark its tenth anniversary, the Society celebrated an ENVIRO MELA at the National Institute for Tourism and Hospitality Management (NITHM) at Gachibowli, Hyderabad highlighting not only the plight of our ancient rocks, but many other environmental issues with the help of many of Hyderabad's environmental organizations. The Mela was an event for children and adults alike - with rock walks, snake shows, puppy adoption, drawing and quizzes, and all-day documentaries. November 21, 2010:

A spectacular performance by Project Bandaloo, an aerial dance company from Los

Angeles, on the granite rocks at the historic Golconda Fort gave us something to remember. The show was presented by the U.S. Consulate General in cooperation with the Department of Tourism of A.P. with a focus on rich Rocky Heritage. The Society to Save Rocks assisted in the presentation. In a unique style that combined rock climbing, vertical dance and music, Bandaloo kept the 4000 strong audience spell-bound on a sunny Sunday afternoon. Inspired by climbing and rappelling, the choreography was site specific and brought an awareness of the integration of natural landscape with the man-made Fort.

#### **Preservation, Partnerships and Advocacy:**

The Government of Andhra Pradesh has taken the first step by including rock areas in Regulation No. 13 of the Hyderabad Urban Development Authority (HUDA) for the protection of Heritage Buildings and Precincts. Hyderabad is the only city in India where rocks are protected as a natural heritage. HMDA, the Municipal Corporation and the Tourism Department have already started to develop rock gardens in the city. The first 9 Formations proposed by the Society in 1997 and protected under Regulation 13 of the Hyderabad Urban Development Authority Zoning Regulations 1981. Educational campuses like the Indian School of Business and the Hyderabad Central University, and IT offices, including the Computer Maintenance Corporation of India, have used rocks as a backdrop for their landscaped gardens.

The Society is conducting a scientific survey that includes the geology, flora and fauna, history and sociological aspects of rock areas in Andhra Pradesh, India. The first volume covering Rangareddy, Medak and Hyderabad Districts has been published. Few rock formations have been protected by the Govt. under HMDA heritage regulations. However, there is a need to conserve the environment for sustenance and survival of the biodiversity associated with them and makes use of them by drawing purposeful plans for the civilization which is crying hoarse on "climate change" says Professor R. Pavanaguru.

**Advantages and Challenges:** Society is more flexible and responds quickly in certain circumstances such as promotion and direct

dialogue with other organizations and individuals. Apparently they do not have the red-tape and bureaucratic problems as the government when making such decisions on matters but some times approvals are needed within government before major decisions can be made, thus causing unnecessary delay. Society is much faster to make things move forward at a relatively shorter time span. To enhance the awareness of conservation on rocks, for instance, the Society is able to recruit and mobilize large number of volunteers to assist in geoconservation activities such as Rock Walks, identification of rock formations in and around the city and other promotional programs like Rock Quiz, Rock Photography Contest, Rock Drawing Workshop, Rock Poetry Contest and Project Banda loop, etc.. The good relationship of the association with other organizations of similar nature encourages large number of co-organizers and supporters.

Society initiated the geopark development in the country by proposing to the government the rock park project. However, the continual involvement of Society in further development depends on the attitude of the government. Society is able to participate in geopark (Rock Park) identification, promotion, networking, planning and designing and nomination. The government must be open-minded and welcome the involvement of Society in the establishment and development of geopark. Society very often disadvantaged by limited resources and manpower and support. For carrying out research and consultancy and other promotional works, financial sponsorship constitutes a major and limited income source for the society to sustain their normal operation. Such sponsorship can be either provided by private enterprises or individuals as members. Under such circumstances, the activities and objectiveness of the society may on the other hand be restricted.

## CONCLUSIONS

The involvement of the society in geoconservation and geopark signifies the importance of public participation in geopark development. The active commitment of the Society to Save Rocks is an example of how the government can incorporate and make good use

of the advantages and resources of a NGO in the identification, preservation and development, promotion of rock formations or geological heritage. Practically, Society is able to provide greater flexibility and better efficiency needed by the government. Society need and role is important particularly at the early stage of rock identification, promotion and development when the rock conservation or rock park concept is still new and somewhat bewildering to many people in India. However, society is facing many challenges in sustaining their activities which will probably require government and corporate sponsorship and active participation of volunteer and continues support of citizens to some extent. There are tremendous opportunities for the government and private enterprises and institutions to work together with NGOs such as Society to Save Rocks for the protection of valuable and unique geological heritages of Deccan. The Society to Save Rocks, Hyderabad is an example and it can be regarded as useful reference for other parts of India to make good use of NGO in the identification, promotion, establishment, management and sustainable development of potential geological heritage sites.

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