

# **Ecological Restoration: Principles, Practice and Monitoring Workshop Report Valparai, 1-5 May 2017**

## **Background**

Ecological restoration of fragmented and degraded habitats plays an important role in conserving biodiversity and improving the supply of ecosystem services in human-dominated conservation landscapes. Practising restoration requires skills and knowledge that span multiple disciplines, ranging from biogeography and plant community ecology to fostering partnerships with local communities, administrators and other stakeholders.

A week-long workshop titled “Ecological restoration: Principles, practice and monitoring” was organized in Valparai and surrounding areas of the Anamalai Hills in the southern Western Ghats, where NCF runs a long term rainforest restoration project. The workshop comprised classroom sessions focusing on principles and theory of ecological restoration, combined with field visits for sharing experiences in nursery techniques, restoration planting, stakeholder engagement and scientific monitoring.

## **Selection procedure**

On 20 Jan 2017, a flyer announcing the workshop was forwarded to colleagues and acquaintances in fields of ecology and conservation, posted on mailing groups such as Young Ecologists Talk and Interact (YETI), and posted on NCF’s blog and social media platforms. Applicants were asked to submit a covering letter explaining their reasons for wanting to attend the workshop, along with a *Curriculum Vitae*. The workshop was open to applicants from all backgrounds. Applications were accepted till 10 Feb 2017.

A total of 51 applications were received and independently evaluated by four reviewers. Applicants were scored based on the strength of their cover letters, in terms of the rationale provided for applying and descriptions of how the workshop would benefit them. The applicants’ ability to develop and implement projects was also assessed from their CVs. Upon completion of individual assessments, the reviewers met to collate scores and shortlist candidates. Ten high quality candidates from a wide range of backgrounds were selected, including students, researchers, conservation practitioners and farmers.

## **The workshop (1 May – 5 May 2017)**

Location: Sinna Dorai's Conference room – Upper Parlai, and field sites

### Organizers and main resource people:

Divya Mudappa, Scientist, Nature Conservation Foundation

T R Shankar Raman, Scientist, Nature Conservation Foundation

Anand M Osuri, Research Associate, Nature Conservation Foundation

Mrinalini Siddhartha, Project Associate, Nature Conservation Foundation

K Srinivasan, Project Associate, Nature Conservation Foundation

### Guest speakers:

M Venkatachalam, Chairman, Parry Agro Industries Limited

Abi Tamin Vanak, Fellow, Ashoka Trust for Research in Ecology and the Environment

Manjunatha H Chandregowda, Project Associate, Nature Conservation Foundation

### Participants:

Balu Hegde, Amruta Chavan, Meenakshi Singh, Rohit Jha, Aniruddha Dhamorikar, Nikita Rao, Niren Jain, Vijaylakshmi Suman, Zabna AB and Jui Pethe

### Day 1 – Introduction and concepts

Day 1 comprised a series of lectures aimed at understanding the need for restoration, restoration concepts and techniques, and core components of ecological restoration programmes. This was followed by a field tour aimed at familiarising participants with conservation challenges and opportunities in the Anamalais landscape, including NCFs work on biodiversity assessments, ecological restoration and human-wildlife interactions.



## **Day 2 – Components of an ecological restoration programme**

The focus of day 2 was on experiencing and understanding different components of an ecological restoration project. The day began with an introduction to phenology monitoring and seed collection protocols, followed by a visit to NCF's rainforest nursery, where participants were involved in soil preparation, seed processing and sowing, and other core aspects of nursery management. Participants were then taken on a tour of previously restored rainforest fragments. The afternoon session featured a talk on grasslands and savannas by Dr Abi Tamin Vanak, focusing on their misclassification as 'wastelands' and the threats posed by misguided 'restoration' efforts that plant trees in these naturally open ecosystems. The day ended with a visit to the Anamalai Tiger Reserve, which gave participants a chance to spend time within a relatively undisturbed rainforest, and to think about whether and how the myriad and complex components and interactions of an intact rainforest can be effectively restored.



### **Day 3 – Planning and managing an ecological restoration project**

On day 3, we visited the Candura project, which is an ongoing effort by NCF and the Parry Agro group to restore a degraded 100-ha rainforest site. The goal for the day was to introduce aspects of planning and management related to restoration. Participants visited the field to observe site preparation (weed removal, digging of sowing pits), and took part in restoration planting. Participants also got to interact with Mr Oliver Praveenkumar, General Manager at Parry Agro Limited, who shared his perspectives on and motivations for supporting ecological restoration. The day ended with a lecture and interactive session led by Mr. M M Venkatachalam, which focused on improving engagement with plantation companies and other corporate groups for conservation.



#### **Day 4 – Research and monitoring, and participant presentations**

The forenoon of day 4 was spent in the field discussing the role of research and monitoring within restoration projects, and introducing participants to basic field techniques for mapping, photographic monitoring and vegetation sampling. Manjunatha H Chandregowda, a researcher with NCF, also delivered a lecture on soil processes, functions and monitoring. The afternoon and evening sessions were dedicated to presentations by the workshop participants, who discussed their ongoing or planned restoration projects, incorporating into their presentations concepts, frameworks and techniques learned during the workshop.



#### **Day 5 – Data management and analysis**

A session on data management and analysis was organised as a follow up to the field data collection exercises of the previous day. Participants were introduced to basic GIS techniques, spreadsheet management and simple data analyses. There was also a session on forums and resources, focusing on sources and platforms containing various kinds of information relating to ecological restoration and monitoring. The workshop ended with a feedback session during which participants shared their thoughts on what they had gained from the workshop, and ideas for improvement in the future.



## **Feedback and future direction**

All the participants expressed their overall satisfaction with the workshop, and said that it helped to improve their understanding of ecological restoration, particularly in the context of their own conservation and restoration projects. Participants appreciated the emphasis given to field visits and hands-on training, as well as the sessions devoted to ecological research and monitoring. A few participants said they would have liked the workshop to focus a bit more on stakeholder engagement, including, for example, involving forest administrators in some of the sessions. Others felt it would be useful to include sessions on communication and outreach, given that garnering wider support is often a key challenge faced by ecological restoration projects. There was strong agreement regarding the utility of the current workshop, and many participants underscored the need for organizing similar workshops for other ecosystems and in different parts of the country in the future.

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