

Indian Regional Association for Landscape Ecology

PANORAMA

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Photo: Manu Mohan

In Focus: Deccan Plateau

AMRITA NEELAKANTAN | NETWORK FOR CONSERVING CENTRAL INDIA

Introduction: A vast semi-arid region south of the Gangetic plains is the Deccan Plateau, quite simply the largest biogeographic unit of peninsular India. The highlands of the plateau are covered with different types of forests that provided for the people of these lands. The Deccan plateau includes the region lying south of the Satpura range and extends up to the southern tip of peninsular India. It is bound on either side by the eastern and western ghats that meet each other at the Nilgiri hills in the south. The Godavari is the longest river in the Deccan plateau. The Narmada and the Tapi rivers flow westwards and fall into the Arabian sea. Multiple rivers originating from the western ghats flow east into the Deccan plateau. It covers about 42 per cent of the total geographical area of the country and includes some of India's finest forest landscapes. The Biogeographic Provinces of this vast region are: Central Highlands (7.3%), Chotta Nagpur (5.4%), Eastern Highlands (6.3%), Central Plateau (12.5%), Deccan South (10.4%). The flagship wildlife stories of the deccan follow the many layered history of people who have inhabited the region – from tribal lands to Indian kingdoms, trade routes, the British raj all in turn intertwined with the stories of the dense Satpura jungles, royal and then british game reserves that made the tigers of the region world famous as well as endangered them. The British initiated rail system that is still used in the country, was founded on timber from these very forests and of course, the Jungle Book.

Biodiversity: It consists of deciduous forests, thorn forests and degraded scrubland, all of which support diverse wildlife species, Chital, Sambar, Nilgai and Chousingha are abundant in this zone. More rare are Barking deer and Gaur (Indian bison) restricted to moister areas but still exist in fairly large numbers. The Deccan Plateau is also home to the Asian Elephants, Wild Buffaloes and is the only habitat of the hard ground Swamp Deer. Most notably perhaps – the region includes multiple protected areas for wild tiger populations and for this is globally known – for tourism and in cultural reference from Kipling's India to the many historied Indian kingdoms that have grown and diminished in these lands. The Deccan Plateau's wildlife areas are quintessentially Indian Jungle.

People: The people of the Deccan Plateau defy a single explanation. The multiple states, historical kingdoms and tribal strongholds are even more diverse when we consider the cultural wealth in more detail. From the Gonds spread across much of the region and who are more interwoven with urbanizing India to the primitive Baigas found in pockets and their 'Baiga Chak' the sheer variety in ways of living in the Deccan Plateau are a hotbed of documentation and research. The documented early history remains in great part obscure. Places like Bhimbetka provide evidence of prehistoric human habitation. The plateau's mineral wealth led many wars among lowland rulers who came to the Deccan from the 4th century to the British and even to present day the large mining belts in the country lie in these regions – unfortunately under much of the remaining forests. Thus making the trade-off between industrial development and forest-based livelihoods even more stark than in other forested parts of India.

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Nature-People Interface: People and nature continue to co-exist in many parts of the Deccan plateau, however with modernization and changing aspirations the region faces multiple challenges. Many of India's 'aspirational' districts are in the region – demarcating the dire need to balance natural resource management, wildlife conservation and economic gains via sustainable development. Tribal communities continue to gain and lose rights over their previously managed lands. Water scarcity affects many administrative districts with competing stakeholder than include wildlife and forests too. Endangered species continue to face habitat loss and an increasingly impermeable matrix between protected areas that is shifting from rural agricultural India to urbanizing small towns and industrial development. However, central India also has historical precedents that suggest in transition this region can prevail – can harness opportunities to better manage resources with the multi-generational cultural backdrop of living in harmony with biodiversity. After all, many strong guardians of coexistence can be found in the various tribal communities that continue to tell stories of the wilds of the deccan plateau in their oral histories, dances, songs and art as they continue shape what could be modern India in this vast peninsular region.





Integrated landscape management plan for securing biodiversity and people wellbeing in the Greater Panna Landscape

RAMESH KRISHNAMURTHY | WILDLIFE INSTITUTE OF INDIA

Panna Tiger Reserve (PTR) is a great source population, but it is surrounded by sink habitats with very few functional connectivity to other potential tiger habitat like Ranipur Wildlife Sanctuary and South Panna Forest Division where tigers from Panna have been recorded to have dispersed. This situation has necessitated the conservation of revived Panna tiger population in a metapopulation framework by ensuring connectivity. Moreover, the proposed Ken-Betwa Link Canal Project (KBLCP) in the landscape, would submerge 90 sq. km. area and would also impact the connectivity to around 105 sq. km on the western side of the Ken River. Therefore, although the idea for integrated landscape management plan originated as a part of the process for KBLCP, the issues concerning PTR along with the surrounding areas that can be termed as 'Greater Panna Landscape' requires integrated landscape approach to ensure biodiversity security and wellbeing of the people in the long-term.

The term 'integrated landscape management' was coined by the Landscapes for People, Food and Nature Initiative, in 2012, and is now widely used. As an umbrella concept, it aims to describe the diverse approaches which exist to landscape management. Integrated landscape management involves long-term collaboration among different groups of land managers and stakeholders to achieve their multiple objectives and expectations within the landscape for local livelihoods, health and well-being, agricultural production, the delivery of ecosystem services, cultural heritage, and values, etc.

The term integrated means that the ecological and social relationships are given due considerations in our planning process and actions. Therefore, the landscape management plan (LMP) that is being developed is aimed at actions that would address conservation and societal concerns specifically at the forest-people interface areas. Our forests and protected area are in general managed through Working Plans and Wildlife Management Plans, and for tiger reserve, Tiger Conservation Plans. However, no general framework or guideline exists for landscape management plan as such that can have universal application, and very often the landscape approach has taken the discourse of the driver of the program. Accordingly, the focus has weighted towards either communities or wildlife conservation depending on the current objectives and funding agencies. Taking conservation agenda as guiding principle, the Integrated Landscape Management Plan which is likely to be implemented in due course of time envision to (a) consolidate forest and wildlife habitats in the Great Panna Landscape through land-sparing and restoration strategies, (b) facilitate conservation of tiger in a metapopulation framework through securing corridors, stepping stone forest and satellite cores areas, (c) put in place species conservation plan and actions for other focal species such as vultures and gharial, (d) enable understanding of biodiversity rich areas and spatial prioritization, (e) develop community engagement and development actions including the interface aspects covered under One Health Plan, (f) promote capacity and skillsets for thematic and general requirements, and (g) long-term research and monitoring strategies to serve for adaptive management and feedback for course correction or augmentation of efforts, as may be needed.





Photo: Gatikrishna Behera

Networks for Landscape Management - an Example from the Central Indian Highlands

PAKHI DAS | TENDRIL CONSULTANCY | NETWORK FOR CONSERVING CENTRAL INDIA

The Central Indian Highlands (CIH) are a mosaic of interconnected landscapes that sustain biodiversity, allow smooth functioning of ecological processes, and maintain the regional climatic conditions. Embedded with protected areas and globally well-known for tiger conservation, this region of India grapples with balancing development and conservation. In the past, management approaches for these independent protected areas could have been adequate, however with increasing interaction of people and natural processes, managers are increasingly grappling with complex challenges that extend well beyond the protected areas that are impacted by multiple factors and sectors. In order to effectively address these complex challenges, creative solutions informed by different perspectives and diverse expertise are imperative and at the adequate scale.

IRALE members will be familiar with the emergence of the landscape conservation approach building on decades of scientific research, technological advancements and data availability. The valuable characteristics of the landscape approach to achieve multiple goals in the CIH is the ability to work across various geographic scales with a variety of governance arrangements and partnerships. Using systems-level, integrative, and collaborative frameworks, landscape conservation approach allows for concerted efforts of multiple stakeholders by means of “networks” for the effective responses.

The Network for Conserving Central India (NCCI) is an example of one such network based in the central Indian highlands. The common currency in large landscape conservation is collaboration i.e. the ability to work across boundaries with people and organizations that have diverse interests, experiences and expertise to share common goals. The NCCI includes researchers, organisations and practitioners dedicated to conserving biodiversity, improving livelihoods, and fostering sustainable development in the landscapes of the Central Indian Highlands through the application of science. The NCCI makes science more accessible and shares insights from practice as project spotlights. New initiatives are housed under working groups focused on important issues such as restoration and connectivity which are necessarily multi-stakeholder and work within the Science Policy Practice Interface (SPPI). Landscape conservation approach also presents framework for aligning resources and efforts to make critical information more easily accessible to the wider network and for all stakeholders. The NCCI runs the data collab to meet the need for a single window data library to compliment conservation action in the region. Networks also bring various stakeholders together and provide them with a space to interact, find their common interests, foster relationships and trust. The NCCI platform for knowledge sharing and getting together as a diverse group of professionals in central India culminates in the symposiums it hosts.

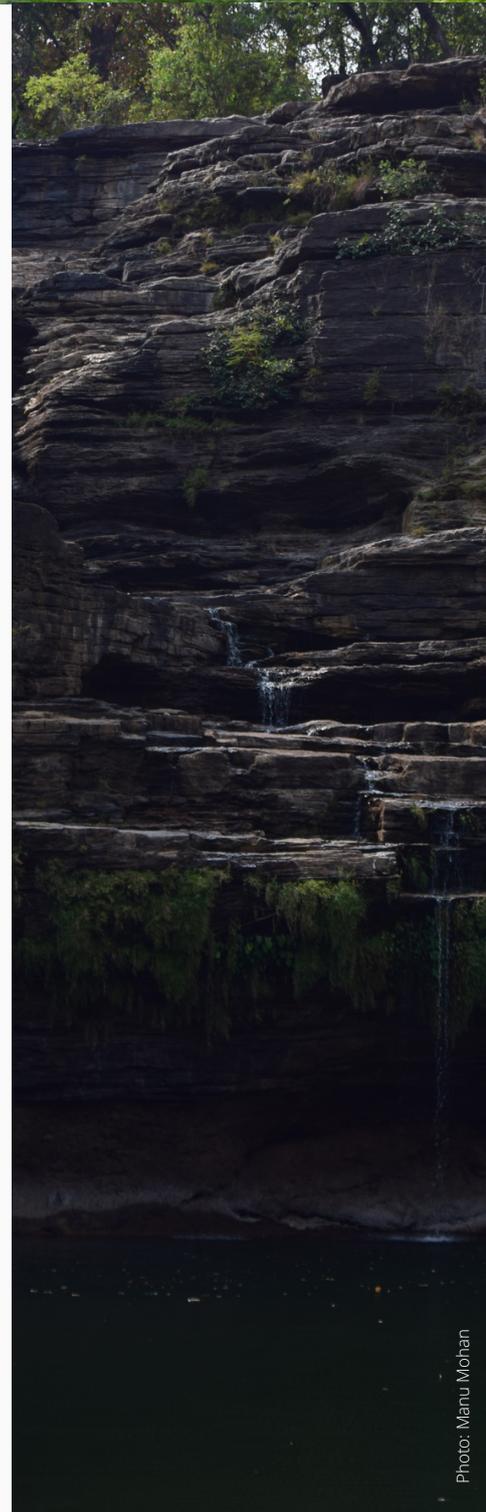


Photo: Manu Mohan



News

Despite tough laws, illegal bear trade continues in India: Study

The highest number of bear seizures were reported in Uttarakhand followed by Madhya Pradesh, Chhattisgarh, and Maharashtra. [Read more here](#)

Two lakh trees and water security at stake in Buxwaha's Bunder diamond mining project

by Manish Chandra Mishra on 4 June 2021 [Read more here](#)



Eucalyptus plantations in Andhra Pradesh sway between economy and ecology

by Azera Parveen Rahman on 21 April 2021 [Read more here](#)



As MP Communities Fight To Save Forests, Planting More Trees Is Not the Solution

As multiple projects threaten Madhya Pradesh's forests, environment campaigns, now led by GenZ, have sprung up. [Read more here](#)

Kuno to get 13 cheetahs next year who can co-exist with leopards

In Madhya Pradesh's Sheopur, a watchtower looms up, overlooking a 12 ft high solar-powered fence. [Read more here](#)

Tamil Nadu in troubled waters without restoration of its tanks, rivers

TNN / Nov 26, 2021, 09:11 IST

[Read more here](#)

Reforestation efforts provide hope, but more work needed on supportive policy and community involvement

by Sapna Gopal on 9 December 2021

[Read more here](#)



Human disturbance alters parasite communities, increases infectious disease: study

by Divya Khatter on 19 October 2021

[Read more here](#)





Photo: Vaishali Vasudeva

Views

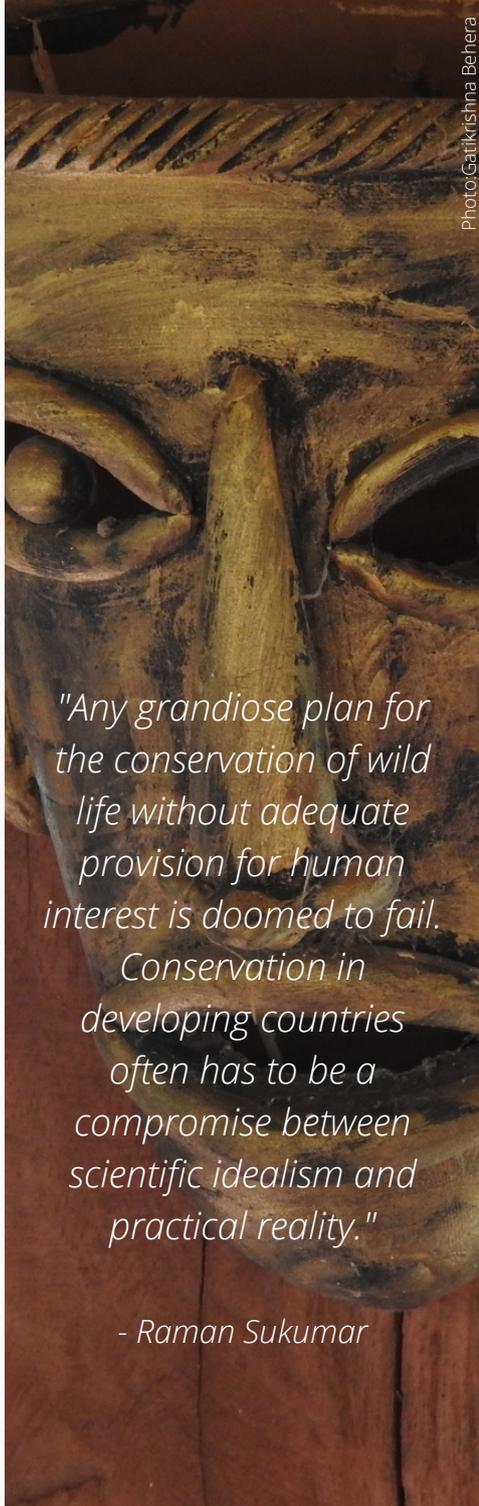
30 x 30 : Challenges and Opportunities for India

VAISHALI VASUDEVA | UNIVERSITY OF BRITISH COLUMBIA

Target based approach has been successfully implemented in several countries and comes with its own set of criticism from conservation community, but still remains somewhat new in the Indian context. India has joined the High Ambition Coalition for the initiative of conserving 30% of its geographical areas as Protected Areas (PAs). With roughly 5% land already under legal protection, it still remains to be answered where and how the additional 25% of area will be designated as PA. Nonetheless, increasing the extent through strictly managed PAs like National Parks and Wildlife Sanctuaries will be a challenge for India which has similar human population as that of China but only one third of the total landmass. Moreover, PAs are not immune to land conversion. In India, there are instances of PADD (protected area downgrading, downsizing, and degazettement) for development as well as to protest protected areas themselves in the past. PAs are means to an end and are only part of the conservation strategy (Woodley et al., 2012). There is a need to formally recognize community conserved areas (ICCAs) under protected areas especially when there is evidence that informal protected areas like Sacred Groves are equally important for conservation (Bhagwat et al., 2005). Other area-based measures are considered significant part of conservation strategy e.g. Important Bird and Biodiversity Areas, Key Biodiversity Areas, Zero Extinction Sites and Ramsar Sites.

The target is globally being seen as a major problem for the Indigenous People and Local Communities (IPLCs) and their rights and holds true for India too. This is mainly due to conservation induced displacement, unfair compensation, cultural impediments, impact on mental well-being (Kabra, 2009; Snodgrass et al., 2016). Management Effectiveness Evaluation of Indian PAs has shown a poor performance for issues related to public and stakeholder engagement, NGO support and research (Mohan et al., 2020). There is also lack of functional corridors between the PAs which can impact the reproductive success of long ranging species. There is need for sustainable management of the forests or ecosystems in which the PAs are embedded in the landscape (adaptive mosaic approach).

Expanding and improving the PA network will require higher stakeholder engagements, devolution of rights, and greater involvement of NGOs. While it could conserve the rarer and endemic species, it is also an opportunity for devolution of rights and adoption of community-based conservation. Finance can be another challenge since various existing PAs do not have enough fund to support management (in addition to being under-staffed) and research. Extending the PA network also implies greater demand for human, social and financial capital. While the National Wildlife Action Plan (2017-31) recommends a landscape approach for wildlife management, successful cases of such an approach are lacking within the country. As India strives for development and raising the standard of living for its people, it is time to rethink the policies, role of institutions, experts and decision makers to balance the conservation and development.



"Any grandiose plan for the conservation of wild life without adequate provision for human interest is doomed to fail. Conservation in developing countries often has to be a compromise between scientific idealism and practical reality."

- Raman Sukumar

Photo: Gatkrishna Behera



Photo: Vaishali Vasudeva

WSL Landscape Centre Summer School 2022

The WSL Landscape Centre is proud to announce our next summer school on "Land-System Science for Analysing Dynamic Landscapes" that will take place from July 3 to 8, 2022, in Filzbach (Switzerland). The summer school is carried out in cooperation between the Swiss Federal Research Institute WSL, the Free University of Amsterdam, Wageningen University, ETH Zurich, and the University of Bern. It particularly addresses young researchers and PhD students who work in the interdisciplinary field of landscape research.

Please find all information on the [WSL website](#).

Registration is open until **January 31, 2022** with a motivation letter of 5000 characters and a 1-page short CV.

Special Issue

Special Issue of Journal Climate "Climate Change - Achieving the UN Sustainable Development Goals in Urban Contexts"

In this Special Issue, original research articles and reviews are welcome, but also perspective and discussion papers. Research areas may include (but are not limited to) the following:

- Climate change impacts on urban sustainable development goals;
- Climate change risks, threats and chances for sustainable urban development;
- Climate change and rural-urban migration patterns;
- Climate trends and urban green, blue and grey infrastructure;
- Nature-based solutions for coping with climate change in urban contexts;
- Participatory urban planning instruments to respond to climate change;
- Sustainable urban governance under future climate conditions;
- Urban planning and development of resilient cities;
- Urban dwellers viewpoints on climate change—vulnerable groups.

Deadline for manuscript submissions: **31 October 2022**.

Members' Page

Member of IRALE and IALE: You can [register](https://www.irale.org/registration.php) to become a member of [Indian Regional Association for Landscape Ecology](https://www.irale.org/registration.php) (IRALE) at <https://www.irale.org/registration.php> and will then automatically become a member of the International Association of Landscape Ecology (IALE) (<https://landscape-ecology.org/>). Being a member of IRALE, one can avail the benefits/opportunities such as newsletters, access to landscape ecology journal, participation in conferences, resource materials and updates on recent developments in the science and application of landscape ecology.

Functioning of Working Groups: **Several Working Groups (WG) have been formed and IRALE members, during registration, are required to specify three WGs with preference.** The list of members' names against each WG will be updated on IRALE Website in due course of time. These groups are dynamic, as more members join and express their interest in different WGs. Based on the first preference for each WG, the members form the core team. From the core teams, thematic champions and leaders shall drive the agenda and enable both mentorship and peer-to-peer learning. If interested, members are free to participate and contribute to more than three WGs.

