

Policy Brief

Green Budget- Growth and way forward

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Ghazal Hashmi¹, Vivek Tejaswi¹

¹Centre for Studies on Environment and Climate, Asian Development Research Institute, Patna

Executive Summary

The research article explores the concept of "green budgeting," which involves increasing public funds dedicated to environmental programs and mobilizing fiscal policy for environmental sustainability. With global temperatures already rising due to climate change, countries worldwide are committed to combating its adverse effects. Green budgeting aims to integrate climate and environmental considerations into decision-making processes, fostering budget transparency and supporting the achievement of international and national commitments and goals.

The study examines green budgeting methodologies used worldwide, such as the Climate Assessment of Local Budget, Climate Public Expenditures and Institutional Review, and Climate Budget Tagging. It also analyzes the experience of the Government of Bihar in implementing a green budget to promote environmental sustainability and climate action.

The findings reveal that the Green Budget of Bihar has steadily increased over the years, with a significant focus on climate action, life on land, clean water and sanitation, and zero hunger. Various departments contribute to different activities under green budgeting, with a focus on program implementation, technology, and infrastructure. Additionally, the research highlights the potential of green budgeting in promoting green bonds, carbon pricing policies, environmental impact assessments, and sustainable investment strategies.

The study concludes that green budgeting can serve as a catalyst for adopting financial tools that support sustainable development and reduce environmental impacts. The implementation of green budgeting requires

a well-functioning budgeting system, strong leadership, political ownership, and effective communication with stakeholders. Going forward, green budgeting has the potential to drive low-carbon development and promote climate action through inclusive and coordinated efforts across sectors and governments.

Introduction

Climate and environmental issues have drawn considerable attention in recent decades as global temperatures are already 1°C warmer than pre-industrial levels, rising by an average of 0.1°C per decade.ⁱ They are expected to rise by 1.5°C between 2030 and 2052.ⁱⁱ Several consequences have emerged because of global warming, such as waves, droughts, floods, storms, and rising sea levels. The national and international attempts in the various platforms have been accelerated to deal with their adverse effects on human life. Therefore, most countries have set national goals and have committed to dealing with climate change and environmental degradation.ⁱⁱⁱ For countries to achieve these targets, sustained effort will be required across the public and private sectors. This is reflected in the Sustainable Development Goals (SDGs), which emphasise that social and economic development must be achieved in ways that are sustainable for the planet. This necessitates the mobilization of financial assets from various origins, encompassing both public and private sectors, as well as bilateral and multilateral sources.^{iv} Consequently, various international initiatives, most notably the Paris Agreement^v, have been established with the objective of aligning financial flows towards a long-term, low-emission trajectory. As a result, governments worldwide

are strongly committed to engaging in coordinated efforts. Governments need to become more accountable for their environmental commitments and support these in moving towards sustainable and resilient societies. One of the ways is to incorporate environmental dimensions into fiscal frameworks including the annual budget document, evaluation of tax and expenditure policies. The Green Budget document is perceived as having the capacity to foster constructive dialogue and debates, aiming to enhance the environmental outcomes of public policies. Institutionalizing green budgeting can create momentum in terms of environmental consciousness in the mind-sets of departments and lead to better planning within the existing fiscal space.^{vi}

Context and Rationale

“Greening the budget” or “green budgets” can be broadly defined as the increase in public funds dedicated to environmental programmes (a policy choice). This is more akin to “green budget reforms” or “green fiscal reforms” or “environmental fiscal reforms”, where fiscal policy as a whole—both the revenue and expenditure side—are mobilized for environmental sustainability.

Each country will have its own motivation for adopting green budgeting. Indeed, in many cases it is likely to involve a combination of factors.

Supporting the achievement of international and national commitments and goals

Almost all countries have signed up to the United Nations’ Paris Agreement, committing to substantially reduce global greenhouse gas (GHG) emissions to limit global temperature rises to 2 degrees Celsius. The net zero targets set by over 70 countries together cover about 76% of global emissions. The countries encompassing the largest greenhouse gas (GHG) emitters, namely China, the United States, and the European Union, are part of these commitments (UN, 2022). These commitments must be put into action. Green budgeting enables them to be translated into clear, measurable and funded actions across countries.^{vii}

Promoting environmentally responsive policy making

Green budgeting involves an approach that seamlessly incorporates climate change and environmental factors into decision-making processes. Through the budgeting process, priorities can be evaluated while considering climate and sustainability aspects. Throughout the budget cycle, in budgetary discussions, decision making and monitoring, this process enables any country to be held accountable for the impact of their activities and policies. Tackling climate change needs a whole-of-government approach. Specific policy measures to address climate change will be vital, but every single policy needs to be evaluated for its impact on climate change and the environment. Green budgeting approaches can evaluate the impact of budget measures through cost-benefit analysis techniques or environmental impact assessments of spending plan.

Fostering budget transparency

The growing emphasis on transparency and accountability in public spending is a key concern for both citizens and the public sector. Green budgeting facilitates the identification of specific elements within a country's annual budget that are directed towards combating climate change and achieving sustainability goals. This process helps demonstrate an organization's commitment to these objectives and highlights its environmental initiatives throughout the entire organization.^{viii}

Thus green budgeting (through green budget statements) have a potential to play an important role in helping developing countries raise revenues, while creating incentives that generates environmental benefits and support poverty reduction efforts. The rationale behind green budgeting aims to strengthen three crucial aspects of public policy and implementation, which is anticipated to result in the following outcomes:

- (1) Mind-set: Encouraging thoughtful consideration of actions aimed at promoting environmental sustainability.

- (2) Implementation: Support for implementing programmes for positive environmental impact
- (3) Impact: Positive environmental outcomes in terms of clean air, water, forest cover and resilience

There is a need to strengthen the structures for revisiting, mobilizing and coordinating actions on the environment in all the departments of the state government. An effective approach to mobilizing action is to ensure the availability of financial resources for environmental sustainability by allocating funds through regular budgets, specifically the state budgets. An active mind-set for environmental protection, energy and resource conservation is required not only for the main environment regulation agencies but also for other government departments to promote sustainable development practices.

Methodology and Approach

The comprehensive approach to green budgeting is founded on bottom-up accounting and planning for environmental sustainability, with the goal of promoting the widespread integration of sustainable development. The policy innovation of green budgeting is guided by the following principles:

Principle 1: Green budgeting will follow a bottom-up process for identifying components of schemes that contribute to environmental sustainability.

Principle 2: Green budgeting exercise will align with strategic priorities of the state and to universal sustainable development goals related to environment in areas such as climate, water, energy, ecosystems, and responsible consumption and production

Principle 3: Green budgeting exercise will seek to mainstream sustainable development through horizontal integration of sustainable development involving all departments through budgeting exercises.

Principle 4: Green budgeting exercise will seek to enhance transparency and accountability of budgeting processes through horizontal integration of sustainable development involving various departments

The process of green budgeting takes inspiration from gender budgeting practices in India. Given the existence of various issue-based budgeting approaches in India, such as gender and child budgeting, there is a need for a framework to consolidate these practices. Sustainable Development Goals (SDGs) can serve as a broader framework, which can be augmented and complemented by state and national goals pertaining to social, economic, and environmental issues over time.

Green budget 'tagging' can identify those budget items that make a positive contribution to achieving broad environmental objectives. For example, budget items with an explicit green objective can be tagged; similarly, those with negative impacts on these objectives can also be highlighted. After selecting a scheme as an environment promoting, related allocation/expenditure can be collected and collated for the fiscal year. To avoid double-counting of expenditure figures and to minimize errors, the 'tagging and tracking' method was adopted. Each scheme is codified through a special code that remains constant over the years. The government budget document DDG includes all the schemes with specific codes. For each scheme, budget codes for the major head, sub-major head, and minor head along with the scheme code can be recorded for easy tracking of the scheme and department wise analysis of expenditure. Actual expenditure data can be reported in subsequent years.

Methodologies across the world

The "**Climate Assessment of Local Budget**" is a methodology developed by The Institute for Climate Economics (I4CE), a French non-profit association specializing in economics and finance. This methodology was introduced after the Paris Collaborative in 2017, during which France and Mexico initiated a joint OECD Initiative on green budgeting (I4CE 2020a).^{ix}

The **Climate Public Expenditures and Institutional Review (CPEIR)** was created by UNDP Regional and the World Bank and implemented in more than 20 countries around the world. It consists of a review of all the spending in the local budget to identify those that are CC-related. The first countries to implement this

tool were developing countries vulnerable to climate change.^{xxi} Most CPEIR reports were national but included a regional dimension, even if it has never been used at a city scale for now. The **Climate Budget Tagging (CBT)**, launched in 2012, is the methodology used to “tag” (i.e., qualify) expenses regarding their contribution to adapting to or mitigating climate change.^{xiii} These methodologies combined can help cities in carrying out the inventory of the climate expenditure of a territory and analysis of the regulations and climate policies in place. It analyzes the whole local context which influences the expenditure and allows to screen the green expenditure in the light of the commitments and actions undertaken by the region and the country.

Experiences from the state

To effectively make environmental sustainability and climate action a priority, one approach is to integrate these efforts into economic decision-making processes, such as annual planning and budgeting. This can help promote policy coherence and better coordination of existing programs and schemes. Over the last two years, the Finance Department of the Government of Bihar has introduced a green budget in the state legislative assembly to institutionalize this approach. The aim is to identify sectoral actions that directly or indirectly contribute to the State's environmental sustainability agenda. Green budgeting is a budgetary policy-making mechanism that can help map and track the sources of funds, expenditures, and policies, supporting coordinated policy design and identification of periodic and continuous finance needs to achieve green objectives related to the climate and environmental dimensions. The budget had two components: expenditure to be incurred on physical restoration after environmental degradation, and non-physical investments (such as publicity drives, public awareness and inclusion of environmental studies in the school curriculum). The exercise is believed to foster proactive mindsets across departments and lead to better planning, coordination, and synergies within the existing fiscal space. The budgetary process covers several thematic aspects, such as climate change mitigation, climate change adaptation, pollution abatement, waste management, natural resource management, biodiversity and ecosystems, sustainable land use, green infrastructure, sustainable consumption, and green economy

Examples of current practices across the world

Indonesia

In 2014, Indonesia introduced a Climate Public Expenditures Review (CPEIR) and implemented Climate Budget Tagging (CBT) in the Provinces of Central Java, Yogyakarta, and Jambi. The adoption of these tools led to the standardization of budget items within and between cities. The objective is to enable the State to prioritize fiscal transfers by gaining a better understanding of the climate-related needs of the provinces. This, in turn, would assist the provinces in directing these funds towards priority projects.

Cape Town

The City of Cape Town is demonstrating leadership and serving as a role model for other cities in Africa by prioritizing climate change considerations in its budgeting. Through peer-to-peer training, the city shares insights on the motivations, key elements, methods of community engagement, sequencing, and costing of interventions outlined in its Climate Change Action Plan.

Nepal

As part of standard government reports: MOF includes climate budget in the Consolidated Financial Statements, Economic Survey Report, and as annex in the Red Book and the Budget Speech. In addition, while the Government of Nepal does not publish its own citizens' budget, CBT data was used by a local NGO to develop a Climate Citizens' Budget, a clear overview document summarizing Nepal's main climate change risks and government spending, to increase public awareness.

Bangladesh

In 2017-18 Bangladesh produced a detailed climate budget report covering six climate relevant large line ministries, and presented to Parliament. In 2018-19 the second climate budget report “Climate Financing for Sustainable Development (2018-19)” was expanded to cover 20 line ministries and divisions (102 pages).

Pakistan

As part of standard government reports, MOF presents a summary of CBT data in its annual budget documents detailing reforms related to climate change finance. Pakistan Economic Survey, which informs government planning and budgeting, includes a chapter on climate change with CBT budgets and expenditures presented by adaptation and mitigation

Achievements of Green Budget

The Green Budget of Bihar Government has increased from Rs 5693.88 crore to Rs 9920.77 crore from FY 2020-21 to FY 2023-24. The growth of the budget has been the highest in 2021-22 at 34.93% from the previous year but it declined to 0.36% in 2022-23 and again increased to 28.67% in 2023-24. The percentage of green budget to total state budget has increased from 2.69% in FY 2020-21 to 3.79% in FY 2023-24. In FY 2023-24, in comparison to the identified department's budget allocation, the total green budget percentage is about 12.55%, which shows a significant difference i.e., an increase of 5.54% as compared to the FY 2020-21. Also in comparison to the identified scheme's budget allocation, the green budget is at 31.21% in FY 2023-24, registering an increase of about 10.21% from the FY 2020-21.

Based on observation of efforts made by the key departments in the last four FY as shown in Figure-5, the contribution of the Environment, Forest and Climate Change, Public Health and Engineering, Health, and Energy departments has been recorded 100 percent consistently in the Green Budget. It is observed that, as compared to the previous FY, the Sugarcane department has increased its green contribution to 100 percent, the Rural Development department has increased its contribution by about 20.08%, and Urban development and Housing department by 13.67%. On the other hand, in comparison to the FY 2020-21, the Education department's green budget contribution is around 89.70%, the Industries department's green budget contribution is

approximately 56.25%, and the Transport department's green budget contribution is approximately 47 percent lower.

Figure-6 shows the trend of identified schemes/programmes under different ranges for the previous three financial years. There has been growth of approximately 12% in the Range 100%, 30% growth in Range 90-75%, 13% decrease in Range 75-50%, 17% decrease in Range 50-25%, 4% growth in range 25-05% and 8% growth in range 05% or less of the schemes/programmes since 2020-21. On the other hand, figure-7 shows the contribution of the department-wise identified schemes/programmes has been increased significantly. A total of 247 schemes/programmes have been identified for green budget in the FY 2023-24, which was 231 in FY 2020-21. It is worth noting that such schemes/programmes are included in the preparation of the green budget, which have a beneficial effect from the point of view of environmental sustainability and do not have a negative effect. The respective departments identify the schemes/programmes being carried out by their departments, their objectives and assess their results. As a result of this, after estimating the estimated budget and expenditure on such identified schemes/programmes by the departments, the green component is classified in terms of importance category. Agriculture department identifies largest number of schemes/programmes under green budget followed by Urban development and Housing department and Environment, forest, and climate change department.

Table 1- Analysis of Green Budget of Bihar

Financial Year	2020-21	2021-22	2022-23	2023-24
State's Budget Outlay	211761.49	218302.70	237691.19	261885.40
Identified Department's Budget Allocation	81176.46	79359.73	79255.54	79074.38
Identified Scheme's Budget Allocation	27162.85	29337.33	28380.42	31788.73
Identified Scheme's Green Budget Component	5693.88	7682.91	7710.25	9920.77
Percentage Green Budget from the State's Budget Outlay	2.69%	3.52%	3.24%	3.79%
Percentage Green Budget from Identified Department's Budget Allocation	7.01%	9.68%	9.73%	12.55%
Percentage Green Budget from Identified Scheme's Budget Allocation	21.00%	26.19%	27.17%	31.21%

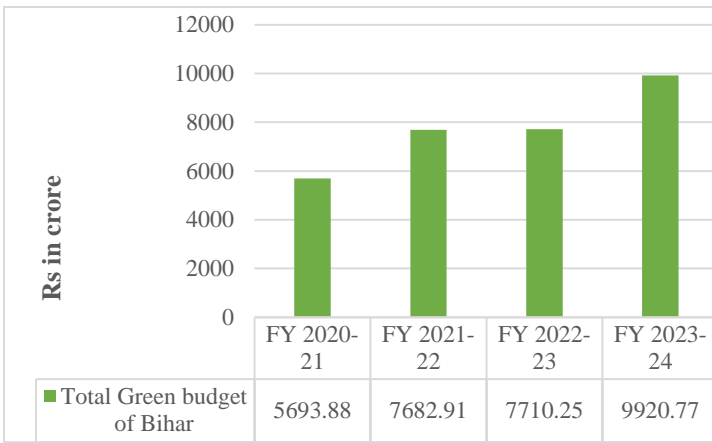


Figure 1- Total Green Budget of Bihar

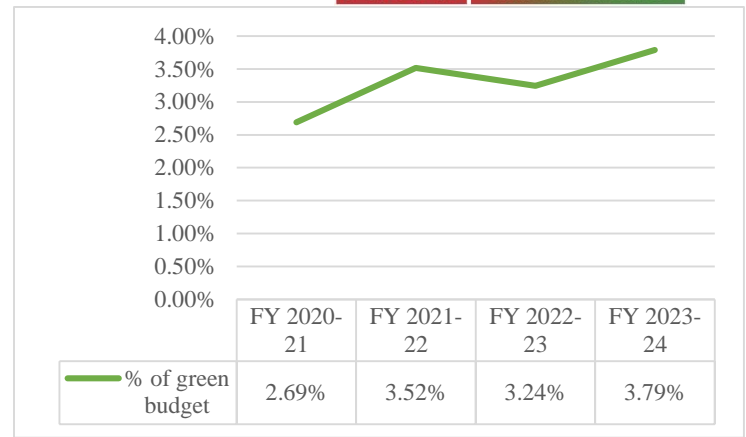


Figure 2- Percentage Green budget from the total state budget outlay

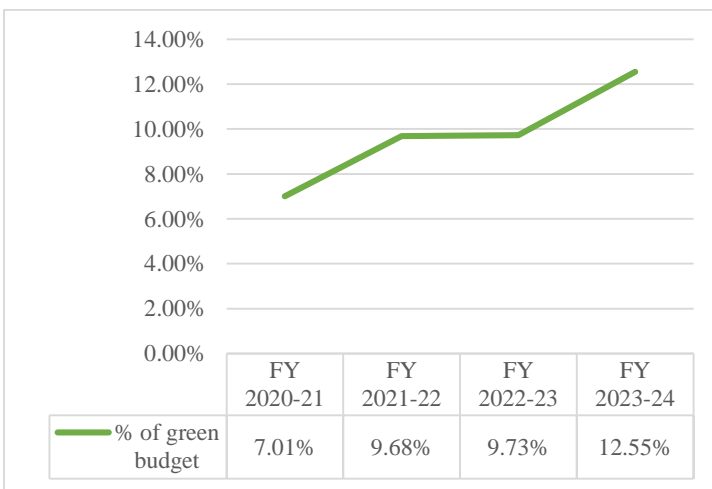


Figure 3- Percentage Green Budget from the total allocation of identified departments

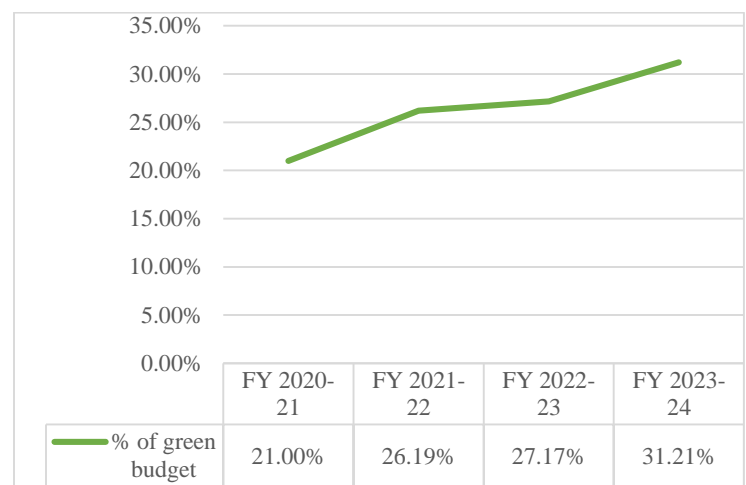


Figure 4- Percentage Green Budget from the total identified schemes/programmes

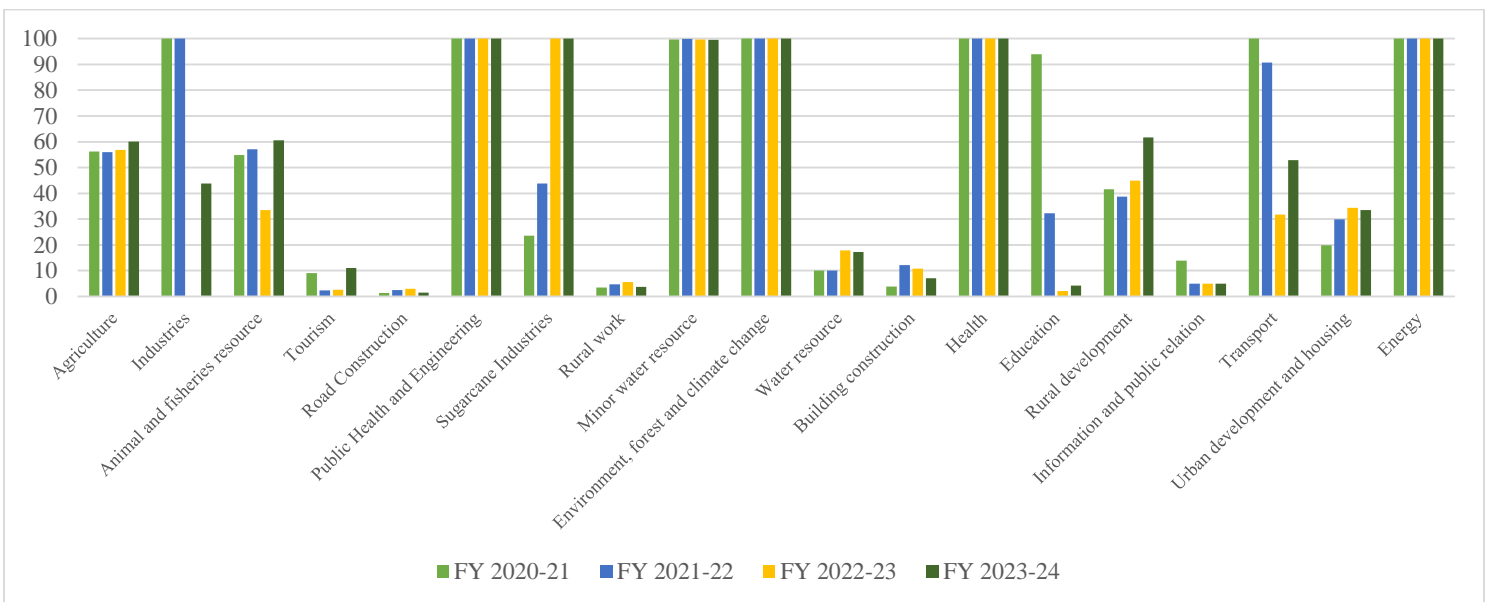


Figure 5- Trend of Department-wise green % of identified schemes/programmes

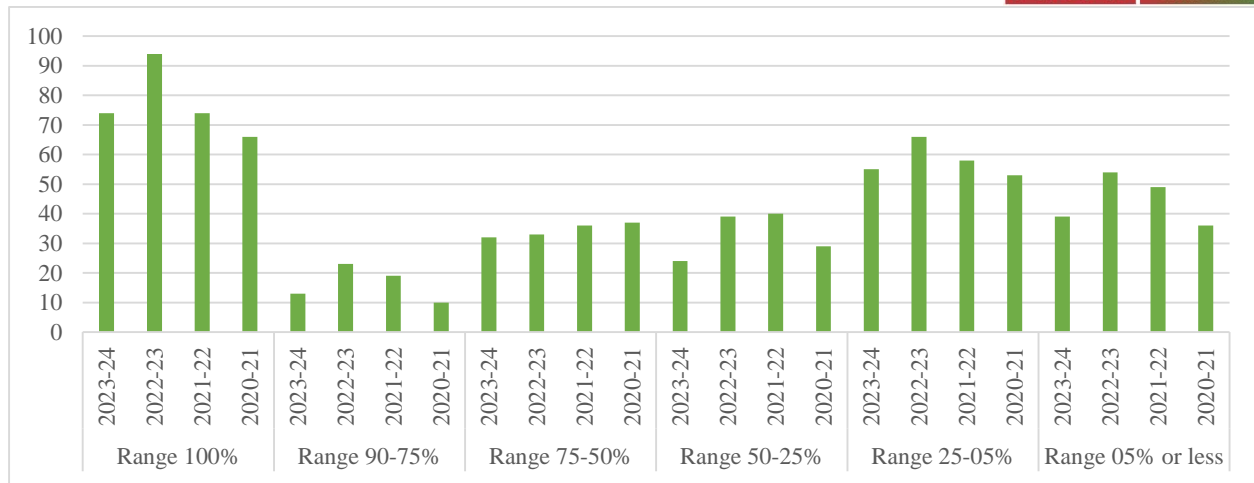


Figure 6- Trend of identified schemes/programmes under different ranges

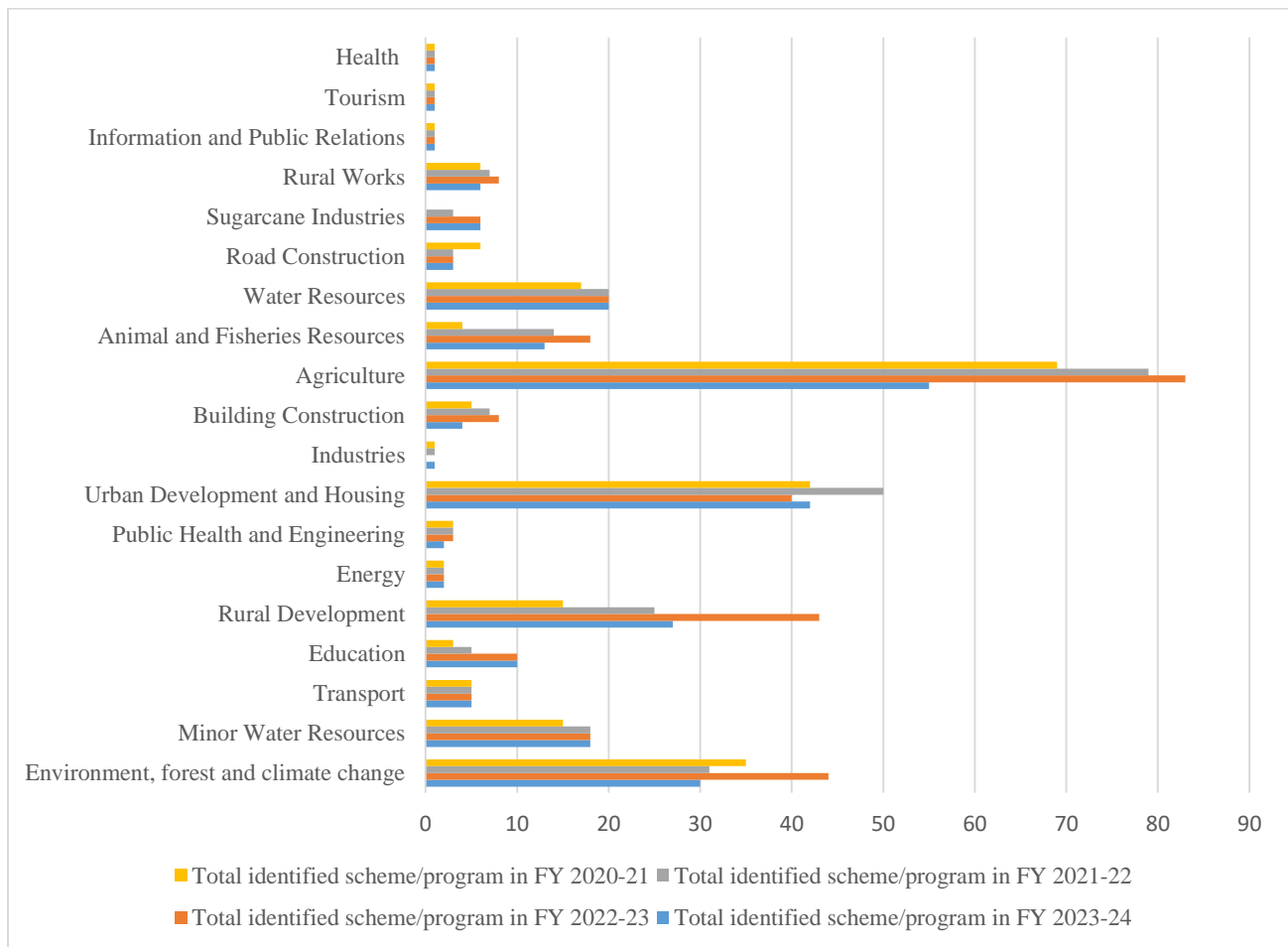


Figure 7- Department-wise trend of identified schemes/programmes

Conclusion and Way Forward

Green budgeting process is a means and not an end. Green budget should also be considered an exploratory tool to help plan, design and coordinate or areas of synergies. The initial phase of green budgeting as a policy innovation may appear more of any accounting exercise but the impact of various departments introspecting as to what components of their schemes is contributing to environment is an important step forward towards more systematic and transformation ways budgeting as well as horizontal integration of climate action and sustainable development. Further evolution of green budget in subsequent years can also include aspects of assessments of programmes, net budgeting, other fiscal policy instruments, and financial planning. The government is the only institution that has the potential and reach to get together various stakeholders from different sectors to combat the serious and expansive challenge of climate change. Some of the ways in which Green Budgeting can be taken forward are listed below:

- Green budgeting can increase the demand for green bonds, which are fixed-income securities that are used to finance environmentally friendly projects. By allocating resources to support environmental initiatives, green budget can increase the supply of such projects and, therefore, the demand for green bonds. Climate bonds or green bonds have emerged in recent years, as a promising financial instrument for attracting private sector investments in projects that offer environmental and climate change benefits. In 2021, Bangladesh launched its very first green bond, through a charity organization called the SAJIDA Foundation.
- Green budgeting can trigger the implementation of carbon pricing policies, such as carbon taxes or cap-and-trade systems. By incorporating the cost of carbon emissions into the budgeting process, green budget can create an economic incentive for organizations to reduce their carbon footprint.
- Green budgeting can lead to the implementation of environmental impact assessments (EIAs) for all budgetary decisions. EIAs are used to assess the potential environmental impacts of proposed projects or policies and to identify ways to mitigate those impacts.
- Green budgeting can trigger the adoption of sustainable investment strategies, such as socially responsible investing or impact investing. By incorporating environmental considerations into investment decisions, investors can support companies and projects that have a positive environmental impact.
- Engaging the private sector in climate change adaptation efforts: The private sector has the potential to mobilize large volumes of investment towards climate action, and also develop efficient innovative solutions to the issue. While private actors are increasingly engaging in environment and climate friendly activities, but they have largely been geared towards mitigation. Their contribution in adaptation activities has been limited so far. This can be attributed to the limited understanding among private actors on the rewards or economic benefits that can arise from investing in adaptation interventions. Therefore, an enabling environment with necessary policies and regulatory frameworks should be in place to incentivize the private sector to invest in climate action.

Overall, green budgeting can serve as a catalyst for the adoption of a range of financial tools that promote sustainable development and help reduce the negative impact of economic activities on the environment. The holistic framework described can help ask the right questions and identify the key steps in pursuing a green budgeting strategy. However, implementing such a strategy can be a long journey and a series of conditions have to be met: ensuring that the basic elements of a functional budgeting system are in place, strong leadership of the MoF and clear linkage with the overall green budgeting reform agenda, smart sequencing of reforms, real political ownership, as well as good communication to stakeholders

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