This research began with the motivation to address climate induced migration with the tools of spatial planning and governance keeping human rights violation as the core focus. The process began with an attempt to establish an exclusive universally accepted legal status through a review of relevant literature. The need for this definition was based on the top-down refugee regime where to gain protection and aid one must attain the refugee status. A difference of opinion amongst the trans-national organizations was discovered due to the multi-causal nature of the migration. Further, many scholars were seen to express an anxiety to define this category of people under the ‘refugee’ tag. The argument put forth was that the political ‘refugees’ would risk losing their importance and due protection if the two categories were overlapped. Extensive criticism of the top-down approach of the current refugee regime was also reviewed to understand this argument.

This brought in the consideration that the use of the word refugee was perhaps inappropriate for climate migrants. Further investigation on the patterns and dynamics of climate displacement revealed that there were different categories of climate migrants which needed different types of support. The category of people who are moving informally due to the loss of livelihood and means of sustenance are devoid of any support and need some form of recognition. Due to the multiple factors responsible for the decision to move they are usually mistaken as economic migrants by many migration experts. The innumerable configurations of these factors make it almost impossible to have a generic support framework for all. The discussion on circular or livelihood-based climate migration is also nascent in the academic world, making it difficult to map and gather data on the issue.

This research proposes a universal definition which considers all these factors but does not advocate for an official status. A common definition would make it easier to attract financial and technical support and create a common understanding between the relevant stakeholders. However, an official status was found to be an ineffective solution, especially for the chosen context. With nuances like the misuse of the status by higher economic classes and politicization of the situation, there is a higher chance of increasing the exploitation. Similarly, an exclusive climate migrant status would deepen the divide in the society, especially because this category of migrants is able bodied and have a seemingly invisible plight.

Apart from the societal and political aspects, another question that arises here is that do these people really need this status? A rural population which has protected its traditional knowledge of the land and harmoniously existed with nature for generations, today finds it difficult to survive due to various man made and natural changes. They have the power to survive and build resilience, provided they have the correct external support, or even the basic support that they deserve as a citizen of a nation. In times when the world is moving towards green initiatives and seeking methods to harmoniously survive with nature, the knowledge of these people can be used as a great asset. It becomes essential to weigh priorities here and understand what the true value of these people is. Further, facilitate the use this true value for the benefit of the people as well as fulfill the needs of the larger region by integrating it in the spatial plans of the region. This allows them to retain their dignity as well as gives them a new self-made status in society.

The research and design proposal evolved through the discussion posed here and moves from a top down population distribution approach to a more economic and services-based design with bottom up community initiatives at its core. It reinstates the societal asset of community action by encouraging cooperative industries. It plans the region and its support policies in way that it stimulates economic movement to designated areas and makes optimal use of the expertise of these people. Further, it redefines the relationship of the people, the secondary and tertiary towns and the main city of the
region. By placing the towns at the center of the equation it redefines the urban trajectory taken by settlements which are at the initial stage of urbanization to retain their rural character, values and economies while accessing urban facilities. Understanding the nuances of human decision-making processes and the delicate relationship between climate change and migration was a steep learning curve. It was an attempt to spatially represent the evidently spatial yet neglected concept like migration. By generating indicators and models to map and plan the circular movement, it aims to embed migratory movements in the spatial plans for climatically vulnerable regions. While participatory methods might not work here as expected due to the lack of awareness in the population and the sheer trauma of struggling for basic needs like one square meal a day. What is key here is collaboration. To bring the stakeholders with the decision-making power together with the ones facilitating adaptation on the ground.

Political Dimension of Planning
During the research process, the inevitable role of politics in planning and policy design was another point of learning. Given the complex political situation in the chosen case, it was essential to understand the political dimension in order to make a workable design. At times it was frustrating for the researcher as every proposed strategy had a political complication which was outside the scope of the research. However, it was an unavoidable consideration due to the vulnerability of the people and the prevalent vote bank politics and citizenship issues of the region.

The role of this project is of a consultant to the government of the State of West Bengal to begin with and then once a successful pilot is achieved, to the national governments of India and Bangladesh for cross-border collaboration. It taps on the strong orientation of the State towards its cultural identity and independence by defining a region based on the original Bengal. Further by decentralizing economic development it presents growth opportunities to the local municipalities and panchayats with better development and infrastructure prospects. However, the functional mechanism to make the proposal work is spearheaded by the civil society, NGO’s and the communities. The process attempts to minimize the investment from the government and political outfits and cater to the individual goals of all the stakeholders. It re-emphasizes on the importance of planning at the regional scale beyond administrative boundaries and considering socio-economic ties and historic trends.
Limitations and Challenges

The research was bound by a set of limitations and encountered some challenges along the way. The primary limitation being the fixed time-frame of 10 months in which it was expected to be concluded. This constricted the extent of the exploration and the depth of the design. The topic requires more in-depth knowledge of the ground situation and the people to generate a solution. However, given the scale of the topic, the research can be taken forward for higher research purposes with the processes highlighted in this document as informants. Further, the single disciplinary approach by a spatial planner to such a multi-disciplinary issue is also responsible for the possible discrepancies in the proposal presented here and the opinion of anthropologists, social scientists or lawmakers. Criticism is essential to make the design more realistic. A multi-disciplinary team with interdisciplinary collaboration is needed to further develop this proposal and make it viable for implementation and make it airtight.

One of the key challenges faced during the analysis of the region was the lack of reliable data and opinion. This can be credited partially to the ambiguous nature of the topic and partly to the context where spatial data is either heavily protected or does not exist. The research has attempted to logically develop the process rather than an implementable product. The process and ideology if followed by a multi-disciplinary team, based in the context, can result in a fruitful and more viable product. The product presented here is a possible idea of the solutions that can be generated, keeping the research themes central.
**Scientific Relevance**

Even though migration is inherently considered to be a part of the social studies, it has had an effect on the urban fabric for decades. The pressure on cities and resources has exponentially increased and has led to the expansion of the informal sector, which has become a subject of growing interest. Climate induced migration is mostly undocumented, and the migrants are subjected to resource scarce situations. The condition of these migrants is similar to that of refugees and require considerable scientific research.

This research highlights two major gaps in the discourse - one of definition and the other of inter relations. Scholars from multiple fields have repeatedly tried to define a term for climate induced migration. Transnational humanitarian agencies have tried to initiate conversations about this issue by highlighting the scale of the impending disaster. Further, countries at the frontline of this disaster have repeatedly made appeals on international platforms for increased attention and assistance. However, all these elements of the discourse are seemingly fragmented and do not cohesively address the humanitarian challenge behind environmental migration. This fragmentation often makes the claims and predictions less believable for the society and reflect in the lack of proactive action.

The second is the gap between scientific fields of spatial planning strategies and environmental migration. The potential of spatial planning tools and good governance to make a positive contribution to the discourse has rarely been addressed in the discourse. Effective planning can help generate effective processes to manage all the stakeholders, prevent disaster situations and protect the dignity of the migrants. This research cohesively defining and classifying the environmental migrants and establishing the positive role of spatial planning in this discourse.

**Societal Relevance**

“Environmental refugees are reshaping the human geography of the planet - a trend that will only increase as deserts advance, forests are felled and sea levels rise. Mega crises may well become the new normal. These are all threats to human security as well as to international peace and security.” – Ban Ki-Moon

Migration by definition is social and deeply influenced by the societal dynamics. This research aims to reflect on two scales of impact on the society – global and local. Common global challenges like security issues, radicalisation of the deprived, disease and conflict can be experienced as an outcome of this phenomenon. These impacts are being felt in the countries on the front line of the disaster and leaders are demanding accountability and support from the countries which have significantly contributed to the GHG emissions. With the demand of international ‘burden sharing’, this research is extremely relevant to the global community. It targets the global society with its contribution to the definition of the issue and the proposed transferable methodology. Through the proposed strategy and governance model, it defines the role of the community in supporting the crisis.

Further, at the local level, the challenge is to manage the ethnic tensions between the resident and migrant population as well as protect the dignity of the migrants. Especially in the case of the GB Delta, which has historically been ethnically, linguistically and religiously segregated. Considering this, the mass influx of refugees will lead to an added pressure on the limited resources and further cause additional conflict and apprehension among the locals. This research aims to look at methods to mitigate this consequence through planning and design. Further, it looks at methodologies to ensure a basic quality of life for the refugees and works towards smoothening the transformation of the existing society. With the aim to develop a model for social and spatial inclusion of the displaced population, the research draws from the concepts of spatial justice and ones right to the city and resources.
Through community participation and self-organisation, the affected communities can retain their original identity and culture by designing their own future. Efficient and sensitive livelihood management can be instrumental in reducing the local conflicts and make it a situation of mutual benefit.

**Ethical Relevance**

There are two types of ethical considerations which are crucial to address the issue of migration. The first primarily addresses the receiving regions ethical stand on accepting and accommodating climate refugees. Multiple ethical questions like how many refugees can the region cater to, what are the living standards it should provide and how to manage the internal resource scarcity while catering to a foreign population become key for the institutions of the country. The current absence of the very definition of the term ‘climate refugee’ in the policy framework of both India and Bangladesh, makes this research relevant and urgent. (Kartiki, 2011)

Second, the research also highlights the ethical dilemma of an urbanist. Decisions like where to draw line between humanitarian ethics and social and spatial capacity and where do the remaining people go, become key to the decision-making process.