

VRINDAVAN ECO-CITY IN MAKING: Working Together for Sustainable Development

INTRODUCTION

As a part of the Tenth Five Year Plan, the Central Pollution Control Board (CPCB) initiated the Eco-city Project, in 2002, with grant-in-aid from the Ministry of Environment and Forest (MoEF), Government of India. The German Technical Cooperation (GTZ), under its Indo-German Programme on Advisory Services for Environmental Management (ASEM), extended the technical support to the project.

It is a demonstration project and in its first phase covers the following six selected cities in India:

1. Kottayam, Kerala State, a tourist centre;
2. Puri, Orissa State, a town of cultural significance;
3. Thanjavur, Tamil Nadu State, a pilgrimage and tourist centre;
4. Tirupati, Andhra Pradesh State, a pilgrimage centre;
5. Ujjain, Madhya Pradesh State, a heritage and tourist place; and
6. Vrindavan, Uttar Pradesh State, a heritage and tourist place.

Under the project, funds are provided to the municipalities by CPCB for the identified and approved project, on 50:50 cost-sharing basis up to a maximum of Rs. 25 million (Euro 0.5 million) per town, wherein 50 per cent of the total budget should come from the municipalities either from their own funds or through financial institutions or any other source including NGOs and CBOs. The total fund for the first phase, including the share of municipalities is Rs.50 million (Euro 1 million at a conversion rate of Rs.50 per Euro, the same rate will be used throughout this paper).

In a selected city, the focus of the Eco-city Project is:

1. To improve environment through conservation of natural resources, management of sewerage, drainage and solid waste; reduction of air and water pollution; recycling of wastes and creation of job opportunities for the urban poor;
2. To improve visual qualities through urban design of selected complexes and landscaping of parks and open spaces and providing green belts;
3. To improve traffic management by providing efficient circulation, parking, pedestrian system that cater to the residents as well as the visitors to the town;
4. To build capacities of the stakeholders to prepare and implement projects;
5. To monitor the projects using specific environmental indicators;
6. To document the project impact;
7. To improve urban management and for this purpose, promote networking of participating cities with similar cities in Europe; and
8. To improve tourism and job opportunities.

The Eco-city Project includes a sub-project known as AAWaM (Achieving Action in Waste Management). The objectives of this sub-project are:

- a. identification and implementation of environmentally and economically sustainable strategies for municipal solid waste in the selected eco-cities;
- b. inculcation of awareness among people about such strategies; and
- c. imparting training through demonstration projects with the participation of selected NGOs.

The Eco-city Project is administered in the following manner:

- The MoEF controls the project;
- An Expert Committee at CPCB reviews and approves the Detailed Project Report (DPRs) for implementation;
- The CPCB is responsible for planning and coordination of the project;
- The GTZ-ASEM provides the technical assistance and training;
- The Local Project Coordination Committee, at Vrindavan, comprising representatives of municipalities, Archaeological Survey of India, community based organisations (CBOs), non-governmental organisations (NGOs), State Pollution Control Board (SPCB), and local experts, coordinates the implementation of projects;
- The municipalities are partners with CPCB on the project and responsible for the eco-city project ownership and its implementation;
- NGOs and CBOs are also responsible for implementation of the projects independently or jointly with the municipal council; and
- The local project management and release of funds is done by the SPCB.

In the initial stages the project submitted for funding were piecemeal. They were not prepared in an integrated manner covering all aspects in a specific area in the town. As a result, they did not ensure an overall ambience that is planned and visually pleasing. Accordingly, the Expert Committee did not approve any of the projects and suggested that an Eco-city Development Plan be prepared for each city with active participation of people. It should be followed by (a) preparation of detailed project reports (DPRs) by municipality, NGOs, CBOs or other implementing agencies; (b) approval of DPRs by Expert Committee; (c) implementation by the agency submitting the project; and (d) documentation of the impact of the project by the CPCB.

Taking Vrindavan as case study, this paper highlights the manner in which the Eco-city Project has been conceived and has attracted participation of people, NGOs and CBOs in its implementation.

CASE STUDY OF VRINDAVAN ECO-CITY

General Characteristics

Situated on the bank of river Yamuna, Vrindavan is a heritage and tourist place in the state of Uttar Pradesh, India. It is located at a distance of 145 km. South of the National Capital Delhi and is accessible by road (National Highway No. 2). The nearest railway station is at Mathura located at a distance of 14 km. Built during the 16th and 17th century, there are more than 5,500 temples mainly devoted to life and deeds of lord Krishna (one of the Gods in Hindu mythology) and Radha. In addition to temples, Vrindavan has *samadhis* (places where ashes of famous religious persons are kept), *ghats* (stepped bathing places along the river), *kunjs* (gardens), *kunds* (man-made water tanks) and institutions of religious and cultural education. There is a 10 km. long circular pathway surrounding the town (*Parikrama Marg*) where, on specific days (*ekadasi*, the 11th day of the waxing and waning moon), devotees, bare-footed in many cases, perform the ritual of walking and completing the round.

The area of the town is 4.56 sq. km. and, as per 2001 Census of India, it has a population of about 56,000. The daily inflow of pilgrims and tourists is about 10,000 and on the birthday of the lord Krishna, it reaches to its peak with one million visitors. In the year 2003, some 3.31 million devotees and 16,000 international tourists visited Vrindavan¹.

Critical Issues

The critical developmental issues at Vrindavan can be summarised as under:

Land

- Most of the land in the town is owned by the temple trusts and is not generally available for other uses;

Condition of Buildings

- A large number of 300 to 400 year old temples, built with good quality red sand stone with rich architectural style, are dilapidated and require conservation;

Roads and Traffic

- Roads are narrow (3m. to 9m.) with buildings on both sides and thus a limited possibility for their widening;
- There are no footpaths;
- Traffic is mixed and carts driven by animals (camel, horse, or bullock), cycle-rickshaw, cycles, automobiles and pedestrians compete for the same road space;
- Animal such as cows and pigs also loiter on the roads freely;
- Roads leading to temple entrances normally have commercial activities on either sides that reduce their capacity and adds further to the traffic congestion;
- There is hardly any traffic management in the town;

Infrastructure

- Storm water drains are open and carry sewage, plastic bags and other solid wastes dumped carelessly by the people, which blocks them at places;
- Drinking water is supplied for only one hour in the morning and evening;
- Ground water is contaminated with fluoride, nitrates and phosphates;
- Solid waste management is poor;
- Tourists' facilities such as parking, boarding and lodging places and public toilets are inadequate.

Pollution

- The river water is contaminated due to lack of flow in river as a result of storage of water up-stream in the states of Haryana and Delhi;
- Discharge of industrial effluent and untreated sewage adds to the river water pollution;
- River front is neglected as the river course has shifted away from the bathing *ghats* and the land between the *ghats* and river course is heavily polluted by solid waste scattered all over or stagnant and stinking pools of water;
- Noise pollution near entrance of temples is very high due to religious music being played at high volume by shopkeepers selling audio cassette and CDs; and
- The town is congested (density 15,000 persons per sq. km.) and people suffer from lack of light and ventilation in buildings.

Eco-city Development Plan of Vrindavan

As mentioned earlier, the initial DPRs, submitted under the Project, were piecemeal and were not accepted by the Expert Committee. Accordingly, technical assistance from GTZ-ASEM was provided for the preparation of the Eco-city Development Plan (EDP) of the identified core area of Vrindavan by the Department of Architecture and Regional Planning, Indian Institute of Technology, Kharagpur (IITK) with active participation of people. The identified core area has been termed as the Vrindavan Eco-zone. The area of this zone is one sq. km. and it accommodates most of the important temples in the city. Some 15,000 people live in this zone.

Public Consultation and Responses

A draft EDP was prepared by the IITK and the same was presented to the people in an Eco-city Workshop, organised at Vrindavan, where member of the public, NGOs, CBOs, and representatives of local administration participated. After the presentation, the participants were divided into four groups to discuss and present their views regarding the following:

1. What should happen in Vrindavan Eco-zone?
 - a Do you support the proposals of the EDP?
 - b What additional projects would you propose for the area?
2. What should not happen in the Vrindavan Eco-zone?
3. What should be the priority of the projects proposed in the EDP? Please rank the projects as per your priorities.

There was full agreement on the plan objectives, which include:

- Environmental improvement of the town (Clean Vrindavan);
- Provision of green corridors (Green Vrindavan);
- Improvement of public physical infrastructure; and
- Revival of historic ambiance of the town.

Practically all projects proposed under the EDP were supported by all the four groups. One group, however, expressed that 'for the past 20 years, many plans have been prepared and nothing has been implemented'². They expressed hope that some of the projects of the EDP will be implemented.

On the question of proposed additional projects, the suggestions of the groups (and the action taken) are as follows:

- An entrance gate to the eco-city be constructed at the two entry points to the town on Mathura Vrindavan Road and Delhi Mathura Road (incorporated in the final EDP);
- The entire town should be covered under the Eco-city Project and it should not be limited to the core area;
- The surface of the *Parikrama Marg* (circular pathway surrounding the town) should be pedestrian-friendly who are generally bare-footed (incorporated in the DPR);
- The various elements in the town may be designed to serve multi-purposes (for example, every street lamp post may have bird feeder on top, and also, a dust bin at an appropriate height (incorporated in some DPRs);
- Form a committee comprising important people of Vrindavan and municipality members to oversee each and every step in preparation and implementation of the eco-city project (Local Project Coordination Committee constituted);
- A web site be set up for Vrindavan Eco-city; and
- NGOs be involved in making the people of Vrindavan aware of the various projects approved for implementation (An eco-city sub programme known as AAWaM introduced).

On the question - what should not happen to Vrindavan? - the response of the groups was that:

- Existing green-cover in the town including parks and gardens should not be destroyed;
- Historic importance, cultural traditions and heritage of Vrindavan should not be lost; and
- 5-star hotels should not be developed in the town.

The prioritisation by the groups of the projects, at the entire town level and also at the eco-zone level, was as under:

Town Level

1. Transportation;
2. Road surfacing;
3. Solid waste management;
4. Provision of utilities – drinking water, public toilets;
5. Parking;
6. Drainage;
7. Street lighting;
8. Landscaping;
9. Signage;
10. Aesthetic and environmental control;
11. Noise control.

Eco-zone Level

1. Entrance gate to the eco-city;
2. Improvement of road between Nagar Palika and Rangnathji Temple;
3. Riverfront development;
4. Restoration of Brahma Kund;
5. Parking at Laxman Sahid Bhawan, and
Parikrma Marg;
6. Road junction improvement near Nagar Palika Office;
7. Parking in front of the Cholera Hospital;
8. Improvement of entry node to Shahji Temple;
9. Improvement of Bankay Behari Temple area;
10. Restoration of Gandhi Park;
11. Adaptive reuse of Laxman Sahid Bhawan;
12. Light and sound show at Kesi Ghat; and
13. Improvement of Gyan Gudri Park.

Final Eco-city Development Plan of Vrindavan

Taking into account the responses of the people, the EDP of Vrindavan was finalised and the following details were prepared for each priority projects and their sub-projects:

1. Actions and guidelines for detailed project report (DPR) preparation;
2. Project outcome;
3. Partners in development and investment;
4. Approximate cost;
5. Cost recovery and management system.

Just to illustrate, the following is an example of the above details for the project 'entrance gates to the eco-city' (the top priority eco-zone level project according to people):

Project Title:

Entry Point and Visitor Centres at Atalla Chungi on Vrindavan-Mathura Road and Chattikara on Delhi-Mathura Road

Action and Guidelines for DPR:

While preparation of the DPRs of this project, the following actions should be taken into account and the guidelines be followed:

- Creation of decorative entrance gate, design to commensurate with traditional art and architecture style prevalent in Vrindavan;
- Use of local material for the gate as well as the Visitors' Centre;
- Appropriate design of road intersection and the surrounding area with location gate, visitor centre, parking needed for the visitor centre so that free-flow of traffic is ensured;
- Design of ornamental signage for different places to guide visitors;
- Design of the Visitors' Centre should have a visitors' hall to accommodate public waiting area, information booths with digital touch screens kiosks; information desks for guides, transport operators, hotel agents, banking service, and health care and recreation activities; information officer's office; snack bars; and facilities such as drinking water, toilets.

Project Outcome:

The expected outcome of the project includes:

- Creation of the religious ambiance in the mind of the people right at the entry point;
- Reduced harassment to the visitors through unscrupulous, unauthorised guides;
- Availability of the tourist-related information; and
- Provision of alternate choices to visitors about the destinations in the town depending upon the available time.

Partners in Development and Investment

The partners in development and investment of this project include:

Vrindavan Municipality, Uttar Pradesh Tourism Department, NGOs, Private Tour Operators, Guides' Guilds, Private Entrepreneurs, Local Unemployed Youths.

Approximate Cost

The approximate cost of the project is Rupees 3,000,000 (Euro 60,000)

Cost Recovery and Management System

The system of project cost recovery can be as under:

- If implemented by the municipality, a one-time entry fee charged per visitor
- If implemented by the private entrepreneurs, returns from rent /sale of space from the Visitors' Centre and parking charges.

Response of Partners in Development and Investment

On completion and approval of the EDP of Vrindavan by the CPCB Expert Committee, and Local Project Coordination Committee, the plan was given a wider publicity through media, public meetings and contacts with prospective partners. The response of partners in development and investment was very encouraging. In a very short period of time of less

than one year, the following NGOs and CBOs came forward with assured funds for implementing projects of their respective interest from amongst the one given by the EDP:

1. Banke Behari Trust

It is community-based organisation for up keep of Banke Behari Temple, which is one of the main temples in Vrindavan. This Trust came forward for improvement of the surroundings around the temple with financial commitment of Rs.1.8 million (approximately Euro 36,000). GTZ-ASEM provided, as technical assistance, the services of an architect who designed the area as per Archaeological Survey of India requirements and maintaining the religious ambiance of the area. This activity has been approved by the CPCB Expert Committee.

2. India Heritage Foundation

It is a non-profit trust of the International Society for Krishna Consciousness (ISKCON). This foundation accepted the responsibility of improvement of *Parikrama Marg* and committed Rs.20 million (approximately Euro 0.4 million) for the first phase covering a stretch of 2 km. between Kaliadha Ghat and Kesi Ghat. Architects and engineers attached to the Foundation, prepared a very interesting design of the pathway with pedestrian-friendly surface, landscaping to provide shade, street furniture, and conservation of sites along the path, restoration of activities of social and cultural significance along the pathway and development of light and sound show depicting life and deeds of Krishna at Kesi Ghat. This project has been approved by the Expert Committee.

3. Braj Foundation

It is an NGO based at Vrindavan. It has accepted the responsibility of restoration of Brahma Kund at an estimated cost of Rs. 3.5 million (Euro 70,000).

4. Centre for Environment Education

It is an NGO. With technical assistance of GTZ-ASEM, it evolved a special public awareness programme focused at solid waste management. This programme is known as AAWaM (Achieving Action in Waste Management) and includes study of solid waste management at Vrindavan; identify environmentally and economically sustainable strategies and appropriate technologies; and implement through training of NGOs, people, and self-help groups. The results of this intervention have already started showing. Segregation of waste at source has already started in three locations and NGO are actively participating in waste collection, disposal. and recycling using technologies identified by AAWaM.

5. Friends of Vrindavan

An NGO, is active in municipal solid waste management in the core area of Vrindavan under the AAWaM programme.

6. Food for Life

An NGO, has committed to the establishment of a paper recycling unit at Vrindavan.

7. UNDP-GEF

The UNDP, Global Environmental Facility (GEF), through its Small Grants Programme, has extended financial support to the NGOs like Friends of Vrindavan and Food for Life to implement projects from the EDP Vrindavan. It has also supported other projects such as VISHWAS (Vrindavan Initiative for Sustainable and Holistic Waste Administration System) and Vrindavan *Kuda Prabandhan Pariyojana* (Vrindavan Waste Management Scheme). VISHWAS is engaged in vermin composting, reuse of waste plastic for making waste bins and baskets. It provides much needed employment to the urban poor of Vrindavan.

8. Vrindavan Municipal Council

Encouraged from the responses of the NGOs and CBOs and their fiscal commitments, which can be taken as a part of the 50 per cent contribution by the local body in utilising funds under the Eco-city Project, the Vrindavan Municipal Council initiated the following projects:

- a. Comprehensive improvement, including road surfacing, construction of pedestrian path, design of signage, street lighting, road side plantation, public toilets and parking, along two roads - (a) Nagarpalika roundabout to Rangnathji Temple, approximate cost Rs. 4.0 million (Euro 80,000), and (b) Rangnathji Temple to Banke Behari Temple;
- b. Restoration of Gandhi Park;
- c. Improvement of the traffic roundabout at Gandhi Park, approximate cost Rs.800,000 (Euro 16,000); and
- d. Parking facility for tourist buses, taxis, and cars.

The Expert Committee has approved preliminary concepts of these projects and DPRs are being prepared.

9. General Public Response

The eco-city project has stimulated the general public of Vrindavan so much that they have pledged on the World Environment Day 2004 to keep their town clean. On the World Environment Day 2005, as a part of Clean Vrindavan Drive, the NGOs were assigned different parts of the town. People's enthusiasm, in one case, was so charged that a group of 60 persons with 15 cycle-driven-carts cleaned the historic Brahma Kund, a dilapidated water tank full of garbage, in just half-a-day. The impact was so great that the Braj Foundation, as already mentioned in this paper, came forward and committed to restore the *kund* and its surroundings to the past glory.

LESSONS LEARNT

Eco-city Development Plan

The Vrindavan case study demonstrates that Eco-city Development Plan (EDP), as evolved under the Eco-city Project, acts as a potent tool to inform people and other stakeholders about the problems, prospects and projects that will improve the quality of life in the town and make it clean and environmentally sustainable. This plan also serves as a source of information to the partners in development about the prospective projects where they could participate and invest their resources. EDP also specifies, the requirements, approach and the technical requirements for detailed project report formulation by the project implementation agencies, which could be NGOs, CBOs, or government or semi-government bodies.

People's Behaviour towards Developmental Issues

An analysis of people's responses, in case of EDP of Vrindavan, reflects that an entrance gate, accessibility and quality of roads are their current top concerns. Solid waste management, regular supply of drinking water, and provision of toilet facility follows it. Conservation of heritage buildings and sites, landscaping and other aesthetic treatments are lower in their priorities. They have, however, shown considerable concern about protecting green spaces and local cultural and traditional values. It is, probably, due to the current situation where the basic services and facilities available to people are inadequate. This situation, regarding priority concerns and lack of appreciation for conservation and landscaping may change with time and level of development in future.

Working Together

The case study demonstrates that the people, NGOs, CBOs, and the municipality are working together in the process of planning and development of Vrindavan. The experience from the Eco-city Project indicates that to achieve a better participation of people, the following will be desirable:

- the presentation of plans and projects, questionnaires and discussions should, as far as possible, be in the local language;
- the people should always feel that the development plan has been prepared to assist them in making decisions and nothing is being imposed upon them and they have the upper hand to decide;
- the people are, generally, reluctant to express their views in large gathering, or filling a questionnaire or prioritising projects individually and therefore, they may be organised into several small groups, according to their choice, for an intense, free and frank discussion and decision making;
- technical assistance provided by the national or international organisations help in motivating NGOs and their confidence building;
- the role of municipalities should be to encourage and facilitate the process of working together and demonstrate their commitment through implementing some projects to set the ball rolling.

CONCLUSION

The approach of Vrindavan Eco-city Project has been to attract participation of a variety of stakeholders by the process of demonstration. In this context, the draft EDP serves such purpose. Considering the results at Vrindavan and other cities, like Tirupati, covered under the Eco-city Project, this participatory approach to planning and development seems to be replicable. It can be a model of working together in sharing, caring and shaping the sustainable cities and improving the quality of life of people living and working there.

¹ IIT Kharagpur, (2004) *Eco-city Development Plan for Vrindavan Eco-zone*, Central Pollution Control Board, New Delhi, p.17

² *ibid* p.155