



Green Economic Recovery of India: Scopes and Opportunities for Selected Key Sectors

Key messages

- A **sustainable green economic recovery** requires a holistic policy strategy, mandatory monitoring, evaluation, and reporting framework in place, and public discourse for participatory decision making
- A **balance between macro and micro-level policies** across geographies, sectors, and social groups is vital to make the economic recovery green and inclusive
- The **economic sectors should be prioritised** based on the vulnerability of the sectors, and sectoral contribution to the sustainable economic development of the country while also considering the net positive impact on the vital capitals (e.g., natural, social, and human capital)
- Green economic recovery policy should incorporate **intended outcomes focusing on** maximisation of positive **natural capital** outcomes and minimisation of negative implications on natural capital
- A **standard reporting framework and mandate** need to be in place for a more effective action-oriented green recovery

The backdrop

The impact of the pandemic on the Indian economy

India has experienced substantial social, economic, and environmental challenges with the COVID-19 pandemic. In addition to mortality and morbidity, the pandemic has wreaked havoc on the Indian economy. Both demand and supplies have been impacted, by external supply and demand restrictions, because of the global recession and disruption of global supply chains. According to the United Nations Conference on Trade and Development (UNCTAD, 2021), the COVID-19 pandemic is expected to cost India roughly USD 348 million in international trade. Additionally, there have been domestic supply interruptions and a drop in domestic market demand. In 2020-21 the GDP of the country contracted by 7.3% (Choudhary, 2021).

Contraction and shutdown of businesses led to a fall in employment across sectors. As a result, the economy's unemployment rate increased from 7.45% in 2019-20 to 8.75% in 2020-21 (CMIE, 2021). Along with falling employment and loss of profits for small businesses, wages were also affected. While these influenced both the formal and informal economy, the intensity of impact was higher on the informal economy, representing a significant proportion of the Indian economy. In India, almost 400 million informal workers are at risk of falling into severe poverty (CBGA, 2020). In terms of loss of income, employment, and fulfillment of basic necessities of life, a larger impact on marginalised and socially disadvantaged groups (Kesar *et al.*, 2021) has also been identified.

In response to the widespread economic impact of the pandemic, the Government of India announced approximately a Rs 20.97 lakh crore (approximately 260 billion USD) recovery package. This is one of the most significant stimulus packages globally, approximating 10% of the country's GDP. The package included measures for the food system (e.g., public distribution system-related measures), income support through direct benefit transfer, healthcare, social security, tax relief, economic stimulus for key sectors (e.g., micro, small, and medium enterprises [MSME], real estate, transport, power sector, banking and finance, corporates, etc.), urbanisation, and others. Additionally, the annual budget (2021-22) of India (approximately 467 billion USD) also turns out to be highly relevant for post-COVID economic recovery, in view of the new schemes introduced, sectoral focus, the pattern of allocation in different sectoral schemes, breakdown of expenditures into revenue and capital components, and so on.

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Greening the economic recovery: The relevance for India

The COVID recovery package aims to boost the economy immediately through income generation, increase consumer demand, and secure community health. A recent study (WEF, 2020) has shown that around a third of the GDP of India is generated by the sectors that are highly dependent on natural capital. These include agricultural and allied sectors, food processing industries, construction, energy, water supply, service industries such as tourism and hospitality, etc. Moreover, apart from GDP contribution, natural capital also plays a significant role in generating rural livelihood in the country. For example, the contribution of forest ecosystems to the GDP is very low (7%), while it generates almost 57% (WEF, 2020) of the livelihoods of the rural communities in India. Hence, the stock and flow of natural capital have a substantial implication on both economic growth and development.

It is also important to note that a number of Sustainable Development Goals (SDGs) (9 out of 17 SDGs) (Figure 1) also depend on natural capital, either directly or indirectly.

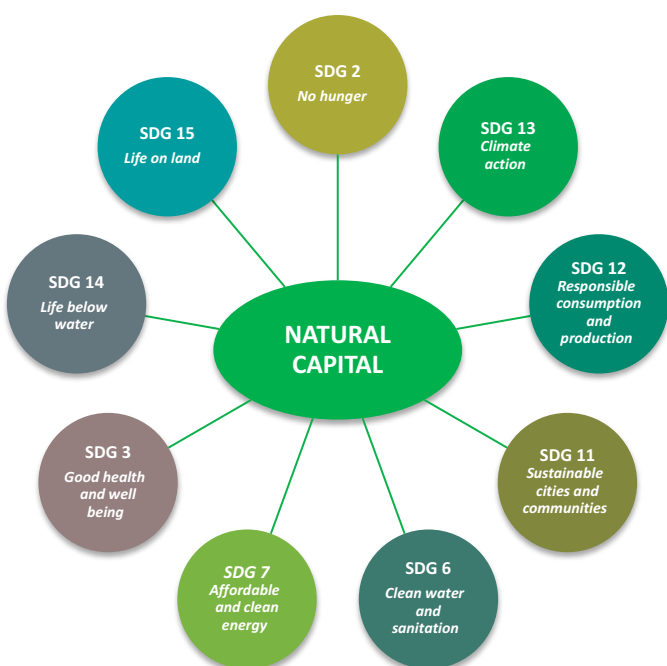


Figure 1: Reference of Natural Capital in Sustainable Development Goals

Source: Diagram designed by authors based on Platform, Green Policy, June (2020)

Hence, to enable the country to cope with the immediate impacts of the pandemic while meeting the long-term economic and developmental goals, a greener economic recovery is fundamental.

Analysis of Indian COVID recovery budget through the lens of the Natural Capital and convening policy dialogue

In a recent study (Datta, Goswami, & Dutta, 2021) undertaken by Development Alternatives, the post-COVID government policies of India were analysed for five selected key sectors. The objectives were to map the post-COVID recovery policy scenario in India and analyse the extent of green economic recovery. The study also identified the gaps in the recovery package at the national level for strengthening natural capital leading to a green economic recovery. The study did an extensive analysis of the provisions made in the COVID recovery package (2020-21) or the '*Atma-Nirbhar Bharat*' package and the annual budget (2021-22) of India announced by the government. For analysis of the budgetary allocations, the key focus was given on the priority sectors chosen by the government in the COVID recovery package. The purpose was to understand the intent of the government in driving a "green" or "natural capital positive" recovery through allocations made in the priority sectors identified by the government for post-COVID economic recovery. Certain sectoral and overall policy gaps were identified. Based on the findings, the study also came up with recommendations for the policymakers.

In the same context, as a part of the study, the European Union Delegation to India, Development Alternatives and Green Economy Coalition (GEC) jointly organised a policy dialogue webinar titled 'Transitioning the policy pathway towards "greening" of the post-COVID economic recovery of India' on 12 August, 2021. The webinar was part of a webinar series under the theme of 'Biodiversity means Life', organised by the EU Delegation to India. The event witnessed participation from officials and policy experts from the Government of India, the NITI Aayog, multilateral organisations, academia, and civil society organisations along with representatives from the EU Delegation, Development Alternatives, and Green Economy Coalition. The webinar initiated a discussion aimed at creating a better understanding of the urgent priorities as well as a sharing of best practices, gaps, constraints, and recommendations as the first step to developing a future roadmap for a green recovery.

Is Indian policy for COVID recovery "green" enough: Insights from a budget analysis

In the COVID recovery package (2020-21) or the '*Atma-Nirbhar Bharat*' package, the national government of the country prioritised five key sectors, namely, agricultural and allied, MSME, power, mining, and social sectors along with a couple of others¹. The results in Figure 2 showed that approximately 18% of the aggregate budgetary allocation has the potential to make a positive (including sub-categories positive high and

¹ The other sectors, not being much relevant for green recovery, were not considered in the assessment. In addition, small share of allocation was made in those sectors.

positive low) impact on natural capital. Additionally, the net impact on natural capital was ambiguous, i.e., could not be identified for almost 39% of the allocations due to insufficient information, although these allocations have the potential to make either positive or negative impact on natural capital depending on the scheme level components. Finally, around 24% of the allocations clearly indicated a negative impact on natural capital.

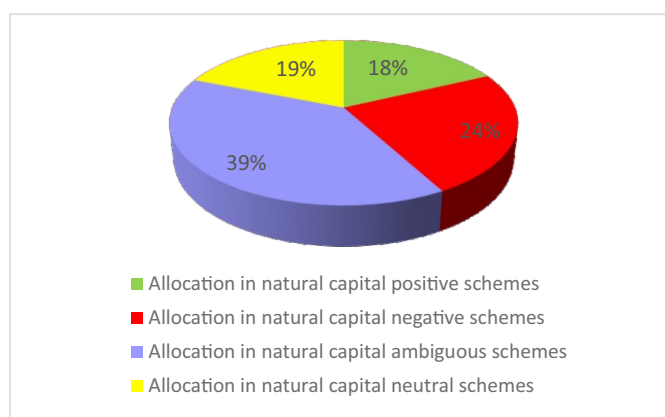


Figure 2: Representation of natural capital in COVID recovery package 2020-21

Overall most of the allocations were found to be ambiguous with regard to the impact on natural capital, mainly in agricultural and allied, MSME, and rural development sectors. Unless specific policy target outcomes are defined for those schemes to create a positive impact on natural capital, these policies might also make a detrimental impact on natural capital, and additionally it would be difficult to track these policies to minimise the negative influence on natural capital.

The natural capital positive allocations made in the COVID recovery budget for the selected sectors are shown in Table 1.

Table 2 shows policies with negative natural capital impact. These are mainly found in the agricultural and allied sector and mining sector.

It was found that the agricultural and allied sector has the highest potential to positively influence natural capital through policies and budgetary allocations. It is followed by the MSME sector and social sector, although in the social sector only a single policy (i.e., MGNREGS²) has a high potential to make a natural capital positive impact. Finally, in the case of the renewable power sector, substantial attempts are yet to be made to harness the potential of the technological innovations in the sector to minimise natural capital depletion caused by fossil fuel-based energy production processes and certain harmful environmental impacts caused by renewable energy generation. The mining sector also needs serious attention of the policymakers to minimise the detrimental impacts on nature and human well-being.

Schemes	Details	Allocation in billion USD (Approx.)	Type of policy
Efficient promotion of herbal cultivation	Promotion and support for herbal and organic cultivation	0.54	Fiscal
Bee-keeping segment	Interventions for beekeeping	0.06	Fiscal
Additional allocation under MGNREGS	Providing social protection and empower the most vulnerable communities in rural India by creating employment opportunities, to enhance livelihood security of the rural poor, to rejuvenate natural resources in rural areas, to create productive rural assets, and to strengthen decentralised planning	5.41	Fiscal

Table 1: Positive natural capital policies in the COVID recovery budget

Schemes	Details	Allocation in billion USD (Approx.)	Type of policy
Fertiliser subsidy	To ensure adequate availability of fertilisers to farmers to enable timely availability of fertilisers in the upcoming crop season	8.8	Fiscal
Coal Evacuation	<ul style="list-style-type: none"> Infrastructure development for evacuation of coal Mechanised transfer of coal (conveyor belts) from mines to railway sidings 	6.77	Fiscal

Table 2: Negative natural capital policies in the COVID recovery budget

² The goals of this rural employment guarantee scheme, as defined by the Govt. of India, are to provide social protection and empower the most vulnerable communities in rural India by creating employment opportunities, to enhance livelihood security of the rural poor, to rejuvenate natural resources in rural areas, to create productive rural assets and to strengthen decentralised planning. Through these targets, this scheme integrates physical, human, social, and natural capital oriented actions.

Policy recommendations for driving a green economic recovery

The budget analysis and the subsequent policy dialogue clearly showed that driving a green recovery requires development of a comprehensive roadmap, prioritising short-term goals to cope with the crisis, and a long-term economic, social, and environmental sustainability vision to build national resilience. This requires broader domestic partnerships and ongoing dialogue between central, state, and local governments and stakeholders across many sectors to mobilise both public and private support for a green, resilient, and inclusive economic recovery.

Policy landscapes in terms of Natural Capital

The study identified some startling good policies that have a great positive impact on Natural capital.

The existing good practices for green recovery

From the assessment of both the budgets, certain good policies have been identified based on their high potential either to strengthen natural capital or to minimise the footprint on natural capital. These policies across all the five selected sectors need to be strengthened further through judicious budgetary allocations and defining the natural capital-oriented outcome targets. In addition, the aspect of effective and efficient implementation of the policies is also to be looked at. These policies are highlighted in the following diagram.



Installing solar irrigation system: A local green enterprise model

Government Scheme	Description
National Food Security Mission	Promotion of agriculture to attain food security
Agricultural Mechanization for <i>in situ</i> Crop Residue Management	Crop residue management
Multiple schemes	Promotion of organic farming
Crop science to improve productivity and adoption of better farming techniques	R&D for sustainable farming
Beekeeping initiatives and herbal plantation	Promotion of livelihood activities with high environmental co-benefits
“Per Drop More Crop” - PMKSY	Micro irrigation and irrigation water use efficiency
Scheme for Fund for Regeneration of Traditional Industries (SFURTI)	Regeneration and development of traditional industries through enterprise cluster development
Khadi Vikas Yojana	Development of biodegradable and natural fibres
Infrastructure & capacity development for testing, training centre, effluent treatment, etc.	Scientific testing and capacity building for reducing environmental impacts of MSMEs
Renewable power generation, energy conservation & efficiency	Renewable power generation; measures for energy conservation and energy efficiency in both the renewable and non-renewable power sectors
Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)	Natural resource development and maintenance through rural employment guarantee policy

Figure 3: Highlights of good policies in India in selected sectors favouring natural capital

Gaps in existing policy through the lens of Natural Capital

Based on the outcomes of the budget analysis and the policy dialogue, as mentioned earlier, certain policy gaps are identified in that selected sectors, these are highlighted below.

Agricultural and allied sector <ul style="list-style-type: none"> Limited focus in consistent allocation in good policies for natural capital strengthening in subsequent budgets (e.g., schemes like beekeeping and herbal plantation along with others) Limited provision for capital investment in irrigation projects and schemes related with water resources development and management (e.g., PMKSY, Fisheries and Aquaculture Infrastructure Development fund along with others) Discontinuation of certain natural capital positive schemes like beekeeping and herbal plantation
Micro, small and medium enterprises sector <ul style="list-style-type: none"> Minimum provisions for capital expenditures limiting the scope for infrastructure development and other capital investment with long term potential (e.g., Khadi Vikas Yojana, Coir Vikas Yojana, Solar Charkha Mission along with others) Allocations reduced in good schemes for minimising natural capital impact like Solar Charkha Mission
Renewable and non-renewable power sector <ul style="list-style-type: none"> Limited focus on decentralised renewable energy in COVID recovery package Union Budget has less capital investment in green policies (e.g., renewable power generation) that limits the long-term growth potential of the sector
Mining sector <ul style="list-style-type: none"> Boost in mining leading to negative social and environmental consequences Limited policy direction for minimising environmental degradation and social injustice
Social sector <ul style="list-style-type: none"> Limited scope of green skill development/environmental awareness initiatives in the budget MGNREGS allocation in recovery package did not highlight focus on natural capital

Figure 4: Natural Capital policy gaps in some of the key sectors of the economy

Beyond these sectoral policy gaps, certain overarching policy gaps are also evident in the Indian scenario. Those are laid out in Figure 5.

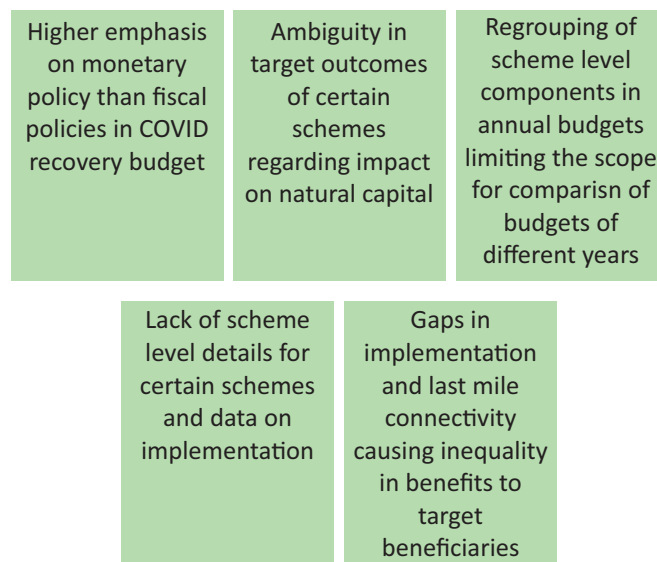


Figure 5: Sector agnostic policy gaps in post-COVID budgets of India

Hence, it can be said that the current policy landscape in India has scopes for driving a green recovery, considering certain good policy strategies mentioned above. However, also a number of sector and specific and overall policy gaps need the attention of the policymakers. For enabling a green economic recovery, it is needed to ensure sustenance of the good policies, strengthen them further, and ensure proper implementation at scale. Along with that, policy gaps are also to be addressed through a robust policy strategy of the government.

Sectoral policy recommendations for driving green recovery

The sectoral recommendations based on the budget analysis are summarised in the following table. For driving a green economic recovery, it is needed to develop policies considering these recommendations.



Poultry farming: A women-led micro-enterprise model

Sectors	Sectoral Policy Recommendations
Agricultural and allied sector	<ul style="list-style-type: none"> The strategies and implementation of existing schemes (e.g., organic farming, herbal plantation, beekeeping, micro-irrigation, drought-proofing of agriculture, were some of the strong natural capital positive schemes) in this sector requires more focus towards strong natural capital positive influence Fiscal and monetary policy instruments for incentivising green practices, promoting green products, and disincentivising environmental damaging practices are needed for the adoption of sustainable green practices and to limit detrimental impacts on ecosystems and biodiversity To drive a long-term natural capital positive recovery, green R&D subsidies, green skill development, investments in nature-based solutions, and green infrastructure are important. These also require the government to make increased allocations in capital expenditures for certain programmes and schemes Stringent environmental regulations are required for a robust green recovery plan
MSME sector	<ul style="list-style-type: none"> Interventions for this sector need to be balanced to incorporate both fiscal and monetary policy instruments The Solar Charkha Mission is the only scheme in the Annual Budget related to energy efficiency. There should have been more allocation of the budget to this particular scheme. Moreover, more schemes related to energy efficiency for a higher and significant Natural Capital impact on the environment need to be provided Capital expenditures are an integral part of the supply chain of MSMEs and contribute a significant portion to overall exports. Thus, the government must focus highly on capital investment in this sector It is recommended to introduce natural capital thinking into MSME businesses, which are often natural resource-dependent, locally oriented, and less capital intensive. These MSME businesses need to be incentivised to adopt natural capital-friendly practices, which will minimise the detrimental impact on natural capital and produce green products and services Skill and capacity building of the MSME entrepreneurs are vital to adopt green practices and sustain their businesses
Power (non-renewable and renewable) sector	<ul style="list-style-type: none"> Mainstreaming sustainability standards in the sector for both renewable and non-renewable energy Prioritising power generation and power distribution from the renewable resources instead of fossil fuel More capital investment is needed in schemes like energy conservation. The funds could be utilised for technological innovation, infrastructure development, carrying out awareness campaigns for energy conservation through print, electronic, and other media for the public, upscaling efforts to create and sustain the market for energy efficiency, etc. Along with the rising demand for electricity in the country, there is a growing demand for energy, which demands increased capital investment for the sector. More decentralised investment is the need of the hour keeping in mind the inclusivity. Both private and public finance is required
Mining sector	<ul style="list-style-type: none"> It is necessary to shift to renewable energy from coal-based energy. This would be one of the main pillars of a transition to protect the health of communities, minimise environmental damage, and sustain economic development Mining is a significant economic activity, but it causes several negative externalities, such as soil and water pollution, loss of biodiversity, and health hazards. Strengthening environmental regulations and enforcement for mining activities that cause negative environmental externalities is vital to make the transition to sustainable mining Generation of alternative employment opportunities for people employed in the mining sector is required. In addition, the health and other life hazards related to mining activities need to be taken care of
Social sector	<ul style="list-style-type: none"> Employment generation schemes such as MGNREGS, which have clearly defined positive natural capital elements in the outcome targets laid out by the government, are demand-driven. This limits the implementation of the scheme uniformly across all states of India. Hence, the materialisation of the full potential of natural capital elements depends also on the intent of the respective state governments. It is recommended to address this gap in the implementation of the scheme Better emphasis is needed on policies related to water quality (e.g., safe drinking water), improving water supply through source strengthening and wastewater recycling Education specialised in green skills to promote sustainable economic, environmental, and social outcomes in industry and the community needs more focus. This would help in establishing a sustainable economy that will use natural resources efficiently and minimise environmental impact Health, education, and workforce skilling are examples of soft infrastructure that would pay off in the long run. For reaping the benefits of the demographic dividend, lowering income inequality, and ensuring long-term economic growth, more investment in the social sector in health, education, awareness, etc. are vital Infrastructural investment and policies with long-term focus should be continued and strengthened further

Table 3: Sectoral policy recommendations

Overall recommendations for policy designing and implementation

Based on the findings of the research study and the points highlighted by the national and international experts at the policy dialogue session during the webinar, **a few key measures needed for green recovery became evident.** In order to build a resilient economy the learning experiences derived through the prevalent threats like the global pandemic, species extinction and biodiversity loss, and climate change are needed to be taken seriously. These threats have widespread impacts across generations. It is important to analyze whether we know why we are facing this pandemic, whether we have taken steps to mitigate this challenge, and whether there is enough investment going into ecosystem restoration and biodiversity loss. **For green recovery, developing an integrated approach, i.e., integrating environmental perspectives into developmental and economic planning for coping with threats like the pandemic and taking preventive measures to deal with potential future threats is the key.** In this regard, a 'one health approach' is recommended.

For doing that, the broad **policy strategies are to be built considering multiple dimensions**, e.g., time, sectoral coverage, selection of policy tools, and building on the existing capacity of

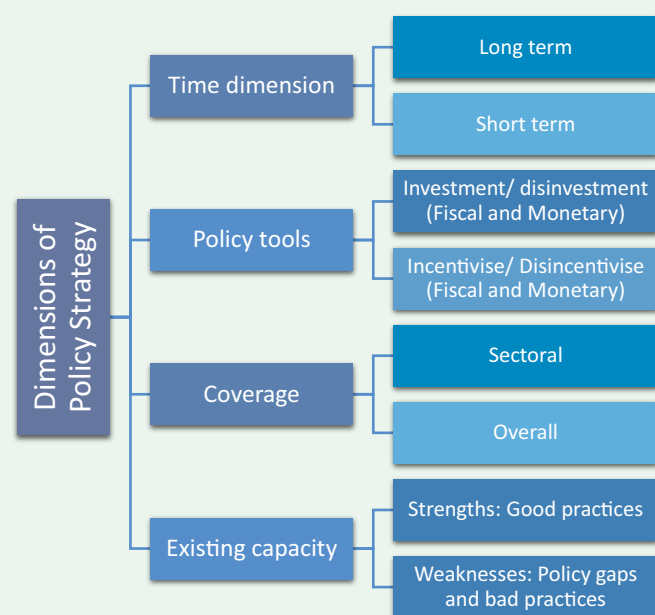


Figure 6: Dimensions of building policy strategies for green recovery

the policies. Those are detailed in the following diagram. Posing balance between all the dimensions is vital for an effective and efficient national policy to drive green recovery.

For each individual programme/ policy/ scheme, it is required to **set clear objectives and outcome targets and have a common framework for monitoring and evaluation of the implementation of the particular policy.** As highlighted by the experts, monitoring and impact assessments through natural capital accounting aid in integrating biodiversity protection and economic planning. **Mainstreaming of natural capital-oriented objectives and outcomes are extremely vital for sustaining natural capital**, which plays a vital role in maintaining other forms of capital like economic, social, and human capital and building system resilience to cope with external shocks like the pandemic or climate change impacts. Publishing policy implementation data (qualitative and quantitative) for open access is also important for transparency of the implementation procedure and for information of the public and the research community. This would aid in receiving feedback on policy implementation and eventually help in further strengthening the policy to serve its purpose in a more effective way.

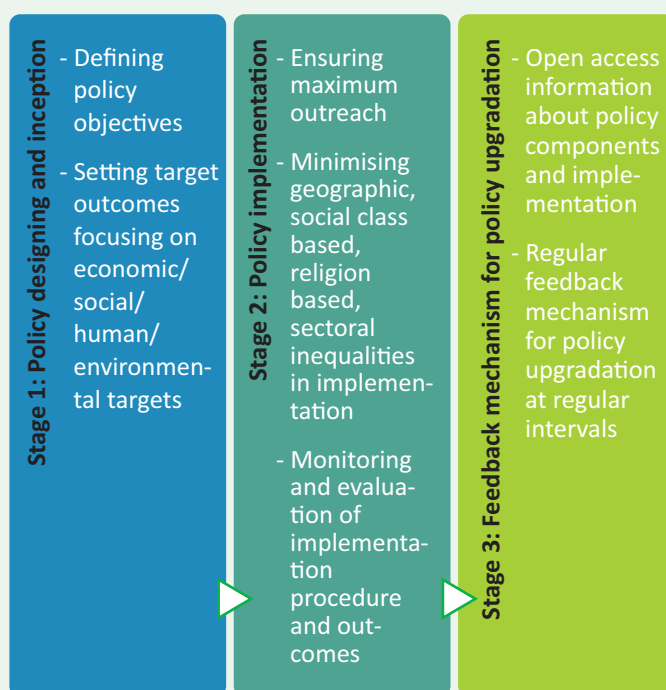


Figure 7: Stages and strategies for policy designing and implementation

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Poultry farming, a micro-enterprise model

About Development Alternatives Group

Development Alternatives (DA) is a premier social enterprise with a global presence in the fields of green economic development, social equity, and environmental management. It is credited with numerous technology and delivery system innovations that help create sustainable livelihoods in the developing world. DA focuses on empowering communities through strengthening people's institutions and facilitating their access to basic needs; enabling economic opportunities through skill development for green jobs and enterprise creation; and promoting low carbon pathways for development through natural resource management models and clean technology solutions.

DISCLAIMER

This document is an outcome of a project and a webinar. The project titled "Indian case study on 'Integrating Natural Capital into Government Post-COVID Economic Decision-Making and Economic Recovery'" was a part of a global study on nature-based recovery that includes Brazil, France, India and Uganda. It has been undertaken in partnership with the Green Economy Coalition (GEC) and the International Institute for Environment and Development (IIED), and forms part of the Economics For Nature project. This work was funded by the MAVA Foundation. The webinar titled 'Biodiversity means Transition' held on 12th August, 2021, was organised by the European Union Delegation, Development Alternatives and Green Economy Coalition. This Policy Brief is intended for use by policy-makers, academics, media, government, non-government organisations and general public for guidance on matters of interest only and does not constitute professional advice. The opinions contained in this document are those of the authors only. However, the decision and responsibility to use the information contained in this Policy Brief lies solely with the reader. The author(s) and the publisher(s) are not liable for any consequences as a result of use or application of this document.

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