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Are Environmental Refugees Refused?

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ABSTRACT The term "environmental refugees" describes a new kind of mass human casualty caused by negative ecological impacts during the last decades. It has been estimated that 25 million environmental refugees are on the move worldwide due to environmental problems, 50 million are left homeless by cyclones, floods and earthquakes, 90 millions are displaced by infrastructural projects. These figures are expected to increase sharply in the next few decades due to the impacts of global warming and the consequence of sea level rise by 2050. Yet, the unfortunate environmental victims are refused refugee status and are not granted assistance and protection by the international community. Why is the number of environmental victims on the increase? Why are they left unassisted? Who should be responsible for what they have been suffered from? What should be done to limit the hardship being suffered by environmentally displaced people? This paper will attempt to answer these questions.

1. INTRODUCTION

The phenomenon of people fleeing and wandering in wilderness is not a new issue. Human beings have migrated from place to place seeking new and better settlements and living conditions since ancient times. Wars, social conflicts and environmental disasters were probably the main reasons that forced people to leave their homelands. In the past, when national borders were ambiguous and natural resources were still relatively abundant, the arrival of several foreigners to a new land did not seriously affect the livelihoods of the receiving land's native communities. Until recently, human migration was smaller in scale and simpler in nature. People could go as far as they wanted and were able to regain their old livelihoods in their new settlements. In many instances, the new settlements literally became their new homes.

The migration of refugees has a new face in contemporary times. Firstly, the number of people on the move is counted in millions, much larger than the number of migrants human history has ever witnessed. Secondly, there are limited destinations for refugees today. Usually, they end up in a huge camp in a neighbouring country where local people regard them as foreigners and uninvited visitors soliciting for charity. Lastly, despite some amount of assistance provided to refugees by the host countries and the inter-national community in finding new homes, this does not guarantee that they are able to regain their old livelihoods. Thus, the lives of refugees are "so miserable that it is impossible to imagine what it is like unless one has experienced it" (World Vision, 2003).

2. CONVENTIONAL REFUGEES

2.1. Who are Conventional Refugees?

Defining refugees is not an easy job. In reality, the issue is raising heated debate about who should be considered a refugee. Being defined as a refugee implies that one would receive international assistance, protection and even international human rights. The definition of refugee or refugee's status is therefore important because it determines who receives aid and resettlement (Baker, 2001).

Due to different reasons ranging from political will, resources available to national sovereignty, "every nation and organisation has a unique definition for refugees" (Baker, 2001). These definitions target some specific groups and normally do not embrace all people who are displaced from their land. At the international scale, the most regularly used definition of refugees was written in the first chapter of the *1951 Convention Relating to the Status of Refugees* developed by the United Nations High Commission for Refugees (UNHCR):

"A person who is outside his/her country of nationality or habitual residence; has a well-founded fear of persecution because of his/her race, religion, nationality, membership in a particular social group or political opinion; and is unable or unwilling to avail himself/herself of the protection of that country, or to return there, for fear of persecution" (UNHCR, 2003).

Originally, the Convention aimed at protecting post-war Europeans only. In 1967, some parts of the Convention were modified in the Protocol Relating to the Status of Refugees, extending the protection to people around the world. Nevertheless, the definition remains unchanged. It has been used as a guideline of the UNHCR and many other UN organisations for more than 50 years.

According to the definition, refugee status is granted only to those who have left their country of nationality and those who fled due to political and social reasons. They are called "*conventional refugees*". From 1986, UNHCR started to provide assistance to other categories of displaced or needy persons, including "asylum seekers, refugees who have returned home but still need help in rebuilding their lives, local civilian communities which are directly affected by the movements of refugees, stateless persons and a growing number of so-called internally displaced persons (IDPs)" (UNHCR, 2004). However, those who suffer from other reasons such as natural catastrophes and environmental disasters are still not included.

2.2. Number of Conventional Refugees

Since 1951, when refugee status was first recognised by the international community, the number of conventional refugees has sharply increased. From roughly 1 million European refugees at the beginning of the 1950s, the number of refugees reached a peak in 1999 with 11,480,900 people of concern to UNHCR (2006).

As of the beginning of 2004, the number of people of concern to UNHCR dropped to 17.1 million, down from more than 20 million in 2002. This is the lowest total figure in at least a decade. Although the category of IDPs, has been included in the UNHCR' protection, constituted a modest proportion of the total population of concern in 2003: 24.5% or roughly 4 million people. However, the figure was more an advertisement for the image of the UNHCR than an actual concern. Assistance extended to this group of people was very limited since the UNHCR considers them as those who "are still within their countries" and "international treaties are unable to protect them" (World Vision, 2003). Moreover, these 4 million people are those internally displaced by civil wars and social or religious conflicts. They constitute a small part of the real figure of total IDPs in the world: 24.6 million. None of them are victims of environmental problems.

Another important issue is that the greatest proportion of the burden caused by refugees is now carried by the developing countries. Table 2 shows the origins of the top ten refugee's populations in 2003 and the countries where they are harboured. Iran and Pakistan appear to be the most generous host countries for refugees and asylum seekers while the rich countries like the USA or the UK received a much smaller refugee population. Ironically, it is not difficult to see that the great powers only accepted refugees from the countries where they intervened to start civil wars.

3. ENVIRONMENTAL REFUGEES

3.1. Who are Environmental Refugees?

Environmental degradation has been a great threat to the development of human societies

Table 1: Refugees and other people of concern to UNHCR in 1999

Regions of asylum/ Residence	*Refugees*	*Asylum seekers*	*Returned refugees*	*Other people of concern*			*Total population of concern*
					Returned		
				IDPs	*IDPs*	*Various*	
Africa	3 523 250	61 110	933 890	640 600	1 054 700	36 990	6 250 540
Asia	4 781 750	24 750	617 620	1 724 800	10 590	149 350	7 308 860
Europe	2 608 380	473 060	952 060	1 603 300	370 000	1 279 000	7 285 800
Latin America and Caribbean	61 200	1 510	6 260	-	-	21 200	90 170
Northern America	636 300	605 630	-	-	-	-	1 241 930
Oceania	64 500	15 540	-	-	-	-	80 040
Total	11,675,380	1,181,600	2,509,830	3,968,700	1,435,290	1,486,540	22,257,340

Source: UNHCR (1999)

Table 2: Origin of 10 largest refugee populations in 2003

Country of Origin	*Main Countries of Asylum*	*Total*
Afghanistan	Pakistan; Iran	2,136,000
Sudan	Uganda; Chad; Ethiopia; Kenya D.R. Congo; Central African Rep.	606,200
Burundi	Tanzania; D.R. Congo; Zambia South Africa; Rwanda	531,600
Democratic Rep. Congo	Tanzania; Congo; Zambia; Burundi Rwanda; Angola; Uganda	453,400
Palestine	Saudi Arabia; Iraq; Egypt; Libya; Algeria	427,900
Somalia	Kenya; Yemen; United Kingdom; Ethiopia; Djibouti; USA	402,200
Iraq	Iran; Germany; Netherlands; Sweden; United Kingdom	368,500
Viet Nam	China; Germany; USA; France	363,200
Liberia	Guinea; Côte d'Ivoire; Sierra Leone; Ghana; USA	353,300
Angola	Zambia; D.R. Congo; Namibia; South Africa	329,600

Source: UNHCR (2004)

and to the existence of human civilisations. The deluge of the biblical time and the great floods that exist in the mythologies of almost all nations in the world are examples of how hostile nature could remove people from their habitable land. Recently, scientists have provided a great deal of evidence showing that environmental problems were the main cause that collapsed many once-high-developed civilisations: the classic Maya, the ancient Akkadian Kingdom and even the Roman Empire, etc.

The story is very much real in the world today. Together with armed conflicts, political and social unrests, environmental disasters and degradation remain the principal factors threatening the sustainability of human livelihoods. Due to the negative effects of global warming, natural catastrophes, deforestation and desertification, millions of hectares of fertile land are lost every year. Consequently, millions of people worldwide are involuntarily removed from their land and are forced to flee to new places where living conditions are normally much worse than what they had. These people are called "*environmental refugees*".

Essam El-Hinnawi - a Professor of the National Research Centre in Cairo - was the first who used this term[1]. In a booklet written for the United Nations Environmental Programme in 1985, 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".

He says environmental disruption refers to "any physical, chemical and/or biological changes in the ecosystem (or the resource base) that render it, temporarily or permanently, unsuitable to support human life".

Since El-Hinnawi's definition of environmental refugees 20 years ago, the concept and many features of refugees have changed over time. Nevertheless, this definition remains the most-quoted because of a number of reasons. Firstly, it clearly confirms that environmental disruption is a reason (besides wars and social conflicts) for the mass movement of humans in contemporary time. Secondly, the definition includes man-made ecological disasters and thus helps to identify those who are responsible for the related environmental changes. Lastly, the definition does not specify that one should leave his or her country in order to be recognised as an environmental refugee. In other words, crossing international borders is not a "must" to be assisted and protected by international law and treaties. The definition of environmental refugees therefore broadens the UNHCR's concept of refugees by including internally displace people.

3.2. Types of Environmental Refugees

According to El-Hinnawi (1985), there are three main types of environmental refugees: (1) those temporarily displaced because of an environmental stress such as earthquake or cyclone; (2) those permanently displaced because of permanent changes to their habitat such as dam construction or man-made lakes; and (3) those permanently displaced because the resource base in their original habitat can no longer meet their basic needs.

3.2.1. Temporarily Displaced due to Environmental Stress

The striking difference in the nature of

temporary displacement due to environmental stress in comparison with the other two broad categories is that "once the environmental disruption is over and the area is rehabilitated to its original state, refugees can return to their habitat" (El-Hinnawi 1985). Examples of environmental problems that temporarily uproot people from their traditional habitat are numerous. They include hydro-meteorological disasters (such as avalanches and landslides, droughts followed by famine, extreme temperatures, floods, forest fires, windstorms, and others (insect infestation and waves/surges) and geophysical disasters (such as earthquakes and volcanic eruptions). Non-natural or industrial accidents that create temporary environmental disruption can also be included in this category. They are chemical spills, collapse of industrial structures, explosion, fire, gas leak, poisoning, radiation, or even transport accidents (Globar Times, 2004).

Although a precise number of the people who are uprooted by these accidents is not recorded, it is believed to be very large. A rough estimation by Globar Times (2004) indicated that disasters such as cyclones, floods and earthquakes have left 50 million people homeless. Little help has been extended to these people (Box 1).

In the developing world, the number of environmental victims is much greater than that of the developed countries. Their situation is also much more critical. For example, the typhoon Muifa, Merbok and Winnie that swept through the Philippines in mid-November and early December 2004 have affected some 3 million people, including 650,000 people displaced; 939 dead; 837 missing and 752 injured (IRC, 2004b). Another extreme case was the Boxing Day Tsunami in the Indian Ocean. In Banda Aceh alone, 412,438 people have been displaced due to loss of homes, land and livelihood (UNEP, 2005).

Box 1: Human resettlement after Kobe earthquake (Japan) in 1995

In 1995, a 7.2-richter earthquake devastated an area of around 20 km2 in Kobe, Japan, destroying 400,000 houses, killing 6,700 people and leaving 300,000 marginalised people homeless (Baker, 2001). Three years after the disaster, 27,000 families still remained in temporary shelters. Until 1999, 5,000 Japanese families were still living out there in wooden boxes without any basic heating equipment in below-frozen temperature (Yoshimune, 1999). The government spent great money to change the *face* of the city, not the *fate* of its people!

Source: Yoshimune (1999), Baker (2001)

Box 2: The effects of the Boxing Day Tsunami on Banda Aceh

On December 26, 2004, a massive earthquake off the coast of Sumatra generates tsunami waves that wreck coastlines in 10 countries, killing more than 280,000 people. As the result of this disaster: 30% of an estimated 100,000 hectares of coral reefs in the water of northern Aceh and 20% of the sea grass beds have been totally damaged (BAPPENAS, 2005; WI, 2005). Approximately 48,925 hectares of coastal forests (other than mangroves) in Banda Aceh were impacted and approximately 90% of between 300 and 750 hectares of mangrove forests were damaged (BAPPENAS, 2005).28,000 hectares of coastal irrigation schemes were significantly impacted. Additionally, there are serious damages to flood protection dykes and related infrastructure. These damages would reduce the crop yields in the next few years (BAPPENAS, 2005)Approximately 30% of farmland is affected on the north east coast, and 70% is affected on the west coast – with a general estimate of 20% of affected land overall as permanently damaged (FAO, 2005).35,009 people in Banda Aceh were internally displaced (WHO 2005).

Source: BAPPENAS (2005), WI (2005), FAO (2005) WHO (2005)

In both cases, the victims did receive some assistance from international humanitarian organisations. However, the assistance mainly came from the Red Cross Societies. UNHCR, the major international institution in charge of refugee issues kept staying outside, claiming that the victims were not among their conventional concern.

3.2.2. Permanently Displaced due to Man-made Problems

This category of refugees is normally associated with large constructions such as dams, reservoirs and irrigation systems and highways etc … The policies of establishing national reserves, protected areas or national parks are also contributing to the increase of environmental refugees. A few examples of large dams taken from the report "Dams and Development" of the World Commission on Dams are cited to illustrate their impacts on environmental refugees. This Commission (WCD 2000) stated:

"While many have benefited from the services large dams provide, their construction and operation have led to many significant, negative social and human impacts. The adversely affected populations include directly displaced families, host communities where families are resettled, and riverine communities,

especially those downstream of dams, whose livelihood and access to resources are affected in varying degrees by altered river flows and ecosystem fragmentation".

Over 45,000 dams were built in the last century. Most of them were built in China, India and other Asian countries, where energy for industrial development and water for agriculture are vital for the existence of societies. It is estimated that some 40 to 80 million people worldwide have been displaced by the construction of these large dams and many of them have not been adequately resettled.

The world's two largest dam constructors - China and India, have built around 57% of the world's large dams. They also account for the largest number of internally displaced people. In the late 1980s, around 10.2 million Chinese were displaced due to reservoir constructions. In reality, the figure could be much higher. The World Commission on Dams (WCD) claimed that large dams and reservoirs already built in the Yangtze basin alone have led to the relocation of at least 10 million people.

In November 2002, the Three Gorges Dam started blocking off the Yangtze River at the town of Sandouping. From 1.2 to 1.9 million people are expected to be resettled (Box 3). These figures are only estimates and do not include people displaced by other aspects of the projects such as canals, powerhouses, project infrastructure and associated compensatory measures such as bio-reserves (WCD, 2000).

In India, estimates of the total number of people displaced due to large dams vary from 16 to 38 million people (WCD, 2000). Another source (Judge, 1997) gave the figure of 50 million people, twice larger than the estimate of WCD. These people faced enormous difficulties when relocated in unfamiliar lands due to the differences between their religion, race and rituals … and those of the local communities. Unfamiliar living conditions brought about new diseases that traditional medical healers were not able to treat. Moreover, the differences in fauna and flora did not allow the traditional healers to make the required medicines. As a result, the displaced communities suffered enormously. In the case of the refugees from Maharashtra, for example, the health problems "escalated to the point that not a single baby survived beyond infancy in the second half of 1989" (Baker, 2001).

Due to the serious problems caused by the construction of dams, "the World Commission on Dams considers that the end of any dam project must be the sustainable improvement of human welfare" (WCD, 2000). Unfortunately, the statement of WCD is no more than an early warning. The organisation is neither able to assist the dam resettlers nor press the UNHCR to do so. Dam refugees, as well as other types of environmental refugees, remain unprotected.

Box 3: The Three Gorges Dams and resettlement problems

Fact

Being constructed on the China's Yangtze River, the Three Gorges Dam is the world's largest power project with a designed capacity of 18,200 megawatts. The construction of this enormous dam will uproot up to 1.2 to 1.9 million people in the Yangtze valley.

Promise"

Our goal is to ensure that those resettled will have better working and living conditions … The compensation we are offering is much higher than their expected losses".

Li Boning (1993), Head of the Three Gorges Migration Office

Reality

Compensation offered to resettlers has fallen short of the replacement cost for their property. Instead, they are forced to buy housing at a cost that far exceeds the compensation they have been offered.The land and jobs that have been promised to resettlers from rural and urban areas are no longer available. Where land has been offered, it has often turned out to be of inferior quality. While approximately 500,000 people have been resettled to other areas in the Three Gorges region, more than 100,000 people have been forced to leave the Three Gorges area altogether.Local authorities appear to have diverted a large part of the resettlement budget into unrelated infrastructure projects, using funds intended for household compensation on projects like hotels and roads.

Source: IRN (2003)

3.2.3. Permanently Displaced due to Environmental Degradation

Our planet is unique because all ecosystems it supports are interconnected. Altering one ecosystem, such as clear cutting forests, may result in the degradation of the other ecosystems. Meanwhile, by over-exploiting the natural resources, we destroy the integrity of the Earth and degrade our resource base. Consequently, nature answers our hostile behaviours by unleashing intensive droughts, soil erosion, global warming, sea-level rise and wide-spreading desertification.

Environmental degradation may be the most

serious factor that rockets the number of environmental refugees during the last few decades. Sadly, most of the environmental degradations that render the land unliveable are made by humans. As El-Hinnawi (1985) points out, a major complication with environmental degradation is that people are both the origins and victims of these problems.

Nowadays, it is well understood that deforestation can strip the ecosystem of vital protection from erosion and cause nutrient leaching, which in turn, depletes the productivity of the cultivated land around the destroyed forests. In areas like Nepal, forest clearance has been identified as the cause of widespread soil erosion. Losses in forest can also increase the intensity and frequency of floods. Downstream from the Himalayas, uncontrolled runoff caused by deforestation in the catchment areas of the major rivers, and the increased silting of river channels as a result of soil erosion have contributed to disastrous flooding in Bangladesh. Every year, around one million people of this country have to abandon their homes (Baker, 2001).

More seriously, the clear cutting of forests remarkably reduces the ability of nature to absorb carbon dioxide released by industries. This contributes much to the process of global warming and sea level rise. According to some predictions (IPCC, 2001; Baker, 2001, Conisbee and Simms, 2003) from 1990 to 2100, global average surface temperature will climb at a rate without precedent in the last 10,000 years and the sea level may rise from 30 to 100 cm by 2100. The effects caused by this rise, though difficult to estimate, can be enormous (Box 4).

Basically, both deforestation and global climate change are responsible for a large part of desertification. However, direct reasons for this environmental phenomenon come from droughts, overgrazing of livestock and overuse of land. These practices create poor grazing and cultivation conditions. At some point, when the whole resource base is so degraded that the cattle die and the seeds are consumed, people "lose their means of subsistence and quickly become environmental refugees" (Baker, 2001). Morocco can be considered as a typical example of this phenomenon. As villages have expanded year after year and farmers have cleared land for cultivation, all the land has been requisitioned. In order to have enough food, the farmers shortened fallow periods. Slowly, a vicious circle has taken over: declining crops, new deforestation initiatives, disappearing vegetation, and the impoverishment of soil. In less than a generation, they have turned the land into a new desert.

Box 4: Prediction of the effects of one metre sea level rise

A one-meter rise in sea level would inundate 3 million hectares in Bangladesh, displacing from 15 to 20 million people. Vietnam could lose 2.5 million hectares, displacing roughly 10 million people. About 85% of the Maldives' main island, which contains the capital of Male, would be swamped, forcing 300,000 people flee to India or Sri Lanka. In West Africa, up to 70 per cent of the Nigerian coast would be inundated, affecting more than 2.7 million hectares and pushing some beaches three kilometres inland. Gambia's capital, Banjul, would be entirely submerged. In the Mediterranean, Egypt would lose at least 2 million hectares of land in the fertile Nile Delta, displacing 8–10 million people, including nearly the entire population of Alexandria.

Source: IPCC (2001), Baker (2001), Conisbee and Simms (2003)

The story is almost the same in other parts of the world. Over one third of total land around the world - around 3.6 billion hectares - is affected by desertification (YRE, 2004). The most fragile regions to desertification are Africa, north and south of the Sahara, the Middle East, central Asia and India. Over 800 million people are affected (YRE, 2004). In order to survive, the populations leave their traditional lands to find new settlements. In most cases, they end up in the slums of overpopulated urban zones or cross the borders to neighbouring countries.

Due to the seriousness of desertification, the international community at the 1992 Earth Summit in Rio drew up a convention to fight desertification. Until now, despite the fact that this degradation disrupts economic and social balance and reduces the Earth's capacity to regenerate, adequate measures are not being taken to avoid calamity. The reason seems to be ironically simple: lack of adequate financial support. However, a one-day military spending of the USA is enough to fight desertification in the whole world in one year.

4. ARE ENVIRONMENTAL REFUGEES REFUSED?

4.1. Refused Destinies of Environmental Refugees

The World Disasters Report 2003 (IRC, 2004a)

stated that "while many [of people now live outside their countries of birth] opt to migrate, tens of millions are forced to flee environmentally-life-threatening conditions at home. Largely unprotected by international laws and institutions, their plight is a forgotten disaster".

As it was pointed out earlier, the 1951 UN Refugee Convention protects only those who have crossed an international border and have a "well-founded fear of being persecuted" if they were to return home. Under the guideline of the Convention, UNHCR recognises only 17.1 million political, religious or ethnic conventional refugees. But a far greater number of forced migrants who suffer equal losses in terms of human live, human property and livelihoods remain vulnerable and under-protected.

The UN has developed guiding principles to help IDPs, but no UN agency is mandated to help them. More correctly, the UNHCR did mention a figure of 10 million people displaced by environmental reasons in a report published in 2004 - far smaller than the estimation of other international organisations. However, it refused to call them "refugees" and it has "consistently rejected the case for categorising the environment as a basis for refugee status, arguing that it must concentrate its limited resources on those fleeing political, religious or ideological persecution" (Conisbee and Simms, 2003). The UNHCR declares that people displaced through environmental degradation will be able to move within their home countries. The duty of care to them should be taken by their own government. However, in many cases, national governments are technically responsible, but millions go unaided. The case of earthquake victims in Kobe perfectly illustrates this situation.

Thus, the lives of environmental refugees' and their destinies remain the concern of no one. Scientists and policy makers keep arguing over the definitions while the masses of ruined populations are left suffering and waiting. Their right to assistance and protection has been deliberately rejected and their future is refused.

4.2. Why Environmental Refugees Are Refused?

Human knowledge of environmental impacts on human life has improved since the 1972 Stockholm Conference. There is now wide awareness that environmental factors are the triggers for major population movements. It is recognised, at least among the academics and the policy makers, that humans are pulling the trigger. Many disasters, which were considered as natural phenomenon before, are now recognised as man-made. The fossil fuel industries that have been booming due to the lifestyle demanded by the industrialised countries in the North vividly illustrate this statement.

According to the Integrated Framework of Climate Change developed by the ICCP (2004), the current socio-economic development path in the industrialised countries has seriously increased the concentration of carbon dioxide and other green house gases in the atmosphere. This leads to the consequences of temperature and sea level rise, precipitation change and an increase in droughts and floods. These environmental disasters negatively affect human food supply and water resources, destroy ecosystems and biodiversity, change human settlements and affect human health. In 2001 alone, 170 million people were affected by disasters, 97% of which were climate related (droughts, floods and storms). In the 1990s, more than 100 million suffered drought and famine in Africa. This figure is likely to increase in this and the coming decades due to global warming. It has been proved that the richest countries are responsible for the largest part of these gas emissions. During the period from 1990 to 2001, despite the world efforts to reduce green house gas emissions, the economic powers keep increasing the emission level of their industries.

Yet, these countries refuse to take responsibility for global warming and for its remedy. According to Conisbee and Simms (2003), rich countries spend a minimum of "80 billion US dollars per year subsidising their fossil fuel industries". However, at the climate negotiations in Bonn in 2001 "they pledged just 0.4 billions US dollars per year, from 2005, to help poor countries manage their emissions and adapt to climate change".

The North is afraid of the fact that if it officially recognised environmental victims as refugees and when the "polluter pays" principle is taken into account, the amount of money they have to pay would be much bigger than that 0.4 billion dollars. Consequently, the economic powers (and the United Nations as well) have systematically tried to ignore the reality that "the poorest people do not contribute to the problem of climate change to a substantial degree, nor do

they benefit financially from it, but they pay the highest price and are more vulnerable to its effects" (Milan, 2004; Conisbee and Simms, 2003).

4.3. Should the Poorer Help the Poorest?

In 2001, the 38 industrialised countries received 595,700 new applications for asylum. However, due to tougher controls in EU member countries, seeking asylum in this continent has become extremely difficult. In its publication "The World Disaster 2003", the IRC (2004) commented:

"While rich governments spend billions of dollars on inefficient asylum procedures, their funding for far larger numbers of migrants in developing countries has declined to dangerously low levels. The real 'asylum crisis' today is that too much money is spent keeping asylum seekers out of the North and not enough is spent helping them in the South".

Yet, there is a myth that many citizens of the highly developed countries believe that their countries are the biggest hosts of the world's refugees. Some even do not feel comfortable when their tax revenue is used for accommodating refugees from the Third World. In reality, the number of refugees accommodated in the developing countries in recent years is proportionally much higher than the figure in the industrialised nations. For example, during the period from 1992 to 2001, 72% of the world's conventional refugees (12 million) were accommodated in the developing countries (UNHCR, 2002). If environmental refugees were taken into account, the percentage should be much higher. Clearly, the poorer are helping the poorest more than the rich are doing.

A pertinent question that should be asked here is: Is it fair that the developing countries have to bear the cost of helping people who fled their home due to the effects of global warming - the direct consequence of the wealthier' fossil fuel industries? The answer can be yes and no. Yes, because from the humanity point of view, they should not leave their neighbours out there unassisted. No, because they themselves do not have enough resources to help. More importantly, they are not the ones who caused the disaster. Why should they clean it up?

5. WHAT SHOULD BE DONE?

5.1. Expanding the Definition of Refugees

The 1951 Refugee Convention's narrow definition of refugees has failed to protect the full range of the people who have been forced to flee life-threatening situations.

Firstly, it ignores the role of environmental disasters and degradation as the triggers of the mass refugee movements. By excluding environmental victims from legal refugee status, the definition also excludes the polluters from their responsibility of paying resettlement costs.

Secondly, the definition addresses only those who have left their country of nationality. Those who remain in their countries are not the subject of UNHCR protection. National governments should be responsible for this. But what happens when the national governments are the direct cause of displacement (like in the dam construction cases) or are just not capable to do the job (like in the case of Kobe earthquake)? Should the UNHCR intervene?

Finally, what would happen if the whole country becomes uninhabitable? In the near future, when Tuvalu and Maldives disappear in the sea and Bangladesh loses most of its land, would India accommodate millions of the lost countries' citizens or would UNHCR consider the case as a national sovereignty issue?

New instruments and new mechanisms have to be developed in order to help the environmental refugees. This process can begin by updating the 1951 Convention's definition of refugees in such a way that it includes the ecological victims into the categories of being protected. To ensure equitable treatment for all types of forced migrants, organisations such as the International Federation of Red Cross and Red Crescent Societies are proposing the establish of a UN High Commissioner for Forced Migrants.

5.2. A More Caring International Community

As it is recommended by IRC (2004a), the international community must restore adequate levels of funding to provide safe conditions for the majority of refugees who remain in developing countries. Developed countries can improve protection by offering resettlement opportunities and ensuring that any repatriation is voluntary and safe. The "polluter pays" principle should be enforced and implemented. In other words, the protection of and assistance for forced environmental migrants should be institutionalised and conventionalised in such a way that helping environmental refugees is not a

charity activity, but a compulsory international collective task.

Though the above-mentioned measures can help to improve the lives of refugees, they are only short-term solutions and therefore cannot solve the root causes of the problem of environmental refugees, which is largely influenced by the current production and consumption patterns. For example, the refusal by the US not to sign the Kyoto Protocol and its plan to increase the emission of green house gases by 25% by 2010 (Conisbee and Simms 2003) is basically because of its industrial production objectives. Thus, the status of environmental refugees even requires stronger measures than the Kyoto Protocol. The over-exploitation of environmental resources to ensure maximum industrial production for mass consumption is denuding the environment and pushing populations to flee from their homes.

5.3. Action by National Governments in the South

It would be unwise if the national governments in the South do nothing and wait for the assistance coming from the North. It is vital that the poor and vulnerable nations should learn how to protect themselves effectively from the dangers of environmental degradation. Adequate knowledge and good governance practice are vital requirements.

5.4. The Role of International NGOs, Institutions and the Private Sector

International NGOs and the private sector can contribute greatly to the task of protecting and assisting environmental refugees. The former institutions can provide expertise to the national governments in the South and help them to confront the social, environmental and economic problems caused by the movement of refugees. The latter one, being bound by the polluter pays principle and other economic incentive measures, could provide financial support to those who are in need, including the national governments of the developing world and the environmental refugees.

5.5. A Proposed Management Framework

In short, a four-actor structure can be applied to deal with the movement of environmental refugees. At the international level, a UN High Commissioner for Forced Migrants should play the role of an international coordinator of the issues related to forced migrants; NGOs and research institutions are the consultants of environmental refugee projects; industries and private sector are the finance sources (Fig. 1). It is important that the international coordinator and the consultants should provide appropriate advice and measures to ensure a change in the private sector's mass production objectives.

National authorities in the South are the local coordinators, who on the one hand, obtain expertise and financial support from NGOs, research institutions, national governments of the North and the private sector, and on the other hand, redistribute the assistance to the forced migrants. In case of emergency or in order to prevent corruption, which is very popular in the developing countries, financial assistance may go directly from the "support provider" to the "beneficiary" (the environmental refugees) (Fig. 1).

6. CONCLUSION

Although the definition of environmental refugees was coined in 1985, the general recognition of environmental dangers confronting humans was achieved much earlier. In 1972, the UN Conference on the Human Environment in Stockholm declared: "A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental conse-quences" (El-Hinnawi, 1985).

It took more than a decade from Stockholm declaration to the small booklet of El-Hinnawi. It took another decade from El-Hinnawi to the Rio Conference and another to Johannesburg World Submit on Sustainable Development (WSSD) in 2002. One more decade has passed since then. The time is enough for one person to be born as a climate refugee, to grow up as a refugee, to get married and have children as a refugee. Yet, in spite of the increasing number of environmental refugees, the international community has so far failed to produce any durable solutions. Most international treaties and agreements are merely powerless signed up documents.

The words of Chief Seattle, an American Indian Leader, in 1855 adequately echo the enormity of the environmental challenges posed by the current consumption and production patterns:

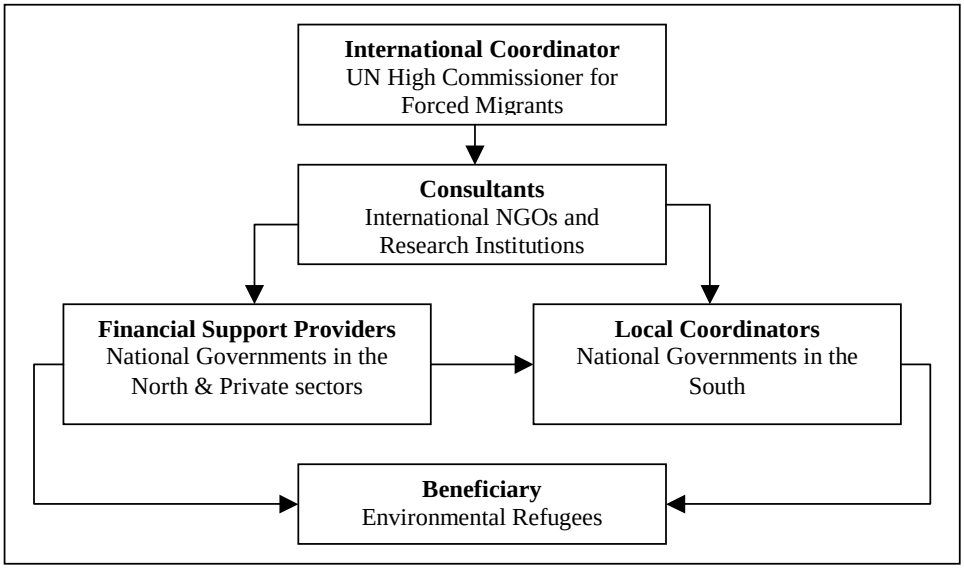

Fig. 1. A proposed management framework for the issue of environmental refugees

"We know that the white man does not understand our ways. He is a stranger who comes in the night and takes from the land whatever he needs. The Earth is not his friend but his enemy, and when he has conquered it he moves on. He kidnaps the Earth from his children. His appetite will devour the Earth and leave behind a desert. If all beasts were gone, we would die from a great loneliness of the spirit, for whatever happens to the beasts, happens also to us. All things are connected. Whatever befalls the Earth, befalls the children of the Earth" (Murray, 1995).

The message clearly underscores the fact that we are not preserving the Earth, neither are we solving the crisis of environmental refugees. To achieve this means we must respect nature and consider it as something sacred. What Chief Seattle called "*the way*" one and a half centuries ago is nothing else but the current pattern of production and consumption. Without changing the current ways of living and the exploitation of nature, modern society will continue to be embarrassed by the flux of environmental refugees.

NOTE

1 Some researchers (Saunder 2000; Flintan 2001) said that the term "environmental refugee" was first popularised by Lester Brown of the Worldwatch Institute in the 1970s.

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