Governance transformation towards localisation of sustainable development goal 11 in India

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A R T I C L E   I N F O

A B S T R A C T

Sub-national governments play an essential role in transforming existing governance to deliver on the Sustainable Development Goals (SDGs), with SDG 11 intrinsically linked to SDG localisation. The Indian government is reforming its existing institutional mechanisms, and a research gap exists in assessing these reforms and sub-national responses to changes at the national level. Drawing from a transition management approach, this study focuses on the localisation of SDG 11 in India through a systematic evaluation of the national-level changes, which are then used as a reference to examine sub-national responses. Our findings indicate that the governance transformation for SDG 11 localisation in India is optimistic but has yet to generate deep transformational reforms given its developing stages. First, the Indian governance system attempts to make cooperative and competitive federalism work complementary to SDG localisation. Second, the political impact of the SDGs on sub-national governance has remained primarily discursive. Third, there is an advantage to exerting the overlaps between SDG 11 and existing government schemes to discern governance adaptiveness and reflexiveness in monitoring and evaluation systems. Four, there are limitations to the usage of the SDG India Index and risks of over-reliance on scheme-based monitoring and evaluation frameworks. In analysing different governance changes around India's SDG localisation across its cyclical process (strategic, tactical, operational, reflexive), this study provides a nuanced understanding of the transition of the governance system in India towards a governance model for achieving the SDGs.

1. Introduction

There is a variety of conceivable forms of governance that can aid in steering societies toward achieving Sustainable Development Goals (SDGs). The most notable proposed governance approaches are 'governance through goals' [4,24] and 'transformative governance' [53]. These governance approaches represent the inspiration to transform governance for sustainable development from rulemaking towards a system based on goal setting [24]. Transformations targeting achieving the SDGs denote the active and purposive governance processes of instigating change across multiple levels and involving broader actors with the intention to drive a major change in societal structure to achieve long-term sustainable development [53].

Despite these governance approaches being designed to achieve the SDGs, their applications have yet to become mainstream. Operationalising such models is particularly complex, owing to the resource required, the distribution of roles and responsibilities across different actors and the large number of actors involved. The existing practice tends to adopt a siloed approach toward governance [5]. Emerging styles of governance are more or less concerned with developing coordination structures [27]: as a process of shaping society [6] or as a process of shaping structures that allow efforts to shape society [45]. Every country has different or combinations of governance preferences due to institutional settings, political practice, traditions and culture, geography and resulting economic, social, and environmental circumstances [32]. Any transformation requires a structure for steering the process that accelerates changes towards the sustainability agenda [27] and will depend upon the institutional system's historicity, ideas and actions, resources, and opportunities in context. Hence, it is hardly surprising that only limited formal governance mechanisms are explicitly established for achieving SDGs. Where observed, there are large variations in attempts to align institutions with the SDGs [3]. Implementation and monitoring of SDGs mainly depend on governments determining their own targets and strategies [4] and mobilising SDGs selectively [20]. Governance

systems in various countries are responding to SDGs through prioritisation of indicators, development of monitoring frameworks, assignment of roles and responsibilities and other such steps [1,10]. Institutional change often replicates existing priorities, trajectories, and government agendas [58,36]. Similar actions are observed at the sub-national level, with governance systems found to face more challenges in developing strategies and conducting monitoring and evaluations for the SDGs [36]. Despite the expected challenges of weak sub-national governance, inadequate funding, and institutional capacity [49], a critical knowledge gap exists in assessing how sub-national governments respond to the national changes in governing SDG localisation.

The challenge of governing the SDGs, for which governance transformation is necessary [24], is particularly relevant in the national-local governance discussion. National-local governance is indispensable to the contextualisation of the global goals, or SDG localisation [44], as global goals are translated into national and local contexts. Sub-national governments play a crucial role in SDG localisation efforts as most SDG targets directly relate to their provisions. On the other hand, reflecting on the SDGs can provide guidelines for urban transitions to sustainable development [23,28]. Localising SDG 11 (Sustainable cities and communities) explicitly relates to urban planning and policymaking associated with strengthening local governments to manage cross-sectoral issues of delivering basic services, infrastructure, mobility, social inclusion, and local economic development. Considering the risk that sectoral interests will steer local SDG implementation as most local authorities face challenges due to sectoral organisational structures [63], SDG 11 attainment hinges on efforts to align urban planning processes with SDG localisation [61]. Therefore, it is critical to understand institutional dynamics and strategies between the two processes to better account for governance transformation to deliver SDG 11. The impact of national strategies to localise the SDGs on local governance remains uncertain and warrants further investigations.

India presents an important case of efforts toward SDGs as it accounts for nearly 18% of the global population [59], with the urban population projected to reach up to 558.8 million by 2031 [34]. Success in achieving the SDGs in India will act as a major contributor toward global success. Some critical urbanisation issues have been identified as inefficiencies in public service delivery, informal settlements, increasing pollution, infrastructural deficits, financial shortfalls, and a lack of integrated planning frameworks [34,48,54]. This makes the achievement of SDG 11 imperative for the country. With the 2030 Agenda as a guiding framework, the Indian government has already initiated the process of SDG localisation by introducing a host of reforms in the existing institutional mechanisms. Power and resources have traditionally devolved from the higher levels of government, thus playing a crucial backdrop towards the governance for achieving the SDGs. Based on the SDG index calculations by SDSN [52], 'major challenges remain' for India in the context of SDG 11, with the goal's progress being assessed as 'stagnating'. However, there is a lack of in-depth analysis on the localisation and implementation of SDG 11 in India.

This article aims to explore the transformation undertaken in India to adapt the governance at the national and sub-national levels to deliver the SDGs. Focusing on SDG 11, this article offers a systematic evaluation of the governance system to assess the progress of governance for an SDG-aligned future. The questions addressed by the study include – What are the governance changes taking place at the sub-national level as a response to the changes at the national level? How do sub-national governments undergoing governance transformation perform with regard to their performance in SDG 11? Through which governance roles (e.g., oversight, strategic planning, financing, etc.) and mechanisms (e.g., controls, policies, guidelines, etc.) the central government steers SDG 11 localisation?

Following the theoretical approach and methodology section, the article elaborates on the governance framework relevant to SDG localisation in India, bringing the institutional interlinkages with urban planning and development. In Section 4, based on national-level transfor-

mation, the study clarifies how the sub-national level is responding to the overarching transformation and approaching the localisation of SDG 11. Section 5 discusses whether and how the institutional mechanisms within the country are evolving to effectively localise SDG 11 and the main challenges in this process. Inferences from the study and its contributions to knowledge building of SDG 11 localisation in India and the discourse on governance for the SDGs are offered in the final section. Despite its focus on governance transformations as the central concern, this article does not seek to explain how transformation in SDG governance should emerge.

2. Theoretical approach and methodology

2.1. Transition framework for governance

How can the governance transformation be utilised for fulfilling the SDGs? The transformation of governance is an emerging process. It is a combination of linear and non-linear changes due to multiple steps being undertaken along the idea of localising the SDGs. The changes at the national level in the strategic and policy framework, networks of actors, and their patterns of interaction are reviewed under the framework of the transition approach in governance for sustainable development. This approach is based on the idea that the transition of a system can be distinguished as a cyclical process of strategic, tactical, operational, and reflexive changes, with sustainable development as a long-term goal (Fig. 1) [11,29]. Strategic changes refer to defining the vision, long-term goals, and anticipation of a suitable strategy. Tactical changes involve steering activities like regulations, organisation of networks, and frameworks. Operational changes relate to institutional practices and introducing new actors or structures. Reflexive changes are associated with assessments and evaluations. These changes may not necessarily occur sequentially as SDG localisation involves multiple scales, levels, and actors. The transition approach focuses on sustainability while recognising plurality in the contexts, interests, and ways of pursuing sustainability. The actors involved and the deliberative processes employed at each step in the transition are reviewed.

2.2. Methods and data

The study follows a descriptive and exploratory approach to research and is conducted through a qualitative assessment of government documents and reports in the public domain. The Voluntary National Review
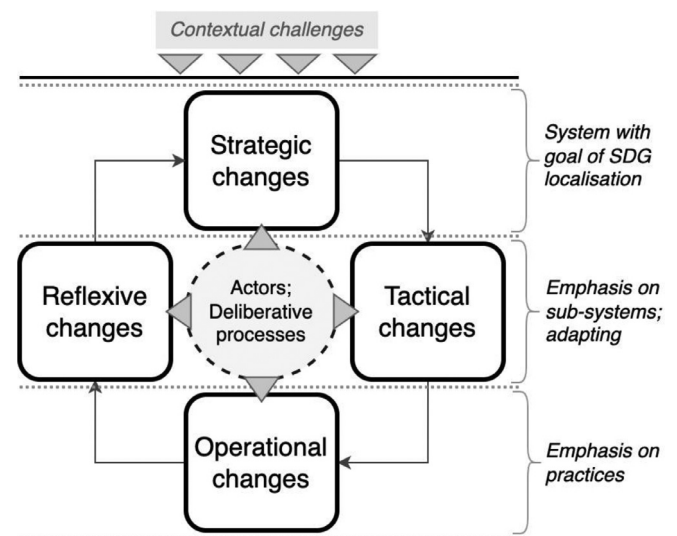

Fig. 1. Transition framework for governance (Based on Frantzeskaki, Loorbach & Meadowcroft [11], Monkelbaan [35]).

(VNR) reports, urban policy frameworks at the national and sub-national levels, mandates of ministry departments and related institutions, and various performance reports of governmental schemes and projects have been systematically reviewed to assess the changes introduced in the institutional framework.

With a review of these changes as a reference point, we further examine the sub-national governmental responses to the governance transformation at the national level through a comparative analysis. It is done by taking specific sub-national cases selected on the basis of their performance in a composite SDG index developed by the Indian government as a part of the efforts towards SDG localisation. A categorical mapping of the state-wise scores for SDG 11 based on the SDG India Index 3.0 was conducted to understand the sub-national variations. QGIS v3.20 software has been used for mapping the values. The scores based on the earlier versions of the Index have yet to be discussed due to the lack of comparability, as they used fewer and slightly different indicators. NITI *Aayog*[1] typically classifies the states and union territories into four categories – achiever, front-runner, performer, and aspirant. This study considers a division into five categories with equal intervals between the lowest and highest-performing states for more refinement.

3. Governance framework through the lens of development planning and SDG localisation

3.1. Institutional background

India is a parliamentary democracy with three tiers of government (central, state, and local). With a federal system of governance, there is a threefold distribution of power under a union list (central government), a state list (state government), and a concurrent list. A history of colonisation by the British has shaped the public administration and bureaucracy in India, and economic development was the prime focus after achieving independence in 1947. The economy was mainly agrarian, and the government opted for a socialist approach to planning for growth. Accordingly, the development planning system was initiated with the establishment of the National Planning Commission, which was tasked with preparing national-level Five Year Plans to set a national strategic vision and goals. The initial plans were centred on increasing agricultural productivity to feed the population and subsequently on rapid industrialisation [57]. The Seventh Plan (1985–90) explicitly addressed urban policy for the first time. The Eighth Plan (1992–97) further built on it by developing a macro strategy for urban development from spatial and economic dimensions [47]. It was also in 1992 that the 74th Constitutional Amendment Act provided a framework for the devolution of powers and finances up to the level of local bodies in urban and rural areas. This was an essential step in the evolution of the Indian planning system as it empowered the lowest level of governance.

The Constitution assigned the urban planning and development sector to the state governments. The 74th Constitutional Amendment (12th Schedule) further decentralised 18 functions pertaining to spatial and socio-economic development in urban local bodies (ULBs), including land-use planning, housing, and basic services provision related to public health and sanitation. Financing constitutes a separate hierarchy, following a top-down approach from the central to the state and, subsequently, the local levels [2,22]. The Ministry of Housing and Urban Affairs (MoHUA) is the central apex body formulating national-level policies, allocating financial resources to the state governments, and monitoring housing and urban development activities. The states have their respective ministries for urban planning. The National Urban Policy Framework is prepared by MoHUA, underlining the country's approach towards urban planning, and the states use this framework to draft their own urban policies.

The Planning Commission was replaced in 2015 by the National Institution for Transforming India (NITI) Commission, or 'NITI Aayog'. The fundamental idea behind NITI Aayog is to increase sub-national involvement in development planning, marking a shift in the government policy towards reducing the hierarchy between different levels of government and encouraging collaborative functioning between government ministries [38]. The body also acts as the nodal agency for implementing the SDGs in India (Fig. 2). It works in collaboration with a diverse set of stakeholders relevant to SDG implementation in the country [7]. It coordinates with all state governments to adopt, implement, and regularly monitor SDGs. Correspondingly, the Ministry of Statistics and Programme Implementation (MoSPI) has led the development of the National Indicator Framework in 2018 to monitor SDG implementation at the national level [37]. The framework comprises a comprehensive dataset of 308 indicators along with their identified data sources and stipulations for measurement frequency. MoSPI is coordinating with approximately 30 ministries and departments of the central government to source the data for SDG indicators. For effective SDG localisation, MoSPI provides the required technical support and has also developed guidelines for the states to establish their own monitoring frameworks in coordination with NITI Aayog.

The Indian model of governance has been described as quasi-federalism [64] or centralised federalism [12], as there is a constitutional distribution of legislative and executive powers between different levels of government. In case of a conflict between the centre and the state, the central legislation prevails. It is theoretically based on a model of cooperation where the centre and the states exercise their autonomous powers but in a cooperative manner [55]. The past few years have seen efforts towards strengthening this spirit of cooperation with the establishment of NITI Aayog. It encourages an environment where states and the centre are equal stakeholders in the process of development planning [43]. NITI Aayog has been functioning as an integrative platform for effective SDG localisation by assisting the state governments in developing institutional structures for achieving the SDGs. With the support of the UN and other knowledge partners, it has also been making active efforts for sensitisation and awareness building on SDG implementation by the sub-national governments.

3.2. Localisation of SDG 11 to the Indian context

The Indian government reported their initial efforts at SDG localisation in their 2017 VNR, mainly highlighting the national commitment toward seven SDGs – 1, 2, 3, 5, 9, 14, and 17. One of the main strategies of SDG localisation in the country is finalising the indicators and improving data monitoring and accountability. In this report, urban development is mentioned only with respect to the need for strengthening sub-national governments, and there is no direct reference to SDG 11. On the development of indicators, the kind of comprehensive data required for the National Indicator Framework by MoSPI is presently lacking at the state level [42]. NITI Aayog developed a composite 'SDG India Index' in 2018 based on indicators selected according to data availability and governmental priorities. The Index is an important step toward data-driven decision-making. It helps state governments assess their performance given the national targets relative to other states. A crucial intent behind this initiative is to instil a competitive spirit between states to improve their performance towards achieving the SDGs. Research suggests that the outcomes are superior in a competitive system [55]. Hence the policy outcomes will be more efficient when there is competition amongst sub-national governments in a federal system. Initiatives have also been taken to enhance the fiscal relations between the central and state governments, like higher tax devolution and the introduction of a unified Goods and Services Tax [25].

Various government initiatives contribute toward achieving the SDG targets across the country, and NITI Aayog has mapped SDGs with related government-sponsored programmes [39]. The urban agenda of the Indian government is mainly being approached through schemes on
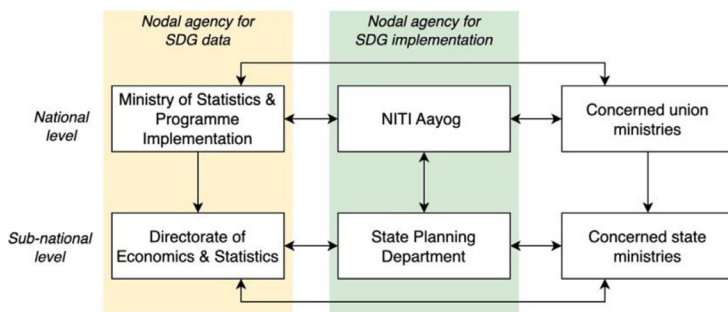
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[1] NITI *Aayog* stands for the 'National Institution for Transforming India' Commission.

Fig. 2. Institutional framework for SDG planning and localisation in India.

housing, basic civic amenities, employment, controlling pollution, inclusivity, and smart interventions. The targets under these schemes have been used to develop indicators under SDG 11 for India. The National Indicator Framework by MoSPI has identified a total of 15 indicators at the national level to measure and monitor the progress of targets towards achieving SDG 11. These localised indicators correspond to 11 out of the 14 indicators outlined for SDG 11 (Table 1). The SDG India Index has been updated twice, and the most recent version of the Index in 2021, referred to as SDG India Index 3.0, measures the performance of SDG 11 with eight indicators that capture three out of the 14 outlined indicators for SDG 11 [42]. It is observed that the National Indicator Framework, notably the SDG India Index, uses a considerably smaller number of indicators. The SDG India Index indicators have been developed in consultation with the state governments and related government ministries [16].

3.3. National schemes and urban policies

In order to define a future for urban development in India, the National Urban Policy Framework was formulated in 2018. A review indicates no direct reference to SDG targets in the policy document despite being developed after the SDGs were adopted. Still, key strategies in the framework resonate with the principles of sustainable urbanisation as envisioned in the 2030 Agenda. The principles propagated are based on a combination of top-down and bottom-up approaches [34]. The framework includes guidelines for state governments to frame their respective urban policies by adopting inclusivity, partnerships, transparency, data-driven governance, and capacity-building strategies. Special consideration is given to financing by advocating outcome-based funding at the state and local levels of government. Parallel to the framework, there are six central government schemes to develop urban areas. The objectives under each scheme directly contribute toward the targets under SDG 11 (Table 2). The 2020 VNR process examined the progress towards SDG 11 with the corresponding achievement in these six schemes. In addition to these schemes, urban transport and disaster management policies such as the National Urban Transport Policy, National Clean Air Programme, and the National Policy on Disaster Management have a bearing on achieving SDG 11.

4. Assessing the governance transformation

4.1. Governing the SDGs at the national level

This section elaborates on the changes in the institutional mechanisms at the national level, bearing on adapting, planning, implementing, and monitoring SDG 11 within India.

4.1.1. Strategic changes

A three-pronged strategy has been defined for effective SDG localisation consisting of (i) cooperative and competitive federalism, (ii) developing localised solutions, and (iii) capacity building at all levels of government. NITI Aayog promotes the role of sub-national governments in implementing SDGs, with the state governments assigned the task of designing and executing policies toward SDGs. National and sub-national consultations on advocacy and awareness development of the SDGs are regularly conducted as a part of localisation. Measures for enhancing the autonomy of states in development planning expenditure have also been taken from 2015 to 16 onwards. Fostering partnerships has been part of the mandate of NITI Aayog, which includes collaborations with the private sector, civil society organisations, think tanks and international organisations like the UN agencies. Intending to align SDGs with the development agenda, the MoHUA has developed a framework for the sub-national governments focusing on using SDG 11 as an action point for achieving other interlinked SDG targets [62]. Additionally, the National Urban Planning Framework has defined the intended outcomes of planning interventions at the local, state, and central levels.

4.1.2. Tactical changes

Integrative functioning is the base for implementing the strategic changes discussed above. The SDG localisation process catalyses multistakeholder engagement by mapping stakeholders and specific population groups for consultations as the first step. Guidelines have been provided to the sub-national governments on building localised data monitoring systems based on the National Indicator Framework. The National Urban Planning Framework provides separate guidelines on the key actions required by sub-national governments for various development planning sectors. To improve fiscal federalism, the state governments now receive an increased share of 42%, compared to the earlier 32%, as a part of tax devolution from the centre. The introduction of the Goods and Service Tax also brings together the central and state governments by replacing the multiple indirect taxes levied on goods and services. Both actions signal sharing of the taxation power between the centre and the states, with councils set at both levels for joint deliberations [33].

A memorandum of understanding between the MoSPI, NITI Aayog and the United Nations India office is a step towards institutionalising deliberations and support for SDG-related data collection and monitoring [37]. In addition, the 'EU-India Partnership for Smart and Sustainable Urbanisation' was launched in 2017 for knowledge sharing on urban policymaking [9]. Under this partnership, the Government of India has the support of the European Union on joint research and innovation and the development of financing mechanisms for smart cities [19].

4.1.3. Operational changes

The advocacy for SDG localisation has created new institutional structures at various levels. High-Level Committees have been established at the state level to provide guidance and oversee the implementation and monitoring of SDGs. Some states have constituted working groups for each SDG or established SDG cells to coordinate the SDG implementation process. In some cases, changes have been made to the mandate of an existing institution like the District Planning Committees. As these committees are already linked to district-level bodies, some states have assigned them tasks of SDG implementation. However, this district-level institutional mechanism is still nascent and needs further

Table 1

SDG 11 indicators by UN, National Indicator Framework of India, and SDG India Index 3.0.

UN SDG 11 Goals and Targets	UN SDG 11 Indicators	National Indicator Framework of India	SDG India Index 3.0
11.1 - By 2030, ensure access for all to adequate, safe, affordable housing and basic services and upgrade slums	11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing	11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing (*UNDER COMPILATION*)	1. Percentage of urban households living in *katcha* (not permanent) houses 2. Percentage of individual household toilets constructed against the target 3. Percentage of urban households with drainage facility
11.2 - By 2030, provide access to safe, affordable, accessible & sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities & older persons	11.2.1 Proportion of population that has convenient access to public transport by sex, age and persons with disabilities	11.2.1 Proportion of households in urban areas having convenient access to public transport (*UNDER COMPILATION*) 11.2.2 People killed/injured in road accidents	1. 1. Deaths due to road accidents in urban areas
11.3 - By 2030, enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	11.3.1 Ratio of land consumption rate to population growth rate	11.3.1 Proportion of Cities with Master Plan	*NOT ADDRESSED*
	11.3.2 Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically	*NOT ADDRESSED*	*NOT ADDRESSED*
11.4 - Strengthen efforts to protect and safeguard the world's cultural and natural heritage	11.4.1 Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage by the source of funding, type of heritage and level of government	11.4.1 Restoration and reuse of historic buildings (*UNDER COMPILATION*)	*NOT ADDRESSED*
11.5 - By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to the global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and vulnerable	11.5.1 number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	11.5.1 number of deaths attributed to extreme climate per 100,000 population	*NOT ADDRESSED*
	11.5.2 Direct economic loss in relation to global GDP, damage to critical infrastructure and number of disruptions to basic services attributed to disasters	*NOT ADDRESSED*	*NOT ADDRESSED*
11.6 - By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	11.6.1 Proportion of municipal solid waste collected and managed in controlled facilities out of the total municipal waste generated by cities	11.6.1 Proportion of households from where solid waste is regularly collected, by agency of collection, by frequency of collection (*UNDER COMPILATION*) 11.6.4 Percentage of wards with 100% door-to-door collection 11.6.5 Percentage of Waste processed	1. Percentage of wards with 100% door-to-door waste collection 2. Percentage of MSW processed to the total MSW generated 3. Percentage of wards with 100% source segregation 4. 4. Installed sewage treatment capacity as a percentage of sewage generated in urban areas
	11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities	11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5, PM10) in cities (*UNDER COMPILATION*) 11.6.3 number of days the levels of fine particulate matter (PM 2.5, PM 10) are above mean level (*UNDER COMPILATION*)	*NOT ADDRESSED*
11.7 - By 2030, provide universal access to safe, inclusive and accessible green and public spaces, in particular for women and children, older persons and persons with disabilities	11.7.1 Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities	11.7.1 Proportion of households reporting an open space within 500 m from premises (urban) (*UNDER COMPILATION*)	*NOT ADDRESSED*
	11.7.2 Proportion of persons victim of physical or sexual harassment, by sex, age, disability status and place of occurrence, in the previous 12 months	*NOT ADDRESSED*	*NOT ADDRESSED*
11.a - Support positive economic, social & environmental links between urban, periurban & rural areas by strengthening national & regional development planning	11.a.1 Number of countries that have national urban policies or regional development plans that (a) respond to population dynamics; (b) ensure balanced territorial development; and (c) increase local fiscal space	Same as 11.3.1 (*UNDER COMPILATION*)	*NOT ADDRESSED*
11.b - By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework 2015–30, holistic disaster risk management at all levels	11.b.1 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	11.b.1 Whether the country has adopted and implemented national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	*NOT ADDRESSED*
	11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	*NOT ADDRESSED*
11.c - Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilising local materials	*None*	*UNDER DEVELOPMENT*	*NOT ADDRESSED*

Table 2

Government schemes contributing towards SDG 11 in India.

Name	Key target areas/provisions
Atal Mission for Rejuvenation and Urban Transformation (AMRUT)	500 selected cities - Provision of basic civic amenities; Construction of facilities for non-motorised transport.
Pradhan Mantri Awas Yojana (PMAY)	Upgradation of slums; Affordable housing in partnership with the public or private sector; Beneficiary-led house construction; Subsidy schemes.
Smart Cities Mission	A comprehensive scheme for city improvement, city renewal, and city extension; Application of smart and sustainable solutions in large parts of the city.
Swachh Bharat Mission or Clean India Mission	Separate components for urban and rural areas; Partnership with international organisations; Construction of household and community toilets; municipal solid waste management; behavioural transformation.
Heritage City Development and Augmentation Yojana (HRIDAY)	Development/revitalisation of urban infrastructure in heritage areas of selected cities.
Deendayal Antyodaya Yojana- National Urban Livelihoods Mission	Creating opportunities for skill development and market-based employment for the urban poor; shelters for homeless people

Source: Based on NITI Aayog [39] and Government of India [16]

refinement [16]. As a part of integrating SDGs into local planning, the Aspirational Districts Programme of the government targets institutional strengthening for basic service provision, infrastructure, skill development and other related sectors in 112 districts selected across states. This programme measures the progress in development activities through real-time data collection. NITI Aayog is conducting capacity-building workshops for the planning departments in each state government.

The National Urban Policy Framework has developed assessment matrices for various development planning sectors to review the outcomes. For the initiatives under government schemes (see Table 2), the financial outlay and output details have to be submitted by the executing body/agency to improve their accountability. In practice, these schemes open broader participation of non-state actors, with many components being implemented with private sector participation. Engaging the private sector through Corporate Social Responsibility activities in social impact projects has been successfully tried out on a pilot basis under the Aspirational Districts Programme.

4.1.4. Reflexive changes

An annual review of the states has been initiated by NITI Aayog based on the SDG India Index. The Index itself is being annually reviewed and subsequently improvised. Before SDG India Index 3.0, the first version in 2018 incorporated 62 indicators (4 for SDG 11), and the second version in 2019 used 100 indicators (5 for SDG 11). The data gaps identified during the indicators' framing process are being used to improve the data management systems [42]. Concurrent with these initiatives, the parliament regularly audits NITI Aayog on the SDG progress.

Based on national guidelines on developing indicators, 21 states and union territories have developed their state indicator frameworks, and many other states are developing their respective frameworks. NITI Aayog maintains a repository of best practices for knowledge sharing amongst sub-national governments on SDG localisation.

4.2. Sub-national performance on SDG 11

Considering the overall scores for SDG 11 based on SDG India Index 3.0, the top-performing state and union territories are Punjab and Chandigarh. Goa, Gujarat, and Maharashtra also fall in the top-performing category (Fig. 3). The lowest scores are for West Bengal, Arunachal Pradesh and Nagaland, located in the north and northeast of India.

The results from mapping the scores for each measured indicator show that a similar pattern is observed for most of the indicators. Re-
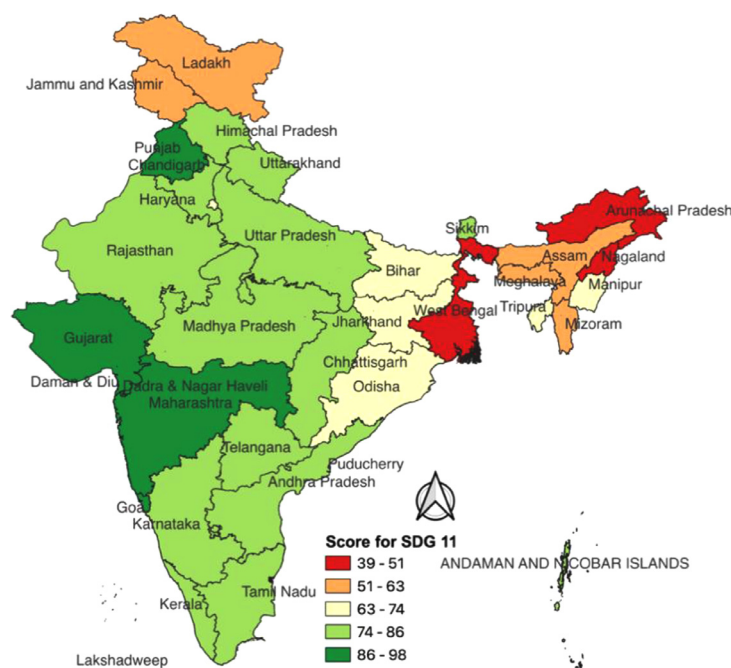
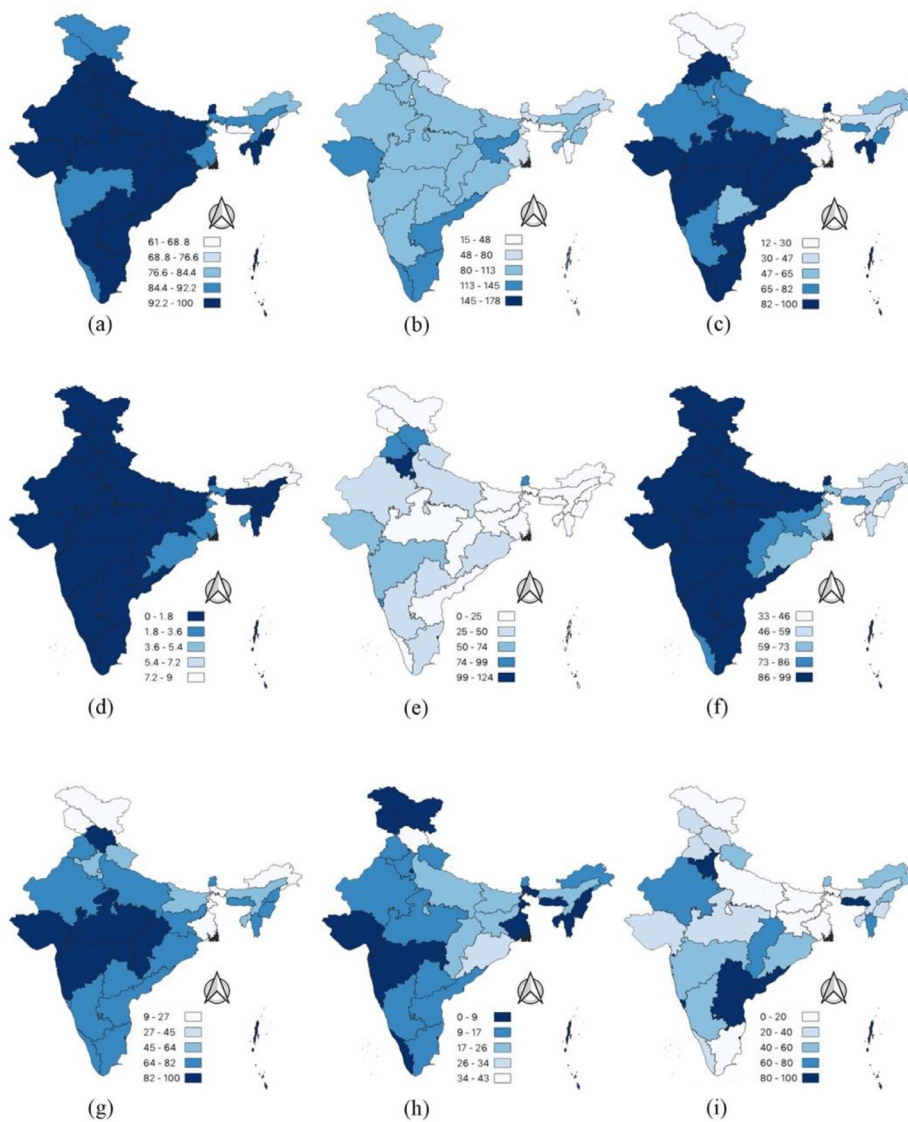**Fig. 3.** Sub-national Performance for SDG 11.

Fig. 4. Indicator-wise sub-national performance (a) % wards with 100% door-to-door waste collection; (b) % of household toilets constructed against target; (c) % wards with 100% source segregation; (d) % households living in non-permanent houses; (e) Sewage treatment capacity as% of sewage generated; (f) % urban households with drainage; (g) % municipal solid waste processed to generated; (h) deaths due to road accidents; (i) % of cities with master plan.

gional variations are visible, with the eastern and north eastern states and the extreme north displaying a low performance. The western region has relatively higher scores. The southern and central states display a moderate performance. It should be noted that the western states and some southern states have a high level of net state domestic product and economic activity [50]. On the other hand, the north eastern states have been facing concerns about accessibility, border disputes, and low levels of economic activity.

A large proportion of states and union territories perform very well for the indicators on the door-to-door collection of waste, urban households with drainage facilities, and urban households living in non-permanent houses (Fig. 4). This can be attributed to the implementation of the Swachh Bharat Mission and the PMAY government schemes. However, there is a huge deficit to be overcome across the country for sewage treatment capacity.

Findings from analysing additional state-level indicators in the National Indicator Framework on the proportion of cities with a master plan indicate a disjoint between the presence of master plans and SDG 11 performance. Despite being top performers in the overall score, Maharashtra, Goa, Gujarat, and Punjab perform poorly in the proportion of cities with master plans (Fig. 4. (i)). This evidence is of concern because the presence of a defined development planning process and master plans at the local level is necessary to align urban planning with the SDGs.

4.3. Sub-national level response on SDG governance

The sub-national initiatives for SDG 11 localisation in the states of Maharashtra, Andhra Pradesh, Himachal Pradesh, Odisha, Assam, and Arunachal Pradesh are reviewed based on the national-level recommendations by NITI Aayog and summarised in Table 3. The initiatives are categorised as those under implementation or already executed and those that have been proposed or are under consideration.

From the highest-performing category, Maharashtra has the highest urban population in terms of numbers, accounting for 13.5% of the total urban population in India [21]. The government of Maharashtra has amended the Maharashtra District Planning Committee Act 1998 to give planning powers to District Planning Committees and assign funds directly related to the SDGs. State schemes have been mapped with SDG targets and have received a financial outlay. A separate body has been set up in collaboration with UN India for SDG monitoring at district and local levels. Funding measures for training programmes at the district level have been institutionalised, and the existing state-level administrative training institute has been incorporated with SDG-based modules for government officers. The state government has initiated knowledge sharing through booklets on SDGs in the local language. It prepared an SDG checklist for conformity with new project proposals and conducted an extensive study on estimating Human Development Index at the local level. The state government has also proposed a survey on

Table 3
State-wise efforts for SDG 11 localisation.

Sub-national efforts for SDG 11 localisation		Maharashtra	Andhra Pradesh	Himachal Pradesh	Odisha	Assam	Arunachal Pradesh
Whole-of-government approach	Creation/designation of a nodal body	○	○	○	○	○	○
	Consulting committees for guiding and overseeing						
	Assigning responsibility for SDG 11 to specific government departments		○	○			
	Amendment to planning guidelines in the context of SDG 11/ sustainable urban development	○			○	△	
	Partnerships for SDG implementation	○	△	○			
Monitoring and evaluation	Mapping of government schemes with SDG 11 indicators	○	○	○	○	○	△
	Preparation of State Indicator Framework	○	○	○	○	△	△
	Development of statistical systems	○	○	△	△		△
	Digital platform	○	○	△	△		
	Identification of data gaps; sourcing comprehensive data						
Financing	SDG based budgeting	△		○	△		
	Outcome-based budgeting of government schemes for the provision of infrastructure, basic services		△			△	△
	Assessment of availability and requirement of financial resources for SDG 11/sustainable urban development	△		△			
	SDG-specific financial outlay by the state government	○					
Capacity building, awareness generation	Training and sensitisation of officials	○	○	○	○	○	○
	Specific funding for awareness generation	○					
	Public awareness programmes			△			
Aligning local plans with SDG 11	Integration of SDG 11 into the state urban policy vision/agenda		○			△	
	Cases of integration of SDG 11 in local-level plans	○	○	△			
	Consideration of SDGs for approval of future projects	△					
	Incorporation of disaster risk reduction strategies in district/local plans		△	○	○		
	Community level consultations						
	Specific initiatives towards SDG 11 indicators- surveys/ action plans, etc.	△					

○ Under implementation/executed;
△ Under consideration/proposed. *Source:* Information based on [16,21,17,40,14,15,18].

the use of local materials in construction, directed at target 11.c for SDG 11 [17].

Andhra Pradesh was one of the front runners in SDG localisation [40], and it is a high performer in SDG 11. A Vision Document was prepared for each district in the state, and the ULBs are implementing strategies adopted under the respective district vision documents. The mapping of government schemes to SDGs is available, and the state government is preparing an outcome budget for all the schemes. A series of conclaves have been organised to sensitise government officials on SDGs. A real-time monitoring system has been developed for periodic data on SDG indicators and is publicly accessible for transparency in governance. Preparation of disaster management plans for the coastal cities is being undertaken. The urban policy of the state targets 100% coverage of water supply and sanitation services in all local bodies by 2029 [14].

Himachal Pradesh, located in the north, is also a high performer in SDG 11. In addition to the mapping of government schemes and the development of a state indicator framework, the state has also initiated SDG-based budgeting and is conducting a detailed fund gap analysis [40]. A highlight of the initiatives is the public awareness programmes through a partnership with folk media groups for local performances orienting the citizens on SDGs and through pictorial booklets and pamphlets in the regional language. Based on target 11.b, the state is also taking steps to mainstream climate action and disaster risk reduction in the urban development sector [15].

Odisha, on the eastern coast of India, is a front-runner in nine SDGs and ranked first in SDG 13 for climate action. However, it is an average performer for SDG 11. A core team has been constituted. SDG cells were created in each relevant department and are in the process of being established within each ULB. The state finalised its indicator framework and is developing a dashboard for SDG monitoring. Training programmes and orientation sessions are being organised for government officials. SDG 11 is grouped with SDGs 8 and 17 to create an inter-ministerial thematic working group. Odisha concludes a mapping of schemes against SDGs and deliberates upon the initiation of SDG-based budgeting [18].

Assam, situated in the northeast, is a low-performing state in SDG 11. The government of Assam is in the process of framing ways to approach SDGs as a synergised initiative [40]. It mapped schemes with corresponding SDGs and is developing a monitoring framework. Government commitments are publicised through various media. An SDG manual has been prepared for each district, and each local body is expected to integrate SDGs into its planning accordingly. Workshops are organised for government officials at the state, district and local levels, and a North-East SDG Conclave was held to ideate ways of implementing government development schemes and partnerships for SDG implementation.

Arunachal Pradesh, also in the northeast, is the lowest-ranking state for SDG 11. The state has merged the departments of planning and finance. State-level indicators are being identified, and sensitisation pro-

grammes have been conducted for high-ranking government officials. The development of a dashboard for indicators is also under consideration.

5. Discussion

The findings suggest that the political impact of the SDGs on the sub-national governance in India has remained primarily discursive. Where any, the institutional changes have been mostly limited to creating nodal bodies instead of realignment of existing institutions and government-wide structural change to address institutional silos. This is despite the 2030 Agenda and the SDGs expected to provide guidance and resolve institutional fragmentation. The limited changes are not due to political tensions as they have not particularly influenced SDG localisation initiatives in the observed states as in other spheres of a multi-level governance structure. Assam and Arunachal Pradesh are under the same ruling coalition party as the central government, whereas Andhra Pradesh and Odisha state governments are under different parties. Since 2022 the government of Maharashtra has shared the same party as the central government, whereas Himachal Pradesh witnessed a change to a different party. The state governments' responses also vary in aligning their governance towards SDG 11 localisation and responding to changes taking place at the national level apart from monitoring and evaluation, which follows national guidelines. Across the six states selected for the sub-national comparison, the extent of referring to or integrating the SDGs in policy documents is modest, even amongst front-runner and best-performing states. Overall, it is uncertain whether these discursive governance transformations signal the beginning of a more profound transformation or whether they remain as such until and beyond 2030. Table 4 summarises the key opportunities presented by the governance transformation and the challenges in the process.

The findings also illustrate the Indian governance system's attempts to make cooperative and competitive forms of federalism work in a complementary manner for the localised implementation of SDGs. The enablers used in this process are the policy and institutional environment, monitoring and evaluation systems, multistakeholder engagement, and financing. Through these enablers, the central government operationalised a combination of policies and guidelines instead of setting up a control mechanism through legal compliance. It also utilises its multiple governance roles to steer sub-national actions to localise SDG 11: i) oversight through annual state review by NITI Aayog, ii) strategic planning of the National Urban Policy Framework, and iii) financing through fiscal federalism, government schemes, and the Aspirational Districts Programme. The central government, through NITI Aayog, also orchestrates SDG localisation by assigning states the task of designing and executing policies relevant to the SDGs.

5.1. Policy and institutional environment

The findings on institutional changes initiated at the national level point toward the central government's efforts in coordinating and monitoring roles and creating an enabling environment for SDG localisation. The strategic changes are well positioned for localisation, considering the sub-national diversity in geography, demography, and other socioeconomic parameters. Regardless of the modest response, they provide opportunities for sub-national governments to develop their forms of

SDG governance. The corresponding tactical and operational changes consider a diverse range of factors necessary for SDG 11 localisation. Cooperative functioning between the central and state governments has been cited as increasing in many state indicators and urban policy frameworks. The Aspirational District Programme also presents an effective cooperative and competitive federalism model for achieving SDG 11. The recent COVID-19 pandemic has been a stressor as it caused a shift in the government's priorities at all levels and a regression in many SDG targets, including SDG 11. Sub-national governments focused on health, social security, public awareness, and managing waste [56]. Mejía-Dugand, Croese, & Reddy [31] and Revi [51] posit that spatial and socio-economic inequalities within urban areas have worsened in many Indian cities. However, there has also been a solid response to sustainable development-aligned action at the sub-national level through partnerships, sectoral coordination for data inputs, and ICT mechanisms. This creates an opportunity for the Indian government to prioritise SDG implementation in urban areas aligned with pandemic recovery measures.

The government still falls short of enhancing coherence between SDG localisation and urban agenda. The SDG mandate of NITI Aayog is found to lack a close association with the MoHUA, which is the ministry directly related to the state-level planning departments. Many government schemes towards SDG targets, particularly those for SDG 11, are under MoHUA. As the implementation of SDG 11 is closely linked to achieving other targets, there is a need to strengthen the cooperation between both bodies. There is also a mismatch between the initiatives for SDG 11 localisation and the state urban policies, as the latter are not aligned with the SDG targets. This disconnect between SDG localisation and the urban agenda is an issue not only in the context of India but many countries [8]. Aligning urban policy framework with the SDGs will help set effective SDG localisation and simultaneously bring about systemic changes at the national, state, and local levels.

5.2. Monitoring and evaluation systems

The national localisation initiatives emphasise developing indicators and setting up monitoring and evaluation in steering the sub-national efforts. The SDG India Index presents positive outcomes regarding the institutionalised review process and transparency in the existing situation. Issues with the earlier version of the SDG India Index, like limited indicators and similar scores for multiple states, have been discussed by Khalid, Sharma, & Dubey [26]. The SDG India Index 3.0 addresses them partly by adding more indicators and initiating the annual review process. Our findings show that it is still not developed enough to capture sub-national performance toward SDG 11 in its entirety. The cherry-picking of indicators is inevitable due to the insufficient data capacities of the central and sub-national governments, but it can negatively impact the measurement of progress in attaining the goals. Based on the indicators, the Index is useful only for analysing sub-national performance in basic service provision, housing, and transport infrastructure sectors. The National Indicator Framework has framed more indicators, but some are still being compiled.

Linking relevant schemes to localisation efforts helps mainstream the SDG targets in the current institutional setup. The sub-national comparison makes it evident that the states performing better have implemented more initiatives on knowledge advocacy, aligning development policy

Table 4
Key opportunities and challenges in the governance transformation.

Opportunities	Challenges
i Strategic changes are well-placed considering sub-national diversity.	i Steps taken at the sub-national level are lagging.
ii Chance for sub-national governments to develop their form of governance for SDGs.	ii Lack of close association with MoHUA.
iii Cooperative functioning between centre and state levels is increasing.	iii SDG India Index - limited indicators
iv SDG India Index - institutionalising the review process and improving transparency.	iv Data inadequacy.
	v The engagement of non-state actors is limited.

with SDG targets, and creating monitoring frameworks, amongst others. Nevertheless, expanding the datasets from scheme-specific indicators to a broader coverage of SDG 11 targets is essential. The SDG India Index 3.0 has taken the first step in this direction by including a combination of outcome and scheme-specific indicators. At the sub-national level, the efforts to develop State Indicator Frameworks will give insight into the ground realities and highlight the data gaps, which will help the state and local governments plan accordingly. Most of the states have already executed this step. However, it is necessary to ensure that the state indicator frameworks are not mere replications of national indicators. Data adequacy needs to be addressed to maintain the essence of reflexivity in the governance transformation. The data sources are currently limited to national and sub-national survey reports and portals created under various government schemes. In order to be able to include more indicators for monitoring and evaluation, alternative data sources need to be identified, including crowdsourcing, remote sensing, and other external data collection processes. In response to the pandemic, states and cities have applied various information-sharing techniques such as real-time data mapping and visualisation. These systems can be built upon and integrated with the SDG statistical systems.

5.3. Multistakeholder engagement and forms of collective actions

Collective action between the centre, states, and local level has improved, but local participation involving non-state actors in developing ULB-level plans and other SDG localisation activities is still lacking. Guidelines exist for receiving feedback from the citizens on the prepared development plans, which is the extent of stakeholder engagement reported at the sub-national level. Lessons from multistakeholder participation in the VNR preparation process by NITI Aayog should be disseminated to the state and local governments to aid them in developing effective methods of participation.

Capacity-building programmes towards stakeholder engagement in SDG localisation at the sub-national level form a broad-based recommendation by NITI Aayog, and there are no specific recommendations on their frequency and formats. Yet this provides flexibility for the state to come up with their initiatives. However, the review of the state-level initiatives highlights a lack of consistency between their respective capacity-building initiatives, creating barriers to evaluating the impacts of the training initiatives on stakeholders' awareness levels and engagement. None of the states specifically mention carrying out public awareness programmes, indicating the requirement for designing concrete guidelines on processes for capacity-building and advocacy for effective multistakeholder engagement.

5.4. Financing

There is no separate provision for addressing the SDGs in the national budget 2021–22. This is a major concern as estimates show that India will have to spend approximately 10% of its Gross Domestic Product to achieve all the targets under SDGs [60]. The SDGs have also not been leveraged to create a long-term financial plan for sustainable urban and regional development. Very few states have taken the first steps to map their budgets with the SDGs or incorporate a budgetary provision for the goals. Urban development projects relevant to SDG 11 targets are financed from the corresponding government schemes and conditional grants, in addition to the traditional means of devolved tax. The VNR 2020 mentions initiating a partnership with the International Monetary Fund for detailed SDG costing [43, p. 10]. A highlight is the case of Maharashtra state, where an important feature of SDG 11 localisation has been the fiscal strategy (Section 4.2).

The findings suggest that fiscal decentralisation should be strengthened, focusing on equitability to reduce disparities between sub-national governments. Existing socio-economic disparities between states can impede competitive federalism. The review of initiatives by NITI Aayog

shows that it has recognised the north eastern states' special requirements, constituted a specific working group for their development issues [30], and developed a North Eastern Region District SDG Index [41]. More efforts are required to address these disparities and enhance the resource base for sub-national governments. Public-private partnerships, credit risk guarantees, pooling multiple sources of finance and other financing mechanisms should be employed for this purpose.

Employing the unified Goods and Service Tax as a tactical change was not without a challenge during the pandemic. By law, the centre had to compensate states for revenue loss from implementing the goods and service tax for five years since its implementation in 2015–16. Due to lower tax collection during the pandemic, the compensation requirement of the states increased [46]. Some opposition-ruled states raised the issue of pending dues [13]. As the health crisis stabilised, compensation was released to the states to compensate for the revenue shortfalls. Some states demand an extension in the compensation period for pandemic recovery [46]. Thus, consensus-building efforts are required to strengthen fiscal federalism within the country.

6. Conclusion

This article gives an insight into the ways in which the federal government in India responds to the governance requirements for achieving the SDGs, goal 11 specifically. The findings illustrate how the central government orchestrates SDG localisation through various governance roles and mechanisms. These include: redefining the relationship between central and sub-national governments with the steps taken toward enhancing cooperative functioning, augmenting the horizontal relationships amongst sub-national governments through healthy competition, and transforming monitoring and assessment systems into a regular evaluation process at the national level to steer sub-national efforts. The overlaps between SDG 11 and existing government schemes have been leveraged by the centre and many state-level bodies to operationalise SDG monitoring and financing.

By critically examining the sub-national performance of SDG 11, this study reveals the limit on the usage of the SDG India Index for global comparability due to its limited indicators. The reliance of the monitoring and evaluation framework on the existing government schemes adds another constraint, as the effectiveness of the schemes will determine the effective implementation of SDGs. As such, achieving all SDG 11 targets will require an ambitious approach to addressing indicators and corresponding data systems in synergy with internationally recognised metrics. Incorporating reflexive changes associated with assessments and evaluations may help to ensure that governance and policy responses address the shortcomings revealed through monitoring mechanisms. Converting fiscal planning measures into an implementable reality and strengthening the sub-national financial autonomy at the earliest by the nodal institutions are conducive to achieving the SDGs. Moreover, with the multitude of initiatives towards consultations and other collaborative forms of working, it is essential to ensure accountability and transparency for all stakeholders. Enhancing the prescribed coordination with academic institutions by NITI Aayog will help in the required research.

The extent of institutional changes implies that India's governance transformation, though optimistic, is still in the developing stages. The efforts in the next few years will determine how effective the complementary functioning of cooperative and competitive federalism serves to localise and achieve SDG targets. Further, our findings make a case that the constitutional decentralisation process allows concurrently employing both top-down and bottom-up approaches in SDG localisation, with the ongoing institutional changes being an important benchmark. Finally, the sub-national governance responses to national governance changes have salience on a subset of characteristics that can also be found in developing economies undergoing similar decentralisation. The diverse governance actions taken by Indian states further illustrate the

SDGs' discursive impacts, a research subject more prominent at the national level.

The two main limitations of this study are that it is based on a documentary review and does not delve into the political aspects of coordinated working. Further research on the governance transition for SDG 11 localisation should involve a more participatory approach to ensure an accurate situational assessment. Research on the availability and quality of non-governmental data is necessary to assess their potential contribution to the monitoring and evaluation systems. Comparative in-depth assessment of governance systems and political discourse for SDG 11 on its actual impact on urban development within the country are laborious. Nevertheless, insights from such studies are of utmost importance to ensure impactful governance and assess the relevance of global goals.

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Supplementary materials

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