

natural resource management. Over the last seven years a large number of local people, especially farmers have been empowered and exposed to various options of livelihood improvement and income generation through this centre. However, many of the farmers did not replicate or adopt these technologies on their farms due to lack of time from their involvement in tourism and the financial gain through it.

Lack of livelihood options for the landless and those with small land hold-

ings compel them to extract and exploit natural resources found in and around the area. Therefore, there is an urgent need for linking developmental organizations with village institutions like the village panchayat for rebuilding infrastructure and to provide opportunities in the disaster-affected regions of the state. Capacity building through on-site training programmes, live demonstrations and interactions between stakeholders and scientists should be facilitated. Government aid alone will not help in this case.

Stakeholder and private sector participation is vital in such cases.

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Notes on conservation of 'RET' plants in India

Conservation of rare, endangered and threatened (RET) plant species is an important issue. Hundreds of RET plants in India have already been recorded and their conservation suggested¹. The *Red Data Book*² has enlisted 622 vascular plant species (VPS) of Indian flora till 1990; this red figure rose to 1255 VPS³ till 2003, and it is on the increase day by day⁴. In India, the RET species constitute 7.7% of known VPS³. Globally, 13.8% of VPS are RET³. According to the International Union for Conservation of Nature and Natural Resources, the current species extinction rate is between 1000 and 10,000 times higher than it would naturally be⁵. Once a species becomes extinct, the particular genetic resource is lost forever.

The floristic diversity and conservation strategies in India have been assessed earlier⁶⁻⁸. Several *in situ* and *ex situ* conservation measures have been taken through biosphere reserves, national parks, world heritage sites, botanical gardens, greenhouses, etc.⁸. In spite of all those efforts, plant species are disappearing due to various causes² and the red list becoming longer; only a handful of species are rediscovered after a long time – almost a century or even centuries^{9,10}. An updated list of species rediscovered so far from India is necessary to

better conservation of biodiversity – both *in situ* and *ex situ*.

Mere enlisting of RET species, as often done, has no meaning unless the dwindling populations are properly conserved and replenished in nature. Through various tissue culture and micropropagation techniques plants can be regenerated, thereby *in vitro* to *in vivo* propagation of the vanishing plants may be considered. Also, a database regarding species which are recovering from RET to normal status, if any, is essential to update the floristic status of the country. Hopefully, some leading Central and State agencies/institutes would come forward with such efforts in near future.

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