

Biodiversity conservation a key strategy in addressing CC in India: some observations based on a review of biodiversity policy, institutions and expenditure

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Biodiversity conservation focus in India's NAPCC & INDC

- India is extremely vulnerable to the effects of climate change.
- The broad policy framework on environment and climate change (NEP 2006), promotes sustainable development with respect for ecological constraints and the need of social justice.
- The NAPCC which is implemented through eight National Missions has strong focus on Biodiversity conservation.
- Biodiversity conservation and planned afforestation are stated adaptation and mitigation strategies, respectively, in India's INDCs.
- A preliminary estimate suggests that at least USD 2.5 trillion (at 2014-15 prices) will be required for meeting India's climate change actions between now and 2030. Strategy-wise finance needs are not available.

- Main objectives of CBD: conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits from utilization of genetic resources.
- CBD mandates Parties to prepare a National Biodiversity Strategy & Action Plan and ensure that this is mainstreamed into relevant sectoral plans, programmes & policies
- CBD defines biological diversity as “...the variability among living organisms and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.”
- Biological resources have been commercialized; yet, its public goods characteristics and the difficulties in establishing and enforcing property rights have led to unsustainable rates of exploitation. Pointing towards need for govt. intervention.

BD conservation: policies and institutions in India

- India being a signatory to CBD has targets to achieve according to a time line, thus requires a credible action plan, funds, & a smart implementation strategy.
- National Biological Diversity Act (2002); National Biodiversity Authority; National Biodiversity Action Plan and National Biodiversity Targets (NBTs) have been implemented/introduced
- While India has a NBAP, it lacks a Biodiversity Finance policy/Plan — key to identifying periodic and continuous finance needs as well as resource mobilization strategies
- Majority of BD management is through Budget support, supplemented by ODA, Civil Society, CSR etc.
- BD finance is highly fragmented, lacks a clear policy & a road map. Multiple institutions are involved in directing finance with no systematic tracking.

India's National Biodiversity Targets



By 2020, a significant proportion of the country's population, especially youth, is aware of the values of biodiversity and its conservation and the steps they can take to conserve and use it sustainably.



By 2020, values of biodiversity conservation are integrated in national and state planning processes, development programmes and poverty alleviation strategies.



Strategies for reducing rate of degradation, fragmentation and loss of all natural habitats finalized and actions put in place by 2020 for environmental amelioration and human well-being.



By 2020, Invasive alien species and pathways are identified and strategies to manage them developed so that populations of prioritized invasive alien species are managed.



By 2020, measures are adopted for sustainable management of agriculture, forestry and fisheries.



Ecologically representative areas under terrestrial and inland water, and also coastal and marine zones, especially those of particular importance for species, biodiversity and ecosystem services are conserved effectively and equitably based on protected area designation and management and other area-based conservation measures, and integrated into the wider landscapes and seascapes covering over 20% of the geographic area of the country by 2020.



By 2020, genetic diversity of cultivated plants, farm livestock, and also of their wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.



By 2020, ecosystems services especially those relating to water, human health, livelihoods and well-being, are enumerated and measures to safeguard them are identified, taking into account the needs of women and local communities, particularly the poor and vulnerable sections.



By 2015, Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization as per Nagoya Protocol are operational, consistent with national legislations.



By 2020, an effective, participatory and updated national biodiversity action plan is made operational at different levels of governance.



By 2020, national initiatives using communities' traditional knowledge relating to biodiversity are strengthened, with the view to protecting this knowledge in accordance with the national legislations and international obligations.



By 2020, opportunities to increase the availability of financial, human and technical resources to facilitate the effective implementation of the Strategic Plan for Biodiversity 2011-2020 and the national targets are identified and Strategy for Resource Mobilization is adopted by 2020.

1. How can the **identified BD conservation plan** be financed:
 - i. Mobilize additional resources
 - ii. Reduce financing needs: address perverse subsidies, realign expenditure, improve efficiency of expenditure
2. What is the Scale of funding needed? Or finance needs analysis
3. Map current BD finance or **BD expenditure review**:
 - What is currently being spent
 - Who spends
 - How much
4. Determine the funding gap.
5. Identify existing and potential finance solutions, assess and prioritize these.
5. Scaling –up finance mechanisms for biodiversity.

Step 1

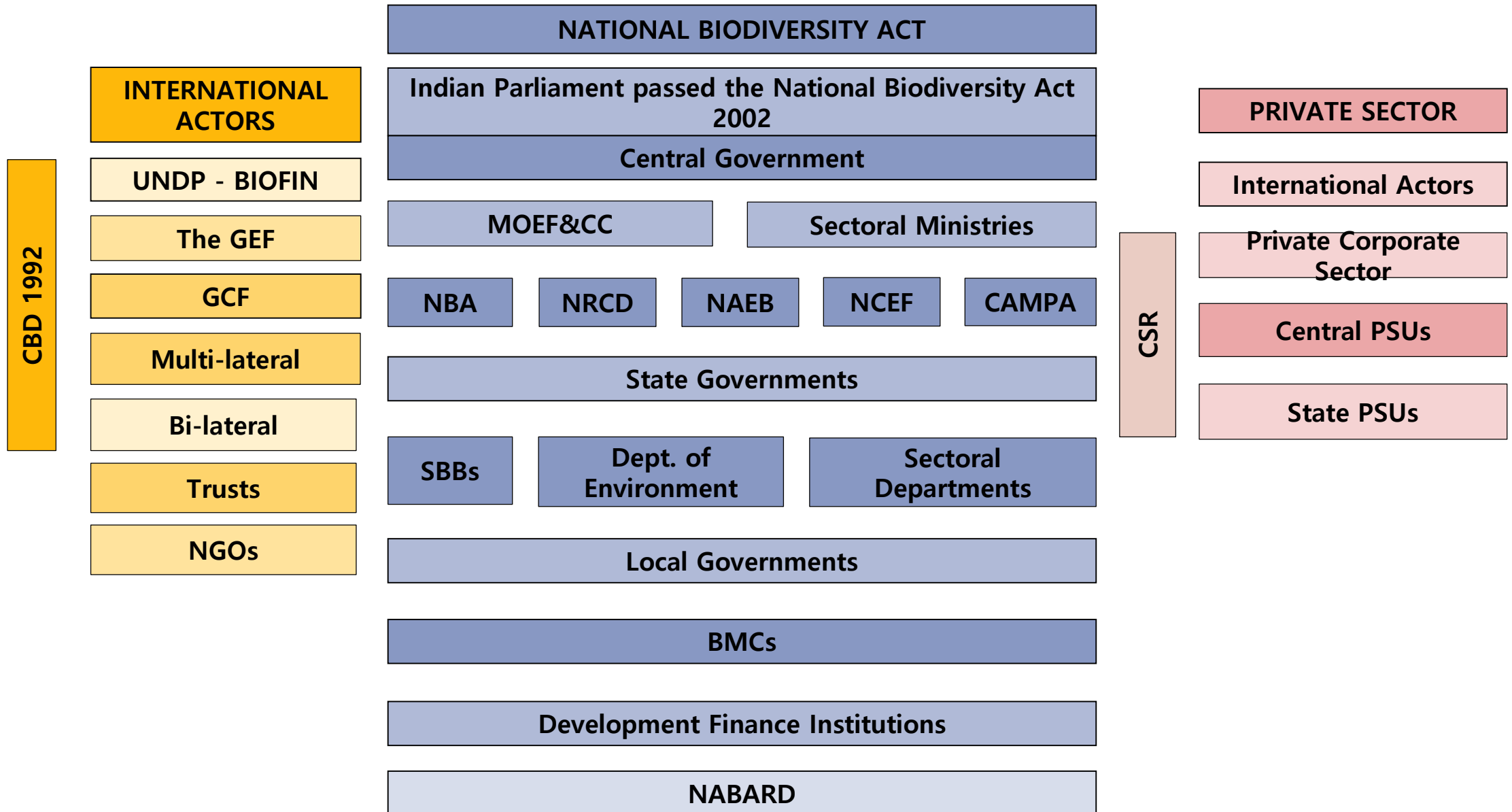
- Identify finance actors
- Compile flow of funds for each of the finance actors
- Sum it up by making necessary adjustments to avoid double counting.

Since the identified finance actors do not maintain and report disaggregated data on all BD relevant expenditures/investments, further analysis becomes necessary which is as in Step 2.

Step 2

- Concepts and definitions of what constitutes BD relevant expenditure/investment
- Identification and quantification of the same especially when BD conservation is one of many objectives of a program.

Institutional Arrangements around Biodiversity Finance



BD Classification Framework

	Strategic Goal A	Strategic Goal B	Strategic Goal C	Strategic Goal D		Strategic Goal E
CBD Strategic Goal	Address causes of biodiversity loss by mainstreaming biodiversity across	Reduce direct pressures on BD and promote sustainable use	Improve the status of BD by safeguarding ecosystems species and genetic diversity	Enhance the benefits to all from biodiversity and ecosystem services		Enhance impl. through participatory Planning, knowledge management and Capacity building
NBTs	NBTs (1, 2 & 10)	NBTs (3, 4, 5 & 6)	NBTs (6 & 7)	NBTs (3, 8 & 9)		NBTs (10, 11 & 12)
Aichi Targets	1, 2, 3 & 4	5, 6, 7, 8, 9 & 10	11, 12 & 13	14, 15 & 16		17, 18, 19 & 20
BD Taxonomy	Biodiversity Mainstreaming	Sustainable use of Resources except invasive species (Aichi Target 9 & NBT4) which are taken as Protection Strategies	Protection Strategies	Restoration strategies	ABS (Aichi Target 16 & NBT 9)	Implementation Strategies
Impact on Biodiversity	INDIRECT	INDIRECT in most cases, except Aichi Target 9 & NBT4	DIRECT	DIRECT in most cases except when it is a very small component	DIRECT	<ul style="list-style-type: none"> •INDIRECT •DIRECT: when implemented by MOEF&CC •There can be some deviations

Classification of Biodiversity Related Expenditure: Examples

Primary Objective and Direct Impact	One of the Significant Objectives	
	Significant intended impact	Significant indirect impact
<ul style="list-style-type: none"> • Afforestation • All conservation and restoration activities • All resource management activities (forests, fisheries, water, mineral etc.) • Reducing pressures on BD • Addressing threats from invasive alien species • All human resource, research, administration of environment ministry 	<ul style="list-style-type: none"> • Mainstreaming activities Ex. eco – system based approaches to CC • Managing Land use to mitigate CC, BD loss • Sectoral measures to address water conservation • Sectoral measures for prevention of water pollution 	<ul style="list-style-type: none"> • Broad scale stakeholder education, awareness and involvement • Streamlining monitoring & reporting • Improve knowledge through data & research • Incentives for sustainable consumption • Incentive for sustainable production

BIOFIN Category BIOFIN Sectors/Practices	Sectoral Mainstreaming	Natural Resource Use	Protection	Restoration	Access & Benefit Sharing	Enhancing Implementation
	<p>Relevant Sector:</p> <ul style="list-style-type: none"> • Manufacturing • Energy • Mining • Transportation • Infrastructure • Waste • Tourism • Education • Health • Space research • Disaster management 	<ul style="list-style-type: none"> • Sustainable Practices: Forestry; Agriculture; Fisheries; grazing of rangeland; aqua-culture; Water Management; land use Waste Management Industrial Manufacturing and Processing • transportation and infrastructure • tourism & 	<ul style="list-style-type: none"> • Assessment of Protection Practices • Effective System Wide Protection Practices 	<ul style="list-style-type: none"> • Restoration of Natural Disturbances • Control of harmful invasive species • Management of over abundant population • Recreation of native habitats • Species re-introductions • Improvements in abiotic environment 	<ul style="list-style-type: none"> • Traditional knowledge • Benefit sharing • Conservation and sustainable use • Prior informed consent • Mutually agreed terms 	<ul style="list-style-type: none"> • Communication & outreach practices • Research and actions • Monitoring research and actions • Legal research • Finance research and actions

Preliminary Results: Budget & Off Budget Flows for BD conservation in Maharashtra

Sr. No.	Finance actors (INR Crore)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	Budgetary Sources	1655.18	1824.02	2983.36	3043.60	2771.27	2883.44	3,470.95
2	CAMPA Grants to State	89.35	85.49	82.63	78.21	78	-	99
3	Finance Commission Grant to State	14	38.7	38.7	77.4	77.4	77.4	
4	Civil Society Organizations	0.37	0.71	0.19	0.43	0.67	0.79	0.5
5	BD relevant CSR							50
6	Total (rows1 -5)	1758.90	1948.92	3104.88	3199.64	2927.34	2961.63	3,621.45
7	Per cent of Total Expenditure of Maharashtra	1.5	1.6	2.2	2.0	1.7	1.5	1.5
8	Per cent of GSDP of Maharashtra	0.21	0.19	0.27	0.24	0.19	0.18	0.18









BD expenditure review: some observations

- i. Exp. on BD conservation is very low compared to the economic and social value of BD in India and direct dependence of 8-10 crore people on BD for livelihood and medicines.
- ii. Analysis of results through the lens of BD taxonomy (slide 9) shows central govt. efforts are more on sectoral mainstreaming and NRM while state govt. prog. are on NRM and enhancing implementation. But these seem very adhoc and lack connect with NBTs, lack appropriate strategies & institutional coordination & cooperation
- iii. In the two districts studied the focus is on restoration & protection through direct impact schemes. However, due to lack of guidance on new techniques and solutions effectiveness of such investments is limited. Impact evaluation studies are rare for any feed back.
- iv. Even CAMPA and FC grants for conservation have underperformed due to lack of clear strategy, capacity & accountability.

- BD conservation is the responsibility of a single ministry which is not a viable strategy.
- It is important that systematic steps are taken to mainstream biodiversity conservation across relevant policy sectors.
- In order to develop the effective strategies, institutional coordination and cooperation are important. Co-production of knowledge in decision making
- There is need to think long-term and address the needs of forest dwellers in direct conservation prog. such as: protected areas and afforestation.
- For BD conservation to be effective in urban contexts there is need for a holistic ecology-sensitive institutional approach in urban areas ...smart cities, urban planning.
- Can potentially leverage more funding if BD presents itself to policy makers to have strong links with SDGs
- CSR is estimated to potentially generate INR 200 billion per year. Leveraging this source would require careful integration of BD conservation strategies with social sector development strategies. A transparent & workable model is required.
- Effective utilization of CAMPA funds would require planning, capacity & accountability.

How to Scale?

Can potentially leverage more if biodiversity presents itself to have strong linkages with relevant Sustainable Development Goals :

NBT	AICHI	SDG
		    
		        
	 	   
		  
	  	   
	  	   
		 
		         
		  
	  	 
		 
	 	    

- i. Clarity on what is needed to be done
 - The goal should be to choose locations where conservation has the greatest payoff
 - Our preparedness to plan future conservation expenditure/investment is poor
 - Scientific knowledge, economic considerations and social justice are key elements
- ii. Feed back is important in improving productivity of investments. We need tools for evaluating the effectiveness of specific policies, such as protected areas and landscape approach which are already in use
- iii. Need to prioritize and go in mission mode. Some examples:
 - Sustainable/Green Agriculture
 - Strengthening Terrestrial Protected Areas and Co-management
 - Improving biodiversity Governance
 - Improving Biodiversity Data and Policy Evaluation
 - Role of timely funding support and not as an after thought.