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NATURE CONSERVATORS

IN CONVERSATION WITH **KETAKI & MANASI** | **OIKOS, PUNE**

Duality of development and environment has always thrown interesting challenges in the realm of design and planning. Courageously, two friends set on an unexplored path of disseminating knowledge, through their works—about the environment and ecology—to the design and real-estate world and on the way finding the joy of their lives.

In conversation with **Ketaki Ghate** and **Manasi Karandikar** of Oikos...



What are the core objectives and different working formats under which you work?

Nature conservation and restoration, with special attention to biodiversity conservation and ecological restoration. About thirteen years ago, both of us met in one-year diploma course '*Natural resource management and sustainable development*' from the Ecological Society. It is a Pune based NGO founded by late Prakash Gole. One of the lessons we learnt was that conservation cannot hap-

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pen alone. It should go hand in hand with conventional development if it has to take place at a large scale. At the same time, during 2001-02, there was a great boom in the market for buying land in the countryside and developing it as farm houses, townships or resorts. The trend is still continuing. If we look at this way of development, it has always been anti-environment. The first thing any developer or land owner would do is get the excavator and flatten the slope and remove existing vegetation as being 'junglee', which disturbed the very base of the local ecosystem and displaced all wildlife including birds and butterflies. But since humans need a congenial atmosphere and greenery, these projects ended up planting all-together different non-native plants which were alien to local fauna.

So with this as a backdrop, we thought to offer a consultancy to people who were educated and environmentally sensible enough to understand an ecological way of development and have land and resources, and that's how *Oikos* was born. We decided to offer solutions towards ecologically appropriate development on the land, wherein and owner could at least save some of the native ecology, if not all of it.

At *Oikos*, our main strength is identifying the ecological potential of the land.

We carry out an ecological assessment of any land under consideration. India being a tropical country, seasons play most important role in changing the ecological status of the land. So each site is surveyed thoroughly during each season with respect to status of resources like soil and water and most importantly biodiversity. Biodiversity is used as indicator of the health of the land. Detailed account of existing flora and few faunal taxa like birds and butterflies are recorded over the year. All these readings are recorded on a contour map or available land map. Rare trees, roosting or nesting sites and special features like springs, dykes, streams—all are marked. This creates an eco-map for any site which is then used as base of the further planning be it master planning or architecture planning or landscape planning.

Other services that we offer are restoration planning, ecological master planning, and ecological landscaping. Ecological restoration is part and parcel of any planning that we do. It includes basic strengthening of soil and water and biodiversity. We rarely see our sites in pristine conditions; most are degraded to various degrees depending on external pressures. So restoration of basic physical conditions i.e. soil and water, is the first task. And not necessarily every time ground water but the sur-

face waters or soil moisture is focused which is most essential part when it comes to restoration of soil. Traditional local techniques are used to arrest soil and water like loose boulder *bunds*, gully plugs using local stones etc. Here, the identification of problem areas becomes important.

Natural grasses are our wealth for restoration processes. Most of the time there are plenty of them in various degraded conditions which assures improvement in soil quality and moisture. However, many times natural grasses are considered a nuisance and are removed or simply put on fire. This is a completely incorrect approach. Instead grasses should be allowed to mulch naturally every year in the soil. This gives free ecological service to enrich the soil all over the site.

But this is the case where land is highly degraded. Whenever land conditions are better with shrubbery or tree canopy, habitat development can be focused. Certain plants are larval host plant or food plants for certain birds or butterflies. These are selected and planted. Small water bodies or wetlands are created intermittently. Hedges of wild native plants are developed to provide nesting sites for birds. In all, diversity is targeted instead of strategizing the entire land with a single concept.



Ecological landscaping is a manicured version of restoration. Resource friendly concepts such as waste water recycling by using biological treatment systems or composting of biodegradables are followed. Water guzzling lawns are omitted or kept to minimum by using native herbs. The focus is mainly on making perennial greenery with the help of native trees and shrubs. Landscape design being the objective, spaces are considered from aesthetics point of view, but which can also create some room for fauna such as insects and but-

terflies. This makes a garden *live*, not just *green*.

This liveliness can be taken on little larger scale with the help of ecological master planning and ecological management of lands. This is done on the concepts of landscape ecology. Wherein networking within landscape or corridors are necessary considering the needs of native species. Once the existing set of biodiversity is known from ecological assessment, strategies and zoning can be carried out on the

↑ *Office landscape of FANUC India Ltd.*
Total area – 2 acres

The office is situated in arid area near Pune, an upcoming Maharashtra Industrial Development Corporation MIDC land. The area being rocky and devoid of good soil cover, the entire planning and design was based on hardy plant species and less water consumption. The design brief by client was 'to develop a woodland' around office building. Trees are best suited for both these requirements so native trees specific to dry-land were selected. Use of lawns was kept to minimum, not more than 1000 sq ft. The trees planted have developed beautifully over past two years and the woodland look can be achieved in next 5-7 years. A balance of manicured areas and tree cover is maintained using various design features.

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land, to assure the protection to native species and smooth functioning of ecological processes. In nutshell, through all these services, we try to push conservation wherever possible.

Is Oikos different from the rest of so many NGOs working in the same field? What is its USP?

Our work is about ecology—biodiversity and natural resources and its actual conservation on land. We try to integrate ecology with development. We are also working as a professional consultancy. Unfortunately, in the development sector, environment management is considered as just a tool for getting approvals or no-objection-certificates or certification.

With both of you with non-design backgrounds, how do you find working with spatial design professionals, especially landscape architects?

It has always been productive. The architects who come to us are already inclined towards ecology and conservation and we have never faced many problems of understanding each other.

What kind of issues and potentials do you see in this kind of association? Tell us some examples in which you had a very positive relationship.

Working with architects definitely has great potential and a great chance to move conservation forward. We have had interesting projects with Varsha Gavandi, Aniket Bhagwat, Ravi Kadam and many others.

It is always engaging to work with architects as they come to the table with their thoughts about spaces and aesthetics and we provide them with the basic background for the ecological feasibility of their ideas. Many times architects talk about making spaces ‘green’ at the cost of destroying green at some other places. One thing we have learnt from architects is the importance of presenting your concept on paper in an appealing form. We realized that if restoration techniques are represented in sketches and drawings, people look at it generously. But if we just plan to get it implemented directly, its importance is not realized in depth.

With Varsha, we carried out in-depth planning for the restoration of a stream patch, and that too within Pune Municipal Corporation limits. It was quite an ambitious plan. Another project with her was a farm house. On both the projects, we enjoyed the process of putting our ideas into rough drawings which she would get translated into CAD drawings with her staff. This was a first for us, when our restoration tech-

niques were recognized by an architect and represented in an attractive format. So it has been a nice give and take relationship.

On a city scale, very little seems to come out from citizen initiatives in saving remnant natural landscapes in urbanized areas. Have you ever tried to address issues at the local level in your projects? Most of your projects are on the scale of “site” and at many times on regional scales.

At a city scale, we have been working on an unpaid basis – we are ex-members of Pune Tree Authority, and members of Joint Forest Management Committee (JFM). We have been providing our inputs to forest department or garden department or even interested groups or individuals working on Pune hills for conservation and restoration.

Have you ever associated with the local government for any reason on your projects? What has been your experience of engagement with government agencies?

Our experience in working with local Government authorities has been good though not very bad. We tried to push for the plantations of native plants through all five years when Ketaki



*DPR for Conservation and Ecological Development of Nargoli Lake, Dapoli, Maharashtra
Total area – 11.5 acres + 100 acres catchment*

The water bodies, be it natural or man-made has always been a point of conflict, as a water resource & also as a waste dumping unit. There are many cases where water bodies like lakes n ponds have been heavily polluted by solid and liquid wastes. Government at national & state level has been trying to conserve such lakes under their 'Lake conservation' schemes. A detailed planning report was developed for one serene lake in vicinity of Dapoli with 'conservation of resources & biodiversity' as focus. It considers improvement of 'ecological value' of this man-made reservoir and avoiding pollution in future.



we wish to create models for conservation which are easily replicable, in various climatic regions of india

(along with friend Tasneem Balasinorwala), was on the Pune Tree Authority and by the end of the fifth year we were able to at least make people and officers ask us about the species before carrying out planting projects. At the forest department, non-native species are banned from plantations in the Pune hills. Of course, this is also due to the efforts of other NGOs. We were able to follow it up though. Manasi has been member of High Level Monitoring Committee for Matheran Eco-sensitive Zone (ESZ).

During this process we always felt that one needs to connect with the working officers in government bodies to create positive impacts. In current system, it is very difficult to do so but not impossible if one has a plan.

Have we developed or are we on the way to developing a scientific approach of addressing the issues of development and environmental preservation not only emotionally but also practically?

Not yet. With few exceptions of course. But we are still engaged in mitigating measures. The problem is we neither look at it practically nor emotionally. Even if we have to look at it practically, we will have to save the environment for our own future.

What was your first experience at Oikos?

It was 2002-03, and we were overflowing with enthusiasm. We were in a hurry to apply the newly learnt lessons from the Ecological Society. We got the opportunity on a farm house in village Sus near Pune which was an acre in size. We developed a simple design and divided the plot in three parts to develop three habitats – thicket with trees, shrubbery and a pond within a stream. We studied all available books and prepared a list of native plants appropriate for the soil and climate. The planting was carried out and protection was assured. Drip irrigation with simple clay pots was installed. And just within a year, we were amazed to see the magic. Each of our native host plants was loaded with 20 to 50 butterflies with 4-5 various species within single acre, which were absent a year before! Not only did the natural grass growth make safe sites for birds such as Bush quails, the stream-side pond was teeming with dragon flies and damsel flies. And we learned that you just have to provide a little assistance to nature, an idea that really clicked with us.

What lies next for Oikos?

We wish to create models for conservation which are easily replicable, in various climatic regions of India. We recently launched one such project of developing a private sanctuary 'Rahal', near Pune. This project aims to create and maintain a sanctuary by urban citizens who wish to do their bit towards the environment. It's a 60 acre land patch in catchment of Panshet dam. It cannot be called an investment project but interested individuals can become members by paying for an acre and availing of timeshare to enjoy the land and work towards restoration on land. There will not be any conventional development such as houses, roads, electricity for everybody but a single common village house which can be used and members can come and enjoy the process of ecological restoration and conservation.



All images courtesy Oikos, Pune.