



RESEARCH PAPER

**The 'Environmental Refugees' - Environmental degradation,
Development and Forced Internal Migration: a case study of Manchar
Lake in Sindh**

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Abstract

This article explores how Right Bank Outfall Drain (RBOD-I) project degraded the Manchar Lake in Sindh, Pakistan. As the RBOD-I drains the industrial and domestic affluent outflows in Manchar Lake since 1990s, it has diminished the livelihood resources and safe drinking water, forcing the local fishers to migrate to other parts of the country. In this paper, using ethnographic methods - participants observation and semi-structured interviews with the fishers of Manchar Lake, and migrants who have settled at Hussainabad in Hyderabad city, I argue that fishers of Manchar lake are environmental refugees - people who are forced to migrate due to environmental degradation. The results show that the forced migration transforms fishers' identity, livelihood means, and social and family networks. The paper recommends devising policies that not only cater to their livelihood needs but also help them to return to their traditional lifeways. This would require focussing on restoration of Manchar Lake and making efforts to the return migration of fishers who migrated.

Key Words Environmental Refugees, Environmental Degradation, Manchar Lake

Introduction

On Muhammad Khan was one of the residents of Manchar Lake now lives at the bank of Indus River in Hussianabad, Hyderabad, the second largest city of Sindh province. Once he used to be a fisherman at Manchar Lake, his whole family was involved in fishing business and in winter they used to prey the migratory birds and sell them in the town market of Dadu District. Now he works as a laborer. One of his sons, Mansoor Khan, who is 14 years works with him and the youngest, Akram, aged 12 works in automobile workshop. His wife goes to do domestic work in the nearby households along with her 8 years daughter. Muhammad khan, when I met him in December 2013 said, "We used to live at Manchar Lake, whole village was family. The only thing we knew was how to catch fish, do agriculture and prey on birds that we used to sell in the Dadu. The contamination of lake water forced us to migrate. There is no more agriculture, land become saline, fish died, very little remained in the lake and that will also die soon. Birds are not coming here anymore. We, along with many other families, migrated to find new work, leaving behind everything. The graves of our forefathers, the land, the house, the relatives, our identity. We feel as if everything has been snatched from us. What to do?

But we are lucky enough, we found some jobs in Hyderabad. I know hundreds of people who migrated with us, who are begging, some of them indulged in criminal activities, few are selling hashish. He was crying while saying, we are respectable people,

we have our traditions and customs, for us women are the symbol of honor and dignity and now they go door to door to find for work. But everything is lost, our honor, traditions, work, knowledge, respect. We have lost ourselves. The worst thing about life is, we have to live it anyhow”.

There are hundreds of such stories of migrants of Manchar Lake. Most of them have settled in Hussainabad in Hyderabad. They are the ‘environmental refugees’. The term was first used by Lester Brown of the WorldWatch Institute in 1970s. (Cited in Renaud, Bogardi, Dun, Warner 2008: 01). While El-Hinnawi defined environmental refugees as: “those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life”. (El-Hinnawi 1985:4).

The contamination of water in the Manchar Lake has forced its residents to migrate. The Right Bank Outfall Drain (RBOD-I) is the main cause of the degradation of the lake. It was a World Bank funded constructed to outflow the Industrial waste into the sea. However, the project was never completed, and the administration started to drain industrial waste into the lake. This paper shows the case of how development projects degrade the environment. The compulsions of underdeveloped state to ‘develop’ themselves has “turned many states into the cheerful enemies of nature or *environment*.” (Sachs 2010: 26, italics added).

Many studies have demonstrated that environmental change is taking place and primary reason for this change are the human actions which have imbalanced nature (IPCC 2007, the Stern Review 2006). The imbalance of nature would ultimately lead the people to leave (migrate) from their current habitat to new habitat in search of livelihood. Although there is lack of any authentic estimates of environmental migrants in the world, the rough estimates suggest that by 2050, between 25 million to 01 billion people around the world would be ‘environmental migrants’ (IOM 2009: 16). When we look into the data for environmental migrants in Pakistan, there is dearth of literature as well as authentic data. But one thing is for sure that in Pakistan due to lack of strong environmental policies the situation is worsening day by day and causing thousands to migrate. The nexus between environment and migration in Pakistan need thorough research from academics and environmental experts to understand the dynamics of the phenomena. Let me discuss some current literature about environment and migration in terms of ‘environmental refuges’.

Literature Review

There is considerable debate in the academic world about the word ‘environmental refugee’. Few scholars (Hathaway 1991) believe that the word ‘refugees’ is strictly applied to those who are ‘in danger of persecution’. As the UN 1951 convention for refugees defines the word as,

“The 1951 Refugee Convention establishing UNHCR spells out that a refugee is someone who "owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality, and is unable to, or owing to such fear, is unwilling to avail himself of the protection of that country.”

The definition exclusively represents refugees to those who are in ‘threat of persecution’ and in response flee to other countries. In this regard, scholars like Hathaway (1991) argue that one should not term environmental migrants as refugees

because the migrants are not in threat of persecution and mostly migration due to environment takes place within the country, environmental migrants rarely cross the border'.

But there are other scholars like (Myers 2002 & 2005, Lambert 2002 and Renaud, Bogradi, Dun and Warner 2008) who argues that 'Environmental conditions should be considered as one element forcing people to flee their places of origin and as such should be afforded similar rights and protection as refugees fleeing because of other causes'. Indeed, the term 'climate refugees' first time appeared in 1970, usually used interchangeably with other terms like 'environmental migrants', 'environmentally displaced people', 'climate refugees', 'climate change refugees', and 'environmental refugees'. Although, first time working definition of 'environmental refugees' provided by El-Hinnawi 1985 as given above, later more and more definitions were provided by other scholars. Norman Myers (1995), British environmentalist's definition is important with regard to livelihood, for him environmental refugee is: "persons who no longer gain a secure livelihood in their traditional homeland because of environmental factors of unusual scope, notably, drought, desertification, deforestation, soil erosion, water shortage and climate change, also natural disasters as cyclones, storm surges and floods". While Jacobson's (1988) figures of environmental refugees of twenty-five million more than the conventional 'refugees' at that time made the term and population more important both in academics as well as within the policy dimensions.

On the other hand, Bilsborrow (1992) provided critical comments on the term arguing, the term overlooks the potentially important role played by other factors in the process and McGregor (1992) was of the view that the term does not give agency to migrants or any ability to endure or adapt to changes in their physical environment. Moreover, Suhrke (1994) criticized El-Hinnawi for characterizing every migration as refugee migration. With all this criticism provided, no one denies importance and needs to look into the issues of migrants who are moved because of environmental constraints.

I myself will be strict with the term of environmental refugees to say that people who flee from the place of origin face the threat of 'persecution' if not in terms of life but socially, culturally, and economically there is 'persecution' of whole life and livelihood style. In the pages to follow we will witness such 'persecution' of culture of people of Manchar Lake, who has migrated to other parts of province in search livelihood. Indeed, the story of Muhammad Khan and many other like him defines the migrants of Manchar as 'environmental refugees'

Environmental Anthropology and Anthropology of Migration:

Environmental Anthropology that has its roots in 1970 took the environmental issues from the vantage point of culture, in other words "how anthropological knowledge can be applied to environmental issues leads to a consideration of advocacy and globalization" (Milton 1995: 02). Moreover, it is not only using anthropological knowledge but also to understand the role of 'indigenous knowledge and culture as a worldview towards nature or *environment*' (Ingold 2000: 15). In this context it is important to view environmental issues not only from western or neoliberal vantage point, but also to understand the diverse knowledge of cultures which view environment as inherently part of their life and culture; in other words, anthropology looks at nature-culture as not two distinct and contesting concepts but as inherently one.

On the other hand, anthropology of migration takes the issues of migration from the perspective of identity, class, gender and livelihood that accompany migrants when they move from one place to another. I am here concerned with the issues of livelihood that migrants of Manchar Lake face, due to degraded conditions of Manchar Lake that

has left them with either no or very little resources for livelihood. Although studies showed migration is as one of the greatest strategy of human to survive in changing environment caused by man-made or natural disasters (Hugo 2008: 01) but the complex relationship between environment and migration, and the other issues as a result of environmental induced migration has to be looked freshly, issues like gender, class, race, identity, livelihood, and cultural.

Manchar Lake

Manchar Lake is the one of the biggest lakes of Pakistan, situated at the distance of 18km from Sehwan Sharif, district Jamshoro, in Sindh province. It is the vast natural depression flanked by the Khirthar Hills in the west, the Lakhi Hills in the South and the river Indus in the east. The natural water reservoir serves to provide water for agricultural land: The Lake water from Sukkur Barrage does not reach the tail areas of Dadu district and is compensated by the water of Manchar Lake that provides water for agriculture purposes. Along with this the floor of the lake is also used for cultivation purposes. When water recedes in October that almost makes 26000 acres of land of Lake for cultivation of different products from the moisture of land. (Memon & Birwani 2002: 08).

Fishing has remained another major source of economic growth for centuries. In 1950 the recorded catch was 3000tons of fish and number declined to 300tons in 1994 and 100 tons in recent years. Not only has this, but the number of species of fish also declined. A survey conducted in 1930 revealed 200 different species out of which 14 have become extinct in recent years. (ibid 09). All this has heavily worsened the livelihood conditions of people dependent on habitat of the lake and compelled them to migrate.

Manchar Lake was also main source of drinking water for the communities living near and around the lake. But the contamination of water denied the right of safe drinking water to communities. People search for and bring drinking water from other areas, while those who live near the lake and do not have access to safe drinking water, are drinking contaminated water. According to reports the lake contains 32000 mg of TDS (Total Dissolved Solids) per liter, while the acceptable level is 1000 mg of TDS. While the salinity of water is recorded up to 7000 PPM (parts per million) where the acceptable level is 500 PPM. (ibid 09 and The Daily News October 31st, 2013). The other main feature of Lake was the migratory birds from Siberia and waterfowls from the northern parts of the country in winter season. The contamination of water and loss of habitat has decreased the flow of birds on the lake. The birds were one of the major sources of economy, both as cause of increase in tourism in the area in winter and the local people used to prey on the birds and sold them in the local market.

The overall deteriorating conditions of the lake both in terms of livelihood and as a source of drinking water forced the local people to migrate in search of new livelihood sources. The detailed is discussed later on. Let me shade some light on the causes of deterioration of the lake. The contamination of lake water could be impugned to both natural causes (rise in temperature, less rainfall, growth of natural vegetation thus decreasing the water holding capacity of lake) and men-made (reducing the water flow from Indus into the lake, construction of RBOD-1 and MNVD that outfalls the contaminated water into the lake). Let me briefly explain each cause.

Natural Causes

The overall rise in the temperature of earth has reduced the overall rainfall. Pakistan is no exception in the regard, where the overall rainfall has reduced. Along with

this the receding of Himalayan Glaciers has reduced the input of water in the Indus that could exceed as much as 50% in coming years. This in return has reduced the input of sweet water in the Manchar Lake from Indus. Moreover, whatever water is flowing in Indus, there are other priorities for that like agriculture. This has overall minimized the fall of sweet water into the Manchar Lake causing the deterioration of the lake. Moreover, the changing pattern of monsoon will also cause uneven rainfall. The heavy rainfall would cause floods, while otherwise there would be no rain or very little rainfall. In both conditions Manchar Lake would be the sufferer.

Men-Made Causes

Along with natural causes that deteriorated the lake conditions, there are unnatural or men made causes that has worsen the conditions at Manchar Lake. The construction of RBOD-1 and MNVD that carries the municipal, industrial and domestic waste and outfall those in the Manchar Lake has caused the sedimentation of solid material. Let us share some light on MNVD and RBOD-I.

Main Nara Valley Drain (MNVD)

MNVD was built in 1932 to provide drainage to affluent rice and storm water. MNVD runs between Hamal Lake in the north and Manchar in the South, indeed, it connects both rivers which is about 111km of distance. (Memon and Birwani 2002: 07). When torrent water fills the Hamal Lake, it then flows into the MNVD and reaches Manchar Lake. The problem of water salinity arises due to the fact that in between MNVD receives industrial and domestic wastewater from North Dadu Drainage Project. The wastewater comes from Wagan, K.N Shah, Mehar and Ghar drainages that contaminate the water that flows into the Manchar. Right Bank Outfall Drainage (RBOD-I) is the remodeling of the MNVD to enhance its capacity to accommodate the affluent from the project area (Memon and Birwani 2002).

Right Bank Outfall Drainage (RBOD-I)

RBOD-I, which funded by World Bank, is the remodeling of MNVD, while the scope, as described by Water and Power Development Authority (WAPDA) is: "1. To outfall drainage facilities to existing and proposed drainage project, 2. To improve the environmental conditions in Manchar and Hamal Lake and 3. Rehabilitation of existing drainage system". While the objectives or benefits of RBOD-I are "1. The priority works would increase crop production through increase in cropping intensity and yield and also decrease agriculture risks to 842,500 acres commanded by the Rice Canal, Northwest Canal and Dadu Canal. 2. Utilization of non- saline effluents to recharge lakes or feed irrigation system and segregate saline effluent for diversion into sea through RBOD-II and 3. Facilitate absorption of hill torrent. The project started in 1994 and was supposed to be completed on 30-06-1998. When it was not completed the PC - 1 was revised with new completion year of 2010, and again in 2013, but it is still under process. While the project cost 4395 million has increased to 17505.018 million but still in process.

Other than these structural and natural causes their other implicit reasons for the deterioration of lake. As one of the local inhabitants Ikram told me that 'now people do fishing on boats with automatic motor engines, they are killing more fish as well as other species which are important for the habitat of lake'. Fishing is business now in the area; many public, private and local 'corporations' are doing fishing distributing the habitat. Moreover, one of the officials of district government told me that 'nowadays, different departments are not coordinating with each other. In previous times, meteorology department used to inform the district and lake authorities when rain will fall in the area and when possibly hill torrents will flow into the river. While receiving information like

this we used to drain out the 'bad water' from the river to fill it with fresh sweet rainwater. But today as we don't have proper information and when hill torrents fall into river, we don't open the gates to allow the hill torrent water to fall in river because it will cause flood in the area. Giving the example from 2010 flood, he said, "In 2010 we already knew that the flooding water from northern part is coming to fall in the river, so we already drained it out and when flood water came the river was empty. Today, river water is sweet, but the breaches caused by floods are causing water to 'go out' and within few years lake will again become poisonous.

Material and Methods

This is based on one-year ethnographic methods - participants observation and semi-structured interviews with the fishers of Manchar Lake during 2015-2016. The researchers lived with the fishers of Manchar lake to observe their daily lives, and especially to explore how they understand, experience, and interpret the degradation of the Manchar Lake. Moreover, the researcher on knowing about the migrants of Manchar Lake at Hussainabad in Hyderabad, lived with them using participant observation approached and conducted semi-structured interviews (n=27) with the male and females of 57 households. The research also conducted a brief survey with all 57 households to understand their past and contemporary livelihood patterns and change in them, and issues they are facing in their contemporary lives.

Results and Discussion

Migration is rarely a simple act of movement from one place to another. As the literature consistently shows, migration brings with it profound changes in lifestyle, identity, social relations, family organization, and patterns of livelihood. People who migrate involuntarily bear the burden of these transformations, as they migrate without planning. This is mostly because they have little time to prepare and plan their migration. With increase in forced migration due to environmental issues or degradation, scholars are paying greater attention to issues faced by people who migrate. Yet there is a dearth of literature to understand how environmentally induced migration shape livelihood patterns, especially in Pakistan and South Asia. The scholarly debate on whether to call them "migrants" or "refugees" has surged over the time as both concepts have different relations to the questions on recognition and rights of the migrants. António Guterres, the United Nations High Commissioner for Refugees, observed in 2010:

"What we are now seeing are more and more people that are forced to flee because of lack of water, because of lack of food, because of extreme poverty, and many of these situations are enhanced by climate change."

This statement is a recognition that environmentally induced migration is strongly tied with the issues of poverty and inequality, especially for the people who migrate.

Literature suggests diminishing natural resources of any ecosystem forced people to migrate (Boano, Zetter, and Morris 2008: 14). It usually starts with a few families migrating and in due course of time entire communities move. The first migrant families become motivating factors, especially in terms of livelihood opportunities for the community. Migration in this sense is more about survival strategy than holding with identity (Hussein and Nelson 1998; Berkes and Jolly 2001). This forced migration is termed as "adopting strategy" which is the ability of an individual family or community to respond to environmental change and cope with the situation (Füssel and Klein 2006: 319).

This broader discussion around environmental degradation and forced migration best describes the case of Manchar Lake. Environmental degradation cascading with other issues around livelihood, safe drinking water, and loss of other opportunities force people to migrate. Environmental degradation of Manchar Lake weakens the economic and social fabric of the community, forcing them to migrate as a coping strategy to find other livelihood opportunities. As the following table illustrates, the depletion of resources at the lake significantly shaped the decision of many households to leave in search of alternative means of survival.

Table 1
The historical data of natural resources at Manchar Lake and change in them over time.

Resource	Year	Data	Remarks
Fishing	1950	3000 tons/year	Currently, it has dwindled to 100 tons/year Where normal is 500 ppm, reducing agriculture.
	1994	300 tons/year	
Water Salinity		7000 ppm	
Aquatic Plants			Pabun, Loreh, Boorani and beh having commercial value vanished
Migratory Birds	1988	25000	Today, fewer numbers of birds come and stay for just few days.

Source: Memon and Briwani 2002: Pakistan Network of Rivers, Dams and People (PNRDP)

Throughout the above literature as well as studies on Manchar Lake tend to focus on depleting conditions at the host place of migrators but lots of work needs to be done about the changing lifestyle, including livelihood patterns of migrators at the new places they settle in. How people cope with new conditions, the problems of conflict with local population on the distribution of resources, changing family and community structure as a source of livelihood needs a fresh look in coming years about environmental refugees.

This is paper is an attempt in this regard to look into the livelihood problems of Manchar Lake migrants in the two areas of Hyderabad, the second largest city of Sindh Province. The Environmental refugees of Manchar Lake have moved to many places especially to the coastal areas of Sindh and Baluchistan. During interview people told me that many of their relatives has migrated to Dam and Gawadar port in Baluchistan, while few migrated to zero point, at the bank of Arabian Sea of Badin district in Sindh and others to coastal areas of Thatta district. The People from Manchar are skilled in fishing and this is the reason of their first choice for the migration towards coastal areas.

My point of departure starts from the point that although migrants of Manchar Lake have adopted to new environment so as to new livelihoods this does not mean that new livelihood methods are agreed up by the migrants. These are more like helplessness than they have adopted. In this regard, I attempt to highlight that 'helplessness' of livelihood that goes towards the disintegrated family and community networks that previously were main channels of livelihood.

Thus this paper is not only about how many migrants are doing what and how they come to do this, does the current work fulfill their livelihood rather through this paper I would like to understand the in-between – from start of migration to current situation – problems, issues, what skills and family and community networks destroyed that were important with regard to livelihood patterns.

The locales where I did my fieldwork; one is Hussainabad in Hyderabad, this area is located at the bank of Indus River downstream. The migrants from Manchar

indulged themselves in fishing. We are happy in the sense that we earn enough doing fishing as one of respondents said. Few of them have also opened shops of various types and others are pushing carts and selling different things. There was total 54 households who migrated from Manchar and all were studied with regard to their livelihood changes. The following table shows their livelihood activities after migration.

Table 2
The results of Survey conducted at Hussainabad, Hyderabad

Total Household Number (54)	Livelihood activity at Manchar	Livelihood activity at Hussainabad	Remarks
20	Fishing and Agriculture	Fishing	
12	----Do----	Opened shops of various types.	Many of the women of these household do domestic work.
12	-----Do-----	Work at workshops	
10	-----Do-----	Labor	

The above table shows the change in livelihood pattern with regard to jobs. People who were doing fishing and agriculture has to shed their traditional profession to indulge themselves in new jobs. Moreover, many females also do domestic household work in nearby plazas to support their families. These 54 households migrated from 2001 to 2002. Most of the households are relatives to each other. Although they have been living sustainable life since then, what they are facing is 'cultural earthquake', which means, they had to shed the traditional livelihood, skills, family and community networks to adopt in new livelihood pattern. One of the respondents Allawadayo told me the following story of his family migration and change. He is labor, while his two sons work in automobile workshops.

I migrated in 2001 with my family and other relatives due to loss of fishing and agriculture at Manchar. We didn't have any choice; to live we need to find other resources. Although it was tough decision for us to leave our houses, community, relatives, friends and whole life but for living we had to take tough decisions. When we came here, we thought we could indulge ourselves in the fishing in Indus River, that is what we knew but water in Indus was not sufficient. They hold water upstream; with less water it was impossible for us to go fishing. Moreover, other fishermen living here didn't allowed us to do more fishing. They said we are already facing problems now you came here to share our resources, many times we have been indulged in conflicts. Then I put my two sons in automobile workshop on daily wages. They used to earn Rs. 20 daily and I did fishing, whatever little I could find. But it was not enough then I decided to leave fishing and do labor. Now we collectively earn Rs. 15000 to 20000 per month.

Every migrant has his own story; how he left Manhar, reached Hussainabad and struggled to find new livelihood methods. Family and friend networks played important role as many migrant studies showed, in finding the new livelihood. Another respondent, Gul Sher, told me how he reached Hussainabad in 2002, after his brother migrated in 2001. 'My brother told me to migrate and come here, my brother has already opened a cabin and asked me to start my own cabin in nearby locality. He helped me. Now we are living good lives.'

When I asked, how much do they know about life of Manchar nowadays. Many people were well aware of the situation at Manchar, about the recent flood of 2010 which sweetened the lake water. They said we first thought of going back to Manchar, but now we are settled here, we have learned how to live in new environment. Moreover, they said that after 2010, nowadays again many people are migrating to different localities. One of the respondents told me that he relative has migrated to Dam port in Baluchistan, doing fishing there.

What is important in these stories are the 'unlearning' of their traditional occupation, skills and knowledge to 'learn' new skills and knowledge. Although the stories retain the points of literature that migration is a strategy for new livelihood, but what also matters is the loss of skills and knowledge that these migrants have to shed while adopting themselves to new environment, livelihood and occupation, not to mention, customs, norms and values that they share with community members at Manchar.

Livelihood at Manchar was more a communal or family business. In other words, most of time, while doing fishing or agriculture, more than three members were involved. Indeed, the social structure of Manchar was self-evident in this regard. Villages consist of small helmets of single extended family, living together as well as supporting each other in both livelihood sources and activities. In this regard, the role of family or community becomes very important in sustaining the livelihood process: availability, access and entitlement to resources.

The migration of Manchar has also disintegrated the family or community structure of people. As the following diagram of Muhammad Mallah's family shows. At Manchar they used to live in extended family of 11 members, cooperating with each other in livelihood activities. Male members of the family mostly used to do fishing and agriculture, while female were more involved in household works as well as supporting in different fishing and agriculture activities.

The extended family has been disintegrated into multiple nuclear families; each nuclear family migrated to different locations. This disintegration raises serious questions about the change of livelihood networks at ultimately affect source of livelihood. Not only this but also the family relationships, values and norms associated with extended family has also severely contested.

The disintegration of such family and community networks has great impact on the livelihood of people who migrated as one of the migrants said, "We lived together at Manchar, 20 members in a family but never deprived of livelihood". In other words, what he wanted to say that family and community remained main source for the availability of livelihood resources. 'But here we don't have any support from our other family members, how can they help us when they don't have anything to eat'.

Conclusion

The forced migrants or refugees of Manchar Lake often describe their movement not simply as relocation, but as a deep rupture in their lives. The idea of a "cultural earthquake" perhaps best captures their experience. The environmental degradation of the lake may have triggered their departure, but what followed was not only physical displacement; it was a profound transformation of their social, economic, and cultural world. Although settling in Hussainabad, Hyderabad, has enabled many families to earn a living, this adjustment has come with losses that cannot be measured only in economic terms.

At Manchar, livelihood was not just a job. Fishing and agriculture were ways of life, shaped by inherited knowledge, shared labor, and collective responsibility. Work was organized within families and extended kin networks. Skills were learned from elders, and economic activities were embedded in community relations. After migration, however, these traditional occupations could not be sustained. Many migrants entered daily wage labor, opened small roadside stalls, worked in workshops, or engaged in domestic labor. These activities provide income, but they are individual and often

insecure. They lack the shared structure and collective support that once defined livelihood at the lake.

In this process, something more than occupation has changed. The knowledge of the lake, the reading of water, the understanding of seasons, the techniques of fishing passed down through generations – has gradually lost its relevance. Migrants have had to “unlearn” parts of their past in order to survive in the city. Learning new skills was necessary, but it also meant distancing themselves from a way of life that had shaped their identity. This shift represents not only economic adaptation but also a reworking of memory, belonging, and cultural continuity.

The fragmentation of extended families has further deepened this transformation. At Manchar, large family units worked together and shared risks. Resources, labor, and income circulated within kinship networks, creating a form of collective security. Migration has broken many of these networks into smaller, nuclear households scattered across different locations. In Hyderabad, survival depends more on individual effort than collective cooperation. As several respondents explained, in the village no one remained without support: in the city, each household struggles largely on its own.

In this sense, describing the migrants of Manchar as “environmental refugees” reflects more than a terminological debate. Although their situation may not fit neatly within international legal definitions of persecution, their experience embodies a different kind of dispossession. They have lost access to natural resources, but also to the social structures and cultural practices that once sustained their lives. What they have rebuilt in the city is a livelihood, but not the same life.

The story of Manchar Lake therefore shows that environmental migration is not only about movement across space. It is about the reconfiguration of livelihood, the weakening of kinship-based support systems, and the reshaping of identity. To understand such displacement fully, one must look beyond environmental decline alone and consider the intertwined social and cultural consequences that unfold long after people leave their place of origin.

References

- Bilsborrow, R. (1992). Rural poverty, migration, and the environment in developing countries: three case studies. *Background paper for World Development Report*. Washington: The World Bank.
- Chambers, R., & Conway, G. (1991). *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century*. <http://www.smallstock.info/reference/IDS/dp296.pdf>. Accessed on 20-02-2014.
- Durkove Petra, Gromilova Anna, Kiss Barbara and Plaku Megi (2012). *Climate refugees in 21st century*. Regional Academy on the United Nations.
- El-Hinnawi, E. (1985). *Environmental Refugees*. United Nations Environment Programme, Nairobi.
- Fabrice Renaud, Janos J. Bogardi, Olivia Dun, Koko Warner (2008). *Environmental Degradation and Migration*. <http://www.berlininstitut.org/onlineandbookdemography/environmentalmigration.html>.
- Hathaway, J. C. (1991). Reconceiving refugee law as human rights protection. *Journal of Refugee Studies*, 4(2), 113-131
- Intergovernmental Panel on Climate Change (IPCC) (2007). *Climate Change 2007: The Physical Science Basis, Summary for Policy Makers*. Contribution of Working Group I to the Fourth
- Assessment Report of the Intergovernmental Panel on Climate Change, February 2007. IPCC, Paris.
- International Organization for Migration (2009). *Compendium of IOM's activities in Migration, Climate Change and migration*. IOM.
- Iwebunor Okwechime (2013). *Environmental Conflict and Internal Migration in the Niger Delta Region of Nigeria*. COMCAD Arbeitspapiere - Working Papers no. 119.
- Jacobson, J. (1988). *Environmental refugees: a yardstick of habitability*. Washington DC: World Watch Institute.
- McDowell Christopher and Hann de Arjan (1997). *Migration and Sustainable Livelihood: A Critical Review of Literature*, IDS working paper 65.
- McGregor, J. (1994). *Climate change and involuntary migration: Implications for food security*. *Food Policy* 19(2): 120-132.
- Memon Naseer, Birwani Zubaida (2002). *Degradation of Manchar Lake: A Case of Human Disaster in collaboration with Pakistan Network of Rivers Dams and People (PNRDP)*. Shirkat Gah Karachi.
- Milton Kay (1993), *Introduction: Environmentalism and Anthropology*, in Kay Milton 1993 (ed.) *Environmentalism: The view from Anthropology*. Routledge Press. London and New York.
- Morrissey James (2012). Rethinking the 'debate on environmental refugees': from 'maximalist to minimalist' to 'proponents and critics'. *Journal of Political Ecology*. 19. 36-49.

- Myers Norman (1995). *Environmental Refugees: A Growing Phenomena of the 21st Century* in Myers, N. and Kent J 1995, ed. *Environmental Exodus: An Emergent Crisis in the Global Arena*. Washington D.C
- Sachs Wolfgang (2010), *Environment* in Sachs Wolfgang, 2010 (ed.) *The developmentDictionary: A guide to Knowledge as Power*. Zed Books.
- Siddiqui Tasneem (2003). *Migration as Livelihood strategy of the poor: the Bangladesh case. Presented at Regional Conference on Migration, Development and Pro-Poor Policy Choice in Asia*. www.livelihoods.org
- Stern, N. (2006): *Stern Review on the Economics of Climate Change*. HM Treasury, London.
- Suhrke, A. (1993). Environmental degradation and population flows. *Journal of International Affairs* 47(2), 473-496.
- United Nations University (2012). *Where the Rain falls: Climate change, food and livelihoodsecurity, and migration*. Global Policy Report. UNU-EHS.
- Water and Power Development Authority (WAPDA). Right Bank Outfall Drain (RBOD - I). <http://wapda.gov.pk/htmls/RBODI13.html> accessed on 14-02-2014.
- Zehra M. Syeda (2010). *The Manchar Lake and Climate Change*. Tansboundary Water Resources