Article

Plugging the Implementation Gap: An Indian Case Study on Bridging Disconnects Between Global Climate Regime and Creation of Local Impact

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Abstract

This article while discussing global and national climate regimes brings out the need for designing and implementing climate projects locally. It brings to the forefront, the local realities in an Indian urban context. The article particularly highlights disconnects between high level thinking and local implementation realities. It goes on further to suggest a novel idea which is being tested to overcome these disconnects. Global climate regime will primarily constitute the UNFCCC processes, and national climate regime will primarily constitute the National Action Plan on Climate Change (NAPCC) processes for the purposes of this article.

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The narrative of local realities brought out in the article is based on the work done at a locality in East Delhi through a prototype resilience centre. The centre conducted numerous community engagement activities, utilising an internally devised multi-stakeholder, participatory and inclusive framework. This prototype has managed to create an impact on the entire community through several interventions piloted with the involvement of strategic actors starting from January 2015 till date. The idea has been incubated within University of Delhi, and this article will present the concept of context integrity, which includes 'nested' relationships with larger institutions. That is, how an institution like University of Delhi can nest a small institution like the prototype resilience centre committed to larger goals of plugging the implementation gap which will bridge the disconnects between global climate regime and creation of local impact.

Introduction

Climate change has become a global environmental problem caused by the build-up of greenhouse gases (GHGs), particularly carbon dioxide and methane, in the Earth's atmosphere (Swain, 2015). The impacts of the problem threaten a range of issues, stretching from threats to biodiversity all the way to national security. Given the multidimensional nature of the climate change problem, there is a need to explore systems and mechanisms that can translate ideas into ground realities. As Popovski, Breakey and Maguire (2015) have pointed out: 'As we move towards the post-Paris climate regime, understanding the complex and multi-faceted structure of integrity systems can help us construct agreements and mechanisms capable of fulfilling the roles we need them to play.'

Thus, a need to identify suitable arrangements and mechanisms can be observed. In this article, we shall precisely describe a mechanism which is capable of fulfilling the aspirations of the global climate regimes (primarily bestowed with the UNFCCC and its adjoining complex involving governments/policies at multiple levels). The espoused mechanism also ties in

with the national climate regime, primarily the NAPCC in India and the new targets that have been taken under India's Intended Nationally Determined Contributions (INDCs, n.d.).

The national regimes of climate change caters to global concerns, with the eye firmly on the big picture while accounting for the local realities. These realities in turn have been identified keeping in mind the need for growth for India to become a developed nation and addressing the goals of sustainable development simultaneously. As India addresses these multiple challenges at the national level, the need to acknowledge the existence of the social aspects of the climate problem and tackle them head on repeatedly comes to the fore (The New Climate Economy, 2014). In India, however, much like many other vulnerable countries, the social aspect is very local in nature and changes drastically across a very diverse culture. This brings in the inherent disconnect between the national aggregated climate targets and local conditions of different states, districts, blocks and even at an urban community or a village level. The emphasis of the article lies in identifying this 'disconnect' of higher (global/national) climate regimes to local realities, as can be seen in the climate response mechanisms at various levels highlighted in the disconnect matrix (refer Table 1). One can also observe the inherent weakness of the high-level approach translating into a bottom-level actionable point with suitable stakeholders being identified.

Table 1. Climate Response Mechanism Disconnect Matrix

| Action	International/ National Actors	Local Policy Actors	Missing Communication and Feedback Mechanism	Local Community/ Individuals
Identify with the problem	Yes	Yes	No	Maybe
Have an understanding of the solution at their level	Yes	Maybe	No	Maybe
Local level implementation challenges	No	No	No	No
Have understanding of implementation process	Maybe	Maybe	No	Maybe

Source: Authors' own.

Therefore, while the policy-level documentation presents a clear guidance on the implementation of both mitigation and adaptation projects (e.g., as can be seen in the Green Climate Fund guidelines), local-level execution of the projects face challenges of making the local community participate and contribute as the main stakeholder. This disconnect can be further identified and detailed into two broad categories that are closely associated with each other:

The Information Disconnect: While there is an understanding of sustainability issues at the global and national level, there is a considerable lack of understanding of those issues at a community level. The local community though partially aware of the problem are not aware of the solutions, and the actors (agencies) responsible for designing and implementing interventions are not well coordinated, especially in terms of information flows.

The Policy Disconnect: The policy implementation, especially on globally sensitive issues like climate change where the targets are taken at a national level, tends to be more top down, limiting the community/ individuals' say and contributions towards implementation of these target. One reason for this disconnect is that the community has no method or framework to make relevant unbiased suggestion for robust decision-making for the community or locality.

These disconnects can have implications with a direct bearing on local communities. We can see the perpetuation of the existing disconnect in the fact that while individuals are aware of what can be done (individual level), and policies/plans (including urban plans) are made keeping sustainability issues in mind (global/national level), the local level solutions are seldom incorporated in the policy level, and when it comes to implementing these urban plans at the community level,
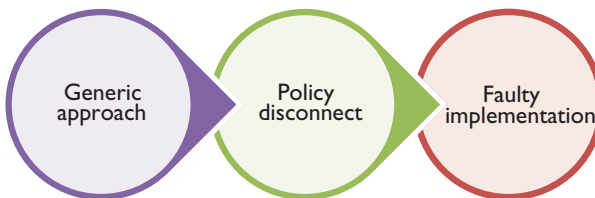
Figure 1. Causal Mapping of Global Climate Policy at Community Level
Source: Authors' own.

they are faced with numerous challenges. Therefore, at the higher levels (international and national) there is a generic direction, but because the direction is not connected to local realities, there is a policy disconnect at the state or departmental levels which finally leads to faulty implementation (Figure 1).

The real problem identified here is not the general information asymmetry but the need of a more granular implementation approach that specifies details on how should a problem be solved. To meet this challenge, we recommend the treatment of various localities separately, and enable them to take part in the decision-making process on their own. 'Empowering decentralised decision-making is a key, along with the understanding that every locality is culturally different and the agents that bring about change have different textures.'

Addressing the Policy and Information Disconnects Simultaneously: Connecting the Dots

The aforementioned understanding has been developed from the work done by the authors of the article, under project resilience led by Dr Seema Sharma. One of the major objectives of project resilience is to create resilience centres as an interface between academia industry and policy community at local level, preferably in academic institutions to implement internally devised resilience framework.[1] Project resilience was started in January 2015 with the creation of first pilot resilience centre (Resilience Center Vivekananda College Chapter [RCVNC]) in Vivekananda College (University of Delhi) in association with Resilience Center Global Network (RCGN) and activities were conducted, which is demonstrated in the subsequent sections of the chapter. Currently, RCGN is implementing and assessing the effects of the 3i (inform, inspire, implement) framework/ mechanism for instilling resilience in a locality across numerous localities in Delhi and also in West Bengal and Bihar (the 3i framework is described later in the Annexure) under the aegis of resilience relations (social enterprise start-up under start-up India mission, Government of India). RCVNC works primarily with adjacent localities to the college campus. RCVNC has conducted numerous community engagement activities and has touched 2,000 or more lives from local residents to elected representatives (includes local councillors, members of parliament, district magistrate, residents' welfare associations, unskilled workers, etc.).

Direction for Action

To understand the need for specific, directed action, let us examine two directions for action emanating at the global (originating from UNFCCC) and the national level (originating from NAPCC) each. Table 2 gives us an overview of the priority areas of the Green Climate Fund, 2016. The fund is borne out of the processes of the UNFCCC. Though the fund amount might not be substantial to fight climate change—it is a first mover, it may well create the climate market/economy and set the rules of the game. There are eight original missions under the NAPCC. These missions and four new added give the texture of climate/sustainability action described at the national stage. The international commitments that India has taken as part of the UNFCCC processes and negotiations have also provided a target-based roadmap and the need of finances to achieve these target.

A scan of Table 2 reveals important points. Even as the layouts help to identify and understand the directions in which action will flow, there is silence on the granularity of the action. This clearly highlights 'the disconnect' consequent to which there will be improper implementation. While there are limitations to the depths to which global action can be planned, the inability to identify the role of community action tends to repeatedly point out the weaknesses of the past global climate mitigation and adaptation approaches. When examining the lessons to be learnt from existing institutions for the GCF, a report jointly released by Global Anti Incinerator Alliance (GAIA), Institute of Policy Studies (IPS) and Friends of the Earth (FoE) (2011) had hoped that communities are able to avail themselves of formal processes that give them a voice in project or programme related decision-making. Similar expectations have been voiced even in 2015, where civil society has clearly stated that to enable people to overcome challenges posed by climate change in the immediate run (which holds true even in the long run), in a manner that empowers them and that builds on their knowledge, ideas require a huge paradigm shift from the GCF compared to standard practice at International Financial Institutions (IFIs) (CDKN, 2015).[2] Even as the GCF continues to evolve to address high community-level expectations, one also notices that projects approved for funding from GCF are of a small ticket size (up to US$50 million),[3] a repeat of its earlier approvals in 2015 barring one project. Such project sizes are ideal for direct community empowerment to execute projects, but the institutional capacity at the relevant level seems to be absent.

Table 2. Overview of Priority Result Areas for the Green Climate Fund

Mitigation	Option M1:	Reducing energy use from buildings and appliances
	Option M2:	Enabling reduction in the emission intensity of industrial production
	Option M3:	Increasing access to transportation with low-carbon fuels
	Option M4:	Providing households with access to low-carbon, modern energy
	Option M5:	Supporting the development, transfer and deployment at scale of low-carbon power generation
	Option M6:	Reducing emissions from agriculture and related land use management
	Option M7:	Supporting implementation of the phased approach to REDD+
Cross sectoral	Option C1:	Facilitating design and planning of sustainable cities
	Option C2:	Joint mitigation and adaptation approaches for the integral and sustainable management of forests
Adaptation	Option A1:	Support across the full range of adaptation result areas
	Option A2:	Support for a selective set of sectoral result areas
	Option A3:	Support for selected themes cutting across result areas ('flagships')
	Option A4:	Facilitating capacity for programmatic and transformative activities
	Option A5:	Facilitating scaling up of effective community-based adaptation (CBA) actions
	Option A6:	Supporting coordination of public goods such as 'knowledge hubs'

Source: Green Climate Fund (GCF) (n.d.).

Focusing on the national level, one can see the considerable amount of detailing present in the NAPCC released in 2008 and guiding India's climate policy with many missions and various ministries being appointed as nodes. However, the policy fails to give voice to what local communities want, evidenced by the absence of community considerations from many of the specific missions. Such a strategy tends to fail good intentions at multiple levels. Totin et al. (2015) have identified the lack of operational capacity at lower administrative levels, little involvement from stakeholders, lack of awareness and funding as barriers to policy development and effective implementation in the countries of their study. They observed that lack of information flows between national and local levels around existing climate policy processes prove to be a major hindrance in the effective implementation of the policy. Totin et al. (2015) also noticed that supervised knowledge-sharing platforms for national, regional and local policymakers and other stakeholders can offer the advantage of strengthening information flows and support policy development and implementation. Similar observations have been made by Salon, Murphy and Sciara (2014), who stated that 'Important factors that enable action include strong local champions, supportive residents, and state and national policies and actions. Important barriers to action include lack of local-government staff time and financial resources.'
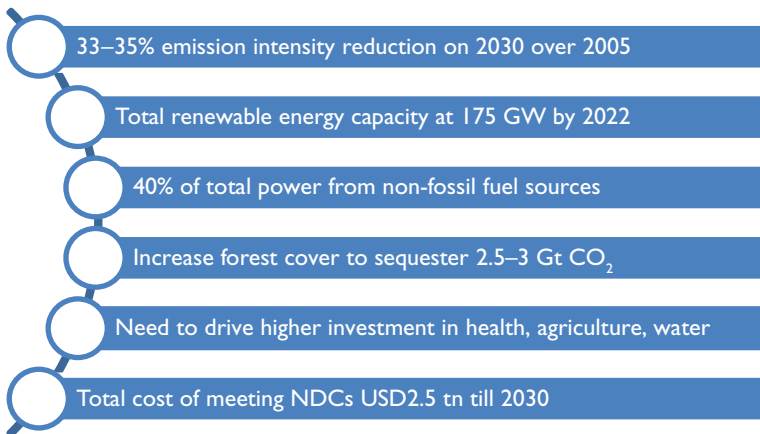
Figure 2. India's INDC Commitments

Source: India's INDCs submitted to UNFCCC, Authors.

India's INDC[4] commitments present a realistic picture at the macro level and identifies the right pain points to be addressed for a low-carbon growth trajectory. It also clearly portrays that the development can only be low carbon and not a zero carbon one. However, as discussed aforementioned as well that it clearly lacks a plan of action or the granularities that need to be assigned and worked on to make the transition to happen.

Thus, both international and national cases clearly enable the reader to easily predict a departure of resultant actions from the intended purpose, without making any significant contributions towards mitigation of the adverse effects of climate change.

How to Align High-level Thinking to Local Realities: 3i—'Inform, Inspire, Implement' Mechanism and Framework

Community action can succeed only if the community can be nudged in the right direction, which implies engaging with its members using an integrated approach (Bose, 2011; Bose et al., 2012). To that end, a three-stage approach has been put forward by us (see Resilience Atlases:[5] they are a part of the inform stage).[6] The three stages involved in this process of community engagement are 3i, and are imperative to engaging with the local community. The channels thus created work both ways: appropriate information channels can be generated to help quickly re-frame approaches, if necessary, and the public at large can learn about the projects being undertaken and participate in the decision-making process in an effective manner.

Stage 1 Inform (Information Collection and Dissipation): During stage one, the simplest way to narrate the activity type is that the stage involves collection of information that is directed towards identifying strengths, weaknesses, opportunities and threats (SWOT) of the locality, training needs and present basic information. In return, information dissipation in a condensed yet simple format is given to concerned stakeholders. The information processes are contextually aligned to culture.

Stage 2 Inspire (Creating a Set of Solutions or Actions That 'May' Be Taken): It is at this stage that human resources are trained and capacities are built for an option or set of options. This is essentially considered the crux in the 'keep options open/alive' method of the robust decision.

Stage 1: Inform		Figuring out options		
Stakeholders	**Processes**			**Outcomes**
Individuals	Community walks/interactions/ open discussions/question-naire/interviews	Resilience center		Basic information
Community/civil societies	Data acquisition Data sets			Vital Information
Local firms/companies	Data Analysis Information presentation	Expositions, Documentary, Booklets and Brochures		Better Sustainable Business Decisions
Local administration	Training need analysis			Better Governance
State government	Stakeholder workshop and strategic actors Interaction			Better Synchronization
National government/inter-national institutions				Better Policy
	Resilience Center Team, Community Coordinators, Academic Coordinators, Subject Matter Experts			

Stage 2: Inspire		Keeping options alive		
Stakeholders	**Processes**			**Outcomes**
Individuals	Problem set identification	Resilience center		More Information
Community/civil societies	Creating options for problem set			Belter Choice
Local firms/companies	Interaction with national/ international experts	Data repository, and Inventory of solutions		Scope for better business environment
Local administration	Creating inventory of solutions (Data Management)			Greater Choice
State government	Training need analysis for solution sets			More flexibility
National government/Inter-national institutions	Stakeholder analysis for solution set			Better flow of governance
	Resilience Center Team, Community Coordinators, Academic Coordinators, Subject Matter Experts			

Stage 3 Implement (Project Implementation and Maintenance Stage): In this stage, if one of the options is chosen as a part of the multi-stakeholder interaction, then it is implemented.

Stage 3: Implement				
Stakeholders	**Processes**			**Outcomes**
Individuals	Field study	Resilience center		More Information
Community/civil societies	Meeting for building trust			Better Choice
Local firms/companies	Workshop for consensus and action plan (definition/assessment/planning/cost allocation)	Implementation and Management of projects		Scope for better business environment
Local administration	All relevant work for Implementation for the selected option (project) will be done	Planning and Financing		Greater Choice
State government				More Flexibility
National government/international institutions				Better flow of governance
	Resilience Center Team, Community Coordinators, Academic Coordinators, Subject Matter Experts			

To instil concepts and values of urban resilience in its surrounding areas, the faculty of Delhi University (namely lead author) collaborated with Resilience Center Global Network (RCGN) in a project mode.[7] The project was named as Resilience Project, and has the motive of meeting the challenges of emerging India. This hosting of the project by the university is a demonstration of 'context integrity' as defined by Breakley and Cadman (2013), as the external environment facilitates the Public Institutional Justification (PIJ) of RCGN. The university hosting facilitates and empowers the agent integrity despite the original PIJ of the university being rather limited and distinct from that of RCGN and its project.

For the successful implementation of the strategic approach, the need to develop a replicable methodology of implementation was formulated.

It was identified that the steps to be undertaken within the method adopted had to be consistent with the framework's strategic approach. To that end, a subplot of the gamut of activities against the three stages was drawn up (Table 1 in Annexure).

In the first stage of the framework's pilot, the study's authors first conducted an engagement activity. The activity essentially entailed taking the community members participating in the discussion, invited through the college forum, for a walkabout and encouraging the community to identify the shortcomings and positive achievements within the neighbourhood of the study area (Vivek Vihar, East Delhi)[8] with respect to public infrastructure and the related activities in an open house discussion following the walkabout. This led to the identification of a preliminary set of problems (Table 2 in Annexure) that were immediately identified by the community residents to which they sought redress in some form.

Similarly, students of the college's environment society were taken for the walkabout to understand the framework's implementation, which in turn would be utilised for instilling resilience into the community.

In the second stage, the inspiration inducing activity was taken up. A public toilet that was clean and pointed out by the community was noted, and the responsible staff of the urban local body directly involved in that operation was traced. The sanitation worker was handed a certificate of appreciation to acknowledge his contribution towards the efforts of keeping the Vivek Vihar community clean.

In the third stage, workshops and open forum discussions were organised on the themes that were identified during the first stage of the framework's implementation. Foremost among them was the workshop on health and sanitation from women's perspective wherein issues of health, sanitation, menstruation management and safe disposal of sanitary napkins were discussed frankly. An industrial organisation working in this area was brought in to provide more information on the same, and they also carried out a distribution of free health care samples for the same. Similarly, considering the financial literacy and livelihood as a major challenge for the community women, an interactive session was organised on the occasion of Women's Day 2015 on the subject of women empowerment and livelihood options, plausible options way forward with the help of the bank that had been previously identified.

In all these activities done and listed earlier, the concept of a resilience centre and its unique interaction model (Figure 3) was tested. The seamless interaction provided by a community resilience centre not only aligns itself to the community's culture but also provides a platform for the

Figure 3. Interaction Model
Source: Authors' own.

implementation of complex international and national activities with continuous feedback from the community itself. This consistent and robust two way interaction platform reduces implementation risks drastically since there is low failure risk; hence, it seems ideal as a low cost framework, especially for adaptation projects at the community level.

What we have noticed is that information flows are often incorrect; very few people were aware who their elected representatives were, let alone what are the roles, or how are their roles different from the district magistrate or who is accountable for footpaths, parks and the children's swing. The narrative is quite long; however, what 3i essentially strived to do was create information flows which are accurate, thereby the district magistrate can take up issues which s/he can resolve; or the members of parliament or local councillors could address. The value addition of the method comes from the reduction of losses that the current information asymmetry entails and leads to huge losses to the money spent on the schemes.

Conclusion

At the level of the community or locality for developing economies like India, there seems to be a strong disconnect with what higher global or

national policy regimes may want to achieve to what is the reality on the ground. There is, of course, devastating poverty; however, even in affluent parts of India, there is a failure of governance and non-aligned stakeholders—therefore, poverty alone cannot explain the failure. Very often this failure is brushed as non-effective institutions and corruption, again from our experience this was very far from the truth. These disconnects called for the need to have an interface between various segments of the community, industry, policy and academia, where a common dialogue can be conducted to overcome the various informational asymmetries as well as the implementation inefficiencies. We have been successful to the extent to develop an interface between academia, community, industry and policy with different community coordinators, who have voluntarily agreed to work as coordinators and have a common dialogue going where information channels are becoming clearer. Moreover, the 3i approach has been beneficial in taking up local issues very often interconnected with each other, and if treated in silos will lead to a temporary solution.

Another crucial point that comes into the light is the important role that cultural aspects play in addressing 'the disconnect'; different localities have different textures and strategic actors (e.g., local elected representatives including local councillors and members of parliament, district magistrate, residents' welfare associations office bearers, police, local faculty of nearby academic institutions, etc.), and solutions of one-size-fits-all leads very often to haphazard development. Moreover, it was learnt that participatory approaches will find academic institutions a great, effective and robust partner, when there is correct guidance and leadership; appropriate understanding of culture and adult learning methods, very useful for capacity building, shall be realised too. Resilience is about relations; academic institutions are a great place to build the trust needed to bridge the relationship gap and instil resilience in India.[9] Academic institutions thus have a pivotal role in climate regimes to connect the higher-level thinking to local realities, and therefore in the concept of context integrity which includes 'nested' relationships with larger institutions—nesting a smaller resilience centre to work for the development of an adjoining locality by an academic institution is noteworthy.

The exercise also highlighted the fact that local-level implementation is a challenge not just for climate-related aspects rather it has been an issue for all development professionals dealing with other themes such as urbanisation. Further research and examination of the current proof of

concept is needed to see whether such social-level interventions can be relevant for meeting the Sustainable Development Goals (SDGs) alongside the climate targets for India. It is noted by the authors that the Resilience Center method addresses 16 out of the 17 SDGs. While the two are not distinct, there is a need to prevent compartmentalisation of these streams of thought. Further research can also look at a method of reducing the cost of implementation of climate/development projects at the community level.

Finally technology has an important role, especially emerging technologies such as blockchain and ever-improving high speed Internet connectivity. Research will also be required to fit technology as an enabler for better human and climate indicators rather than becoming another reason of higher disparities among human beings.

Acknowledgements

Notes

1. The framework has been developed and published in several seminars and international journals. The original idea was seeded in Bose, Wolf and Sharma (2012)
2. Retrieved from http://cdkn.org/2015/03/opinion-paradigm-shift-want-green-climate-fund/?loclang=en_gb
3. Retrieved from http://www.greenclimate.fund/documents/20182/226888/GCF_B.13_16_Add.12-Consideration_of_funding_proposals_-_Independent_Technical_Advisory_Panel_s_assessment.pdf/b98da11f-1e32-421e-8aa8-356f9cf1fdba?version=1.0
4. Retrieved from http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf
5. Web-link of atlas: http://resiliencerelations.in
6. The three-stage strategic approach and methodology has been developed, especially with the purpose to give a holistic view/approach to the activity and to engage the community at individual level-©2015 (Bose and Sharma).

7. Though the three-stage framework here has been used for urban situations, the framework is equally worthy for rural set-ups.
8. Web-link of TEDxDELHI talk: https://www.youtube.com/watch?v=PhBlK4twDIk&t=82s
9. The definition of resilience used in this article is found in Arrow et al. (1995) and urban concepts are found in Arup (2014).

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Annexure

Table 1. Strategy-wise Steps for Execution

Activity Stage	Strategy	Steps	Activity
Stage I	Inform	Community 'walk-through' to understand need and issues of the community by the community	Activity 1: Community engagement activity to identify issues by the community for the community. Activity 2: Capacity building workshop for students to instil resilience in community
Stage II	Inspire	Information dissemination and generating awareness on available options within the community	Acknowledgement of person/activity to inspire community
Stage III	Implement	Creating a platform of strategic actors to promote inclusive participation in decision making processes at the local level	Community interaction and open discussion on identified issues via: interactive sessions open discussions workshops

Source: See Resilience Relations YouTube Channel for a visual walk though of concepts and activities: https://www.youtube.com/channel/UCcztAD8Z9Ejna4BIrDNpTfw

Table 2. List of Issues Identified by the Community at Stage I

Category	Issues
Waste management	Throughout littering on roads, outside houses, in corners of buildings, shops and apartments, waste segregation and management at home
Infrastructure	Uncomfortable bus stops and height of footpaths, open drainage and pipeline, and unplanned placed hoardings on footpaths
Health and sanitation	Public toilets available for men but not for women, proper disposal of sanitary napkins, pollution in air, water and its effect on health
Disaster management	What they will do in case of earthquake?
Telecom radiations	People have identified this as a risk but are not aware of the magnitude of the problem—need more information and awareness of the subject