# Food, Livelihoods & Climate Change in the Mekong Region

**Introduction**

From August 9-11, 2010, Focus on the Global South, the Foundation for Ecological Recovery/TERRA, World Rainforest Movement (WRM), International Rivers, Bank Information Centre and the Thai Working Group on Climate Justice (TCJ), organised a workshop entitled "Food, Livelihoods and Climate Change in the Mekong Region". The workshop was held at the Chulalongkorn University in Bangkok, and attended by 52 representatives of local networks and civil society organizations from Myanmar, Lao PDR, Thailand, Cambodia, Vietnam and China. The workshop was supported financially by the Heinrich Boell Foundation, KEPA, and Action Aid.

Due to rapid industrialisation and commercialisation of its natural resources, the Mekong region is one of the fastest growing regions in the world. It is also rich in biodiversity, watersheds, culture and natural resources, and particularly vulnerable to climate change. A significant proportion of the region's population is dependent on subsistence agriculture and artisanal fisheries for food and livelihood security, which are already being negatively affected by economic and environmental changes resulting from a resource extractive development model aimed at achieving rapid, high economic growth.

The region's abundant rivers are the very basis of life for tens of thousands of communities, but their regular flows are projected to change significantly because of the rapid melting of the Himalayan glaciers and increasingly erratic rainfall bringing unusual floods and droughts to different areas. Agricultural seasons are likely to be affected by changes in temperature and rainfall, causing disruptions in flowering and harvesting times and disturbing the balances of pests and diseases. Equally vulnerable are communities in the heavily populated Mekong and Red River deltas, whose homes and coastal livelihoods could be at risk from the expected rising of sea levels. Natural habitats that help to give life to the sea, such as reefs and coastal forests, are also under threat.

Most of the 'solutions' to tackle climate change being promoted in the region entail transforming the relationships that local communities have to the region's eco-systems (which they have nurtured and stewarded for generations), and privileging market-driven initiatives over those that are environmentally and socially sustainable. Except for parts of Thailand (for example Bangkok), per capita emissions of greenhouse gases (GHGs) are extremely low in the region. Programmes to tackle climate change are oriented towards adaptation, and building 'climate resilience'; at the same time, state and private enterprises continue to earn revenues from the region's natural resources, especially rivers,

forests, oil, natural gas and minerals. Local communities certainly bear the impacts of climate change, but they are not consulted or even given information about initiatives that will fundamentally alter the way they live, produce food, work, etc.

The workshop sought to assist participants to reflect on how climate change is related to economic development trends in the region, and how it will affect food, livelihood and environmental security. Particular attention was given to discussing what climate justice might mean for different communities and especially for women in these communities. The resource people for the workshop consisted of academics, analysts and researchers from across the world.

The first day was devoted to establishing a broad understanding about the phenomenon of climate change, its impacts in the Mekong region, international platforms and proposals to tackle climate change, and how these are likely to affect nations and peoples with differing levels of economic power. The second day focussed on Reducing Emissions from Deforestation and Forest Degradation (REDD), since REDD in its various versions is being heavily promoted in the Mekong region as a way for the region's governments to attract financing for adaptation and resilience building programmes, and to earn revenues by protecting forest cover. REDD is also viewed by several international conservation agencies as a way to prevent forest destruction by paying for the 'opportunity costs' of commercial logging. The third day was devoted to analysing the development model in the Mekong region, the impacts of this model on local economies, livelihoods and natural resources, and the impacts that climate change will have on eco-systems, agriculture and fisheries in light of the vulnerabilities already created by this development model. The final sessions of the workshop explored what climate justice might mean in the Mekong region, and what could be done in different countries to move towards socially and ecologically just ways of tackling climate change.

Discussions over three days revealed several common threads in the situation across the Mekong region. Peoples and communities face numerous similar threats as a result of the resource-extractive model of economic development adopted by governments in the region. In addition, climate change is being experienced in every country through droughts, floods, irregular rainfall, changes in hydrology, pest outbreaks, and deterioration of terrestrial and marine resources. People's ways of life, farming, fishing, producing food and earning incomes are being changed because of both the development model and climate change. With the exception of those living in major cities such as Bangkok however, the majority of the region's peoples are not part of the high-growth economies and high-consumption lifestyles that contribute significantly

to climate change. Governments have begun making plans and taking actions to address climate change, but these plans are not shared with their citizens, especially local communities in rural and urban areas. Public consultations on climate action plans are few and far between, and restricted to participation by select members of private enterprises, university/research institutions and developmental organisations.

While governments claim to be formulating climate adaptation plans, they continue to follow development trajectories that undermine the capacities and resilience of local farming and fishing communities to withstand climate-related disasters. A favoured programme in the region appears to be REDD. Governments view REDD as a way to earn revenues from the climate crisis. Communities living in and around forests areas are being pushed to sign conservation agreements before they have had a chance to fully understand the obligations within them, and the consequences of not meeting these obligations.

Everywhere in the region, governments have sequestered common lands, forests and rivers as public property/assets, to hand them over to state and private companies for logging, plantations, extractive industry and hydropower development. At the same time, national policies and laws target local communities for cutting down trees, farming in so-called conservation areas, foraging and gathering in forests, using water bodies for their daily needs, etc.

Participants agreed that the dual challenges presented by a destructive development model and climate change also present opportunities for community empowerment, public education, national policy reform and structural changes. People and governments of the Mekong region have to find suitable solutions to address these challenges that take into consideration the uniqueness of each country as well as common regional characteristics.

This report is based on the discussions at the workshop and presentations made by the various resource persons, who did their best to briefly summarise complex issues.

This report provides a summary of the key issues and points that were presented and discussed over the three days. Section 1 gives an overview to the Mekong region, its climate and its present context. Section 2 provides a snapshot of the challenge of climate change for fisheries in the region, section 3 is on forests and REDD and section 4 is on agriculture. From section 5 we move to the macro picture and list some of the false market solutions that are being promoted as global solutions to the climate crisis. The UNFCCC, its basic framework, negotiating structures and politics are dealt with in section 6. The

concluding section 7 provides insight on the concept of climate justice and its key principles. A list of the presentations at the Mekong climate workshop[1] are listed in Appendix 1, while Appendix 2 provides the text of the initial unity statement of the Climate Justice Now! network.

## 1. The Mekong Region and its Climate:

The Mekong region derives its name from the Mekong River, which has its source in Tibet and connects Southern China, Burma, the Lao PDR, Thailand, Cambodia and Vietnam. The region is one of the richest in the world in terms of biodiversity, culture and natural resources, and boasts numerous watersheds in addition to the Mekong, including the Salween, Ayeyawadi (also called the Irrawaddy), Chaophraya, Tonle Sap and the Red River. A significant proportion of the region's population is dependent on subsistence agriculture and artisanal fisheries for food and livelihood security. The Mekong is a region rich with rivers -- there are 400 rivers in the Lao PDR alone -- fertile lands, forests, and many people thrive on the natural and cultivated fertility of its wetlands, its diverse soils and forests. It is home to over a hundred different ethnic groups.


[1] Many of the presentations made at the workshop are available at the following web page: http://www.focusweb.org/content/workshop-food-livelihoods-and-climate-change-mekong-region.

The weather in Southeast Asia and the Mekong region is determined by three major regional factors. First, monsoon winds from different directions bring different types of weather. Monsoon winds coming from the south bring moisture from the Indian Ocean, resulting in rainfall, while monsoon winds from the north generally bring dry air from the Asian plateau. The second factor is what is referred to as the Inter-Tropical Convergence Zone (ITCZ) which is an area where the northern (colder) and southern (warmer) air masses meet, and the difference in temperatures of each create an unsettled weather pattern. This convergence zone moves up and down twice a year, drastically affecting rainfall. Each year, the Mekong region generally has two rainfall peaks - at the beginning and the end of the rainy season which extends from May through October. The third factor is tropical storms. Storms play a significant role in shaping the region's weather, but they are relatively difficult to model compared to the other two factors.

Additionally, there are global factors, for example, El Niño (also known as ENSO[2]). Originating in Pacific Ocean, El Nino has a direct impact on the region's climate. For example, in 2010, affected by El Niño, sea surface temperatures in Southeast Asia were warmer than in previous years, which led to unusually dry weather over the dry season. There are several other climatic, atmospheric and global development factors which are taken into account by the scientists who have studied the historical and projected trends in average temperatures and variations in rainfall.

Worrying predictions for the region have been made by climate and other scientists working in the region. The region's abundant rivers are recognised as the very basis of life in the region, but their regular flows are projected to change significantly because of the rapid melting of the Himalayan glaciers, and increasingly erratic rainfall bringing unusual floods and droughts to different areas. Agricultural seasons are likely to be affected by changes in temperature and rainfall, causing disruptions in flowering and harvesting times and disturbing the balances of pests and diseases. Equally vulnerable are communities in the heavily populated Mekong and Red River deltas, whose homes and coastal livelihoods could be at risk from the expected rising of sea levels. Natural habitats that help to give life to the sea, such as reefs and coastal forests, are also under threat. Unless mangroves are re-established along the new coastlines, many settlements will lose their current defenses from storms and lashing waves. Clearly, these predictions foresee that the lives of millions of people across the region will be placed in jeopardy.

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2 El Niño Southern Oscillation

Regional climate models can be useful for work at provincial and district levels. Under various scenarios, in the short term temperature increases will not be significant, but the number of hot days will increase significantly and the hot season will be longer especially in coastal areas e.g. southern Vietnam, Thailand, the Malaysian Peninsula and certain parts of coastal Burma. The modelling also indicates that there will be fewer rainy days in certain parts of the region, e.g., the southern part of Vietnam and Cambodia. In other words, it can be seen that although the size of the region is relatively small, there is a wide variation of possible changes in climate across the region.

The model projected by the Climate Change Modeling Initiative of the Mekong River Commission (MRC) shows that increases in temperature will be greater in the upper part of the region, resulting in increased river water volumes from snowmelt. Currently, melting snows account for 10-15% of the water volume in the peak monsoon season. Although the percentage will slightly go up to 20% of water volume in the next 15 years, the full effects of temperature change will be felt in base flow especially in the wet season.

Taking into account the proposed dams in the Mekong Region, the forecast from the model is that water flows will slightly increase during the dry season while peak flows will be lower. Adding to this the consequences of climate change, the Mekong River will be drier in the wet season. While relying on models, one must keep in mind the caveat that predicting future climate scenarios can be as uncertain as the projected climate itself. It was even said that projecting future climate is much like a blindfolded shooter attempting to shoot a bull's eye in a dark room.

Participants at the workshop, including resource persons, reported that the impacts of climate change are already being felt across the Mekong region in the forms of droughts, floods, irregular rainfall, changes in hydrology and pest outbreaks. For instance, water availability is particularly affected. As water is needed by everyone for survival and is crucial for food production, water related conflicts among communities are reportedly increasing.

*The challenge of unsustainable development*

The model of economic development adopted in the Mekong region creates significant problems across the region and affects several sectors. It is based predominantly on extracting maximum value from the region's natural resources, for example, mining/mineral extraction, dams for hydropower and irrigation, cement factories, plantations, industrial agriculture, large-scale commercialisation of fisheries, deforestation, conversion of farm, forest and

wetlands to industry, plantations and housing, etc. This model is financed through bilateral/multilateral aid and financing from international financial institutions (IFIs) as well as foreign investment in extractive industries, dams industrial agriculture, forestry and so on.

The adverse impacts of climate change are an additional burden to peoples and communities negatively affected by this economic model. The natural resource based livelihoods of people in the region (for example, farming, fishing and foraging/gathering) are being undermined by the current fossil fuel based and resource intensive model of economic development. Another additional layer of problems arise from so called 'solutions' to climate change. All governments in the region have jumped into the climate discourse and started to make plans and take actions to address climate change. But these plans, projects and policies are not widely shared with people, especially local communities (rural and urban); consultations are held with select groups of privilege and influence. At the same time, government plans and actions place the blame for many different environmental problems on communities who live in the forest areas, who are accused of cutting down trees (as in the case of Southern Thailand) and farming in so-called "conservation" areas.[3] The climate crisis is being used in different countries of the region to promote and justify projects that are the cause of many problems such as large dams and water diversion canals, nuclear energy, 'clean' coal fired power plants, and industrial agriculture and agro-forestry plantations through Economic Land Concessions (ELCs). Eleven dams are proposed on the mid and lower Mekong mainstream (which, if built, would add to the eight dams already underway in the upper Mekong mainstream in China), and dams have also been built, or are proposed, on all the major rivers in the Lao PDR, Cambodia and Vietnam, with serious potential impacts for the livelihoods of riverside communities and the ecosystems affected.

In Vietnam, the government was quick to launch a strategy to address climate change, but issues related to preserving and promoting bio-diversity as well as peoples' participation have been ignored in the strategy. As less water is becoming available for irrigation, many farmers are beginning to switch from growing rice to corn. The government is responding through technical solutions such as introducing hybrid rice.

In Thailand, discussions about the adverse impacts of climate change, and the country's unsustainable path of development, on livelihoods are sidelined. For policy makers, climate change is linked with foreign issues such as the extinction of polar bears. It is therefore very important to re-direct the discourse on climate change to local issues, impacts and livelihood concerns. Thailand has proposed a ten-year plan for climate change but it is a top down

[3] Point raised by participants from the land reform network in Thailand.

plan with little role for people in the process. The Thai Government is formulating its draft strategy on climate change without genuine democratic consultations with affected constituencies and is instead promoting large-scale agriculture for agribusiness groups. The government plans to use chemicals, industrial plantations and genetically modified organisms to deal with the climate challenge, and hopes to take advantage of carbon credit mechanisms to gain new funding. Thailand is also building new hydropower projects arguing that hydropower is clean energy and a solution to the climate crisis. Participants argued that nothing could be further from the truth. Big dams are ecological disasters that lead to massive deforestation, loss of livelihoods and substantial methane emissions. The reality is that big dams contribute to climate change.

In Southern Thailand, some community groups are in conflict with the government. They are fighting for community rights to manage natural resources in areas that are declared to be National Parks and other protected areas. Climate change dominates the government's discourse and they have used 'climate concerns' to threaten and arrest people who cut down trees. Yet there is little criticism about the amounts of energy used by cities or industry, and how consumption in urban settlements and industry contribute to climate change. The court case against the people arrested for deforestation is being used as an opportunity to campaign for community rights to manage natural resources. Community groups are raising awareness of their mixed agroforestry systems that promote biodiversity and proposing that they can protect agricultural lands and protect biodiversity.

Participants from Thailand raised the question of whether forest protection can really absorb carbon dioxide (CO2) emitted in, for example, the USA. How can a small tree absorb carbon from the atmosphere? Agriculture causes emissions of greenhouse gases (GHGs), but smallhold agriculture cannot compare to industry or transport in emission amounts. The burden is now being placed on the forestry sector and local communities to change their livelihoods, rather than on rich countries to cut emissions. Schemes such as REDD are creating disagreements and tensions between different civil society organisations (CSOs); while CSOs from Indonesia describe REDD as a crisis issue, CSOs in Vietnam consider it an opportunity.

While deforestation is a serious concern that needs to be addressed, participants stressed that the spotlight must be on the large picture. Seventeen percent of global GHG emissions supposedly come from deforestation while the rest comes from other unsustainable practices, and particularly from industrial processes. The latter should be addressed first before putting the onus on forest management in the South.

In China, concern about climate change is being used to create a model where agriculture, land and forests are being used as "dumping mechanisms" for the North through the mechanism of carbon trading (this is discussed further in section 5 below). At the same time, the Chinese Government has claimed that fish dying due to industrial pollution and effluents being pumped into water bodies is because of climate change. Participants also mentioned that aid budgets were being used by Northern Governments to push their climate agendas.

There is a big debate in China is whether GM crops or biotechnology are better ways to address climate change than a traditional approach to agriculture. Greenpeace has done studies on livelihoods in China that show that agribusiness and biotechnology companies are devising schemes to benefit from climate change. They argue, for example, that genetically modified (GM) seeds are better for drought conditions and pest management. CSOs, on the other hand, assert that GM crops are not the answer to climate change and that traditional crops are more resilient. Food security is a big concern in China. The availability of farmland in China is decreasing, which makes the question of how to use and distribute the land increasingly critical.

In the Lao PDR, the government is developing its response to climate change and agrees that it can cooperate together with civil society to tackle climate change. The government has established an Office of Climate Change under the Prime Minister's office. A National Action Plan on Adaption (NAPA) has been funded by donors but there is little or no public discussion about it. Meanwhile the Lao government continues to promote land concessions, environmentally destructive foreign investment, mines and hydropower dams.

In Burma the forestry department is talking to international NGOs such as the Wildlife Conservation Society. Signs of climate change have already been seen, most disastrously with the 2008 cyclone Nargis, which caused massive destruction and much loss of life, as well as a series of floods and landslides. Local communities in both rural and urban areas are not consulted about or represented in the planning of official climate change related plogrammes; instead, the government is promoting investment by corporations in cassava and rubber plantations. Local communities and indigenous peoples in particular have no official land rights.

## 2.Climate Change and Fisheries in the Greater Mekong Subregion

In the Mekong Region, fisheries have played a crucial role as a source of subsistence and economic benefits for up to 60 million people.

- Over 90 % of the world's freshwater fish production is in Asia
- Over 0.5 million tons of aquatic fauna are produced in the Mekong basin. It is more than the combined amount of aquatic fauna production of all the river basins in the USA.
- Research by the World Fish Center shows that fish and other aquatic life account for 50-75 percent of the protein consumed in Southeast Asia, especially in the Lao PDR, Cambodia, and Vietnam.

Heavily reliant on healthy ecological conditions, fisheries are put at considerable risk by climate change, in terms of yields, diseases, safety and efficiency. This eventually threatens the livelihoods of millions of peoples which, in turn, results in negative impacts on the economy as a whole. The World Fish Center monitored the impacts of El Niño and La Niña (known as ENSO) throughout Africa, Southeast Asia and the South China Sea. It was found that changes in sea temperatures and currents contributed greatly to fish stock depletion.

According to the World Fish Center, while all fisheries in the Mekong countries have high sensitivity to environmental changes, communities in Vietnam, the Lao PDR and Cambodia have relatively low adaptive capacity compared to communities in Thailand due to economic vulnerability factors.

Undoubtedly, the unprecedented melting of glaciers in the Himalayas, which is the source of the region's major rivers, is a sign that Asia is facing an imminent environmental crisis. Originating in the Himalayas, the Mekong River's 4,184 km stretch is abundant with diverse ecosystems that provide habitats for different forms of aquatic life. For instance, seasonal changes transform a grassland into the dry season to a large lake that serves as a nursery ground for fish, without which fish life-cycles cannot be reproduced and fish production in the basin is jeapordised.

The Mekong region is unmistakably one of the world's biodiversity hotspots. In the past two decades, over 300 species of fish have been newly discovered throughout the region. Besides, the region is home to endangered fish species, notably the Mekong's giant catfish and the Irrawaddy dolphin, which are flagship species of the river.

Almost half of the fish species in the Mekong River are migratory. Their migration patterns may be short or long, latitudinal or longitudinal and triggered by seasonal changes in water flows. During the dry season around the area of the Khone Falls in Southern Laos, low levels of water leave only one main channel that is passable by migrating fish. The giant catfish is one of the long migratory fish species which have to travel upstream through this channel

to their breeding ground in northern Thailand, then go downstream to the lower part of the Mekong for nursery grounds. If climate change disrupts the river's flows and water levels, preventing access through the channel, the giant catfish will completely disappear in as little as twenty years. Most importantly, climate change will result in severe impacts on the region's fisheries that are crucial means of livelihood and food security for men and women in the Mekong region.

In addition to climate change, a number of human activities are proving to be devastating to fisheries. Globally, overfishing with destructive fishing gears and pollution have undeniably put fish stock at risk. With less than 50 individuals left, the Irrawaddy dolphin is gravely endangered. Their mortality increases every year and this has been proved to be a result of human activities. Currently, dams planned on the Mekong are threats to the river's integrity that nurture the region's abundance and biodiversity. The Three Gorges dam has contributed to extinction of at least two fish species in the Yangtze River.

Fish productivity as a result of the Mekong River's rich biodiversity provides income to women and elderly people who craft a number of fish preserves for their family's additional income. The Mekong river nourishes peoples and communities ecologically, economically and culturally. Even one dam blocking the river will disrupt the integrity of the river basin, causing irreversible impacts to a countless number of fish species and millions of people.

In addition, because of rising temperatures caused by climate change, a number of species that contribute to food security in the region, including clams, snails, mollusks, jellyfish, insects, amphibians and shrimp, will be critically imperiled. These species are vulnerable to changes in temperature, many of which are important sources of food for local people in Laos and Thailand.

### 3.REDD Alert in the Mekong

REDD is an acronym for Reducing Emissions from Deforestation and Forest Degradation. It is today among the most controversial new issues in the UNFCCC negotiations. The basic concept is: governments, companies or forest owners in the developing countries should be rewarded for keeping and protecting their forests instead of cutting them down. The devil, as always, is in the details.

The idea of making payments to discourage deforestation and forest degradation was discussed in the negotiations leading to the Kyoto Protocol, but it was ultimately rejected because of four fundamental problems: leakage, additionality, permanence and measurement.

- "Leakage": while deforestation might be avoided in one place, the forest destroyers might move to another area of forest or to a different country.
- "Additionality": it is almost impossible to predict what might have happened in the absence of the REDD project.
- "Permanence": carbon stored in trees is only temporarily stored. All trees eventually die and release the carbon back to the atmosphere.
- "Measurement": accurately measuring the amount of carbon stored in forests and forest soils is extremely complex and prone to large errors

REDD developed from a proposal in 2005 by a group of countries lead by Papua New Guinea calling themselves the Coalition for Rainforest Nations. Two years later, the proposal was taken up at the Conference of the Parties to the UNFCCC in Bali (COP-13). In December 2010, REDD formed part of the Cancun Agreements decided at the 16th Conference of the Parties, (http://unfccc.int/2860.php).

REDD is described as follows[4]:

> "developing country Parties [are encouraged] to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances:
>
> (a) Reducing emissions from deforestation;
>
> (b) Reducing emissions from forest degradation;
>
> (c) Conservation of forest carbon stocks;
>
> (d) Sustainable management of forest;
>
> (e) Enhancement of forest carbon stocks;"

This programme is often referred to as REDD "plus" because the original REDD programme only included ideas (a) and (b), while the current draft of REDD has added the last three points (c, d and e). It is often written as "REDD +". But each of these "plus" points has potential drawbacks:

[4] in paragraph 70 of the AWG/LCA outcome. For more information about the structures and terminology of the UN climate negotiations, please see section 6 below.

- "Conservation" sounds good, but the history of the establishment of national parks includes large scale evictions and loss of rights for indigenous peoples and local communities. The words "of forest carbon stocks" were added in Cancun. The concern is that forests will be viewed simply as stores of carbon rather than ecosystems.
- "Sustainable management of forests" could include subsidies to commercial logging operations in old-growth forests, indigenous peoples' territory or in villagers' community forests.
- "Enhancement of forest carbon stocks" could result in conversion of land (including forests) to industrial tree plantations, with serious implications for biodiversity, forests and local communities.

There are some safeguards in the latest version of the REDD in the Cancun agreements that may help avoid some of the worst possible outcomes. But the safeguards are weak and are only to be "promoted and supported". The text only notes that the United Nations "has adopted" the UN Declaration on the Rights of Indigenous Peoples. In other words, the text refers to indigenous peoples' rights, but it does not insist that REDD programmes must protect them.

But perhaps the most controversial aspect of REDD is omitted from the REDD text agreed in Cancun. There is no mention in the text about how REDD is to be funded the decision was postponed until COP-17 that will take place in Durban in December 2011.

Trading the carbon stored in forests is controversial for several reasons:

- Carbon trading does not reduce emissions because for every carbon credit sold, there is a buyer. The ultimate buyer is a person, or more likely a company, which should reduce their carbon emissions but finds it cheaper to buy a carbon credit. Trading the carbon stored in tropical forests would allow pollution in rich countries to continue, meaning that global warming would continue.
- Carbon trading is likely to create a new bubble of carbon derivatives. There are already extremely complicated carbon derivatives on the market. Adding forest carbon credits to this mix would be disastrous, particularly given the difficulties in measuring the amount of carbon stored in forests.
- Creating a market in carbon credits from REDD initiatives opens the door to "carbon cowboys", or would be carbon traders with little or no experience in forest conservation who are exploiting local communities and indigenous peoples by persuading them to sign away the rights to the carbon stored in their forests.

Yet many REDD proponents continue to argue that carbon markets are needed to make REDD work. "Only a market-based approach, with REDD credits tradable for developed country emission reductions, will generate enough money to incentivise forest protection," argues the Royal Society for the Protection of Birds in the UK, to give one example from many.

While there has not yet been any agreement on how REDD is to be financed, a look at some of the main actors involved suggests that there is a serious danger that it will be financed through carbon trading. The role of the World Bank is of particular concern, given its fondness for carbon trading.

The World Bank's main mechanism for promoting REDD is a new scheme, launched in Bali in 2007 called the Forest Carbon Partnership Facility (FCPF). The FCPF was set up with the explicit aim of creating markets for forest carbon. Benoit Bosquet, a World Bank senior natural resources management specialist who has led the development of the facility said:

> *"The facility's ultimate goal is to jump-start a forest carbon market that tips the economic balance in favor of conserving forests, "*[5]

There is a serious risk of REDD leading to increased corruption if large sums of money start to flow. Forestry departments are among the most corrupt departments in some of the most corrupt countries in the world. The complexity of carbon markets, combined with poor regulations, increases the risk of fraud and corruption in the rich countries. Billions of dollars have already been lost from carbon markets in Europe through fraud.

Peter Younger at Interpol is already concerned. "Alarm bells are ringing. It is simply too big to monitor," he said in October 2009, adding that "Organised crime syndicates are eyeing the nascent forest carbon market."

> *"Fraud could include claiming credits for forests that do not exist or were not protected or [were taken] by land grabs. It starts with bribery or intimidation of officials, then there's threats and violence against those people. There's forged documents too. Carbon trading transcends borders. I do not see any input from any law enforcement agency in planning REDD."*

**REDD in the Mekong:**

There are already several REDD projects in the lower Mekong (Cambodia, Laos, Thailand and Viet Nam). Cambodia and Vietnam are members of the UN-

[5] World Bank press release on 11 December 2007

REDD programme (www.un-redd.org). Cambodia, Laos, Viet Nam and Thailand are members of the World Bank's Forest Carbon Partnership Facility (www.forestcarbonpartnership.org).

Here is a list of the REDD projects so far in these four Mekong countries:

*Cambodia*

1. Community Forestry Carbon Offset Project, Oddar Meanchey
2. Prey Long
3. Northern Plains, Preah Vihear Province
4. Seima Protection Forest, Mondulkiri Province

*Laos*

1. Lao-German Climate Protection through Avoided Deforestation Program
2. Participatory Land and Forest Management Project for Reducing Deforestation
3. Nam Et Phou Loey National Protected Area
4. Bolikhamxay province in central Laos, including Nam Kading National Protected Area (the Theun Hinboun hydropower dam REDD project)
5. Oji Paper

*Thailand*

1. Greater Mekong Subregion GMS Biodiversity Conservation Corridor Initiative

*Viet Nam*

1. Google financed project, measuring carbon stocks in forests
2. Reducing Emissions from All Land Uses ASB Partnership for the Tropical Forest Margins at the World Agroforestry Centre
3. JICA projects in Dak Nong, Binh Phuoc and Nghe An
4. WWF and SNV REDD model in Cat Tien National Park
5. ICRAF Vietnam Payment for Ecosystem Services (including carbon) at Bac Kan province
6. REDD-Alert, supported by the EU and the Macaulay Institute (UK): 2009-2012

Some of the actors involved in REDD projects and programmes in the Mekong Region, such as the World Bank and the Asian Development Bank (ADB), have a long history of involvement in the region's forests. The World Bank, and later the ADB too, financed the Nam Theun 2 dam in Laos. An area covering 450

square kilometres was clearcut to make way for the dam's reservoir. Having destroyed the livelihoods of the indigenous peoples living in and around the reservoir, the Bank moved the people out of the way.

Another project, the ADB's Industrial Tree Plantation Project in Laos, was a disaster according to the Bank's reports and a formal evaluation. It created and increased poverty and indebtedness. It replaced forests important to the livelihoods of local communities with eucalyptus plantations that then failed.

The risks of REDD are well illustrated by Oji Paper's industrial tree plantations in Laos. Oji Paper is currently working on a feasibility study looking at the possibility of gaining REDD financing for its project aiming at establishing 80,000 hectares of industrial tree plantations. Yet in order to create its monoculture plantations, Oji Paper cleared community forests and regenerating forests which it dismissed as "degraded forest".

Several of the REDD-type projects are in National Parks or other "protected" areas. It is far from clear how such projects will claim to be additional, or how they will manage to convince private financiers to get involved. One in particular the Nam Kading National Protected Area in Laos, which is aimed at protecting the watershed area above the Theun Hinboun hydropower dam seems to have extremely tenuous claims to additionality. Ironically, the Theun Hinboun dam was also financed by the ADB. In order to prevent the river from silting up, the forests above the dam need to be protected in any case. In addition, the idea of REDD financing going to the company responsible for damming the Theun River is somewhat perverse.

REDD initiatives in the Mekong Region illustrate several of the problems inherent in REDD. Many REDD proponents hope for funding through carbon markets, running the risk of exposing their finances (and more important, local livelihoods) to uncertain fluctuations of the market price of carbon.
REDD could also give governments the opportunity to revisit projects and targets that have long-since failed. At COP-15 in Copenhagen, for example, Thailand's prime minister, Abhisit Vejjajiva announced that,
"to increase our carbon sink, Thailand has set the ambitious target to increase the national forest cover from 30% in 2006 up to 40% by 2020."

The 40% figure is a well-known number in Thailand's forestry sector. It has been a target since the 1970s and was included in Thailand's 1983 National Forestry Policy. The figure is linked to government promotion of industrial tree plantations (which the government classifies as forests) and attempts to evict communities from forests. A large number of people live in forest reserve areas in Thailand. Attempts to evict them in the past, such as the infamous Khor Jor

Kor (the Land Distribution Programme for the Poor Living in Degraded Forest Areas, which despite its harmless sounding title was carried out by the military's Internal Security Operations Command, and aimed to evict five million villagers) have been, and remain, extremely controversial.

REDD does not necessarily require the eviction of people from the forest areas. But the risk is real that REDD could usher in a new era of military-style conservation in some areas of the Mekong region, while failing to address the causes of deforestation in others.

**Do Forest People Need REDD? The view of the proponents**

Despite resistance from forest communities and progressive civil society groups, there are several conservation related groups that advocate for REDD and REDD plus.

The REDD proponents argue that at the right price, REDD plus can be a bonus reward to local communities for properly conserving and managing forests, whether or not they have secure access to the forests. The real rewards from REDD plus are in making resources available for communities to increase conservation and management activities in forests from which they derive non-timber value. Even though people have fairly insecure tenure, they feel that they get values from forest already, and do not need REDD+. But funds from REDD+ can be a handy bonus which is a reward for inputs rather than outputs. In other words, rather than accounting for carbon, the reward is for increasing activities for forest protection and management. Civil society proponents insist that REDD plus+ must not jeopardise current livelihoods.

Recently a report was sent to the Vietnamese Government by UN-REDD suggesting certain key strategies to ensure local participation[6] as follows:

- Secure rights to forest land of local communities,
- Accelerate allocation/decentralization of forest land,
- Effective law enforcement,
- Clarify functions of state agencies; where there are too many overlapping mandates between departments gives room for corruption, failure, and the waste of money,
- Minimize transaction costs e.g. taking advantage of available skills for resource management,
- Provide interim incentives for local people.

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6 'Design of REDD – compliant Benefit Distribution, System for Vietnam' (UN-REDD, GTZ) Jan 2010, Dr. Nguyen Quang Tan, RECOFTC country coordinator, Vietnam

In a nutshell, these proponents believe that local people hold the key to the forest carbon market and the achievement of REDD+. There are three crucial principles to incentivize local people to participate in REDD+:

- Do no harm to existing livelihoods
- Understand local needs and the aspirations of the people who depend on forests
- Utilize local knowledge and skills

**Examples of Related Pilot Projects**

- Lao PDR: one of five countries initially selected from all over the world for the World Bank's Forest Investment Program. Twenty-five million US dollars will be given to the country as an incentive for the Lao Government to fundamentally reform forest governance. All projects in Laos are under development; none have been finalized yet.

- Cambodia: Seima Mondulkiri project run by Wildlife Conservation Society (WCS) on the forest area of 187,000 ha has been through the preparation process and implementation has begun. It is adjacent to another project run by WCS which is a commercial community forestry (CF) project seeking to take community forestry as a model that integrates legally a fully productive management system. There is also a vision to include that area in the REDD project over the next few years, which requires a lot of discussion with the Cambodian Government.

- Vietnam was the first country in the Mekong region to try to secure free, prior and informed consent (FPIC) of communities living in REDD pilot areas. FPIC is an essential part of UN-REDD country programmes. After initial trial exercises and workshops, there has been noticeable improvements in terms of consultation for local people, effective communication materials, well-trained facilitators. However there are still significant problems as communities were not given access to other information sources, there was very limited time for the consultation process, and it was not made clear to the communities what the "consent" would be given for.

### 4. Agriculture in the Mekong region:

Agriculture plays multiple roles in relating to climate change: as one of the causes or the emitters of greenhouse gases, as a sector that is directly affected, and as a solution to reducing GHGs through $CO_2$ sequestration.

*As an emitter:*

About 14% of all global GHG emissions come from the agricultural sector. This amount does not include $CO_2$ emissions from the conversions of forests to farmlands. Releases of methane from animal farms and nitrous-oxide from the use of chemical fertilizers are significant and these gases have a rapid warming effect on the planet. Nevertheless, it is particularly important to distinguish between small-scale farmers and large-scale farmers or industrialized agriculture when identifying the groups responsible for GHG emissions, as the latter emit much greater quantities of GHGs and, thus, should take greater responsibility.

*As a mitigation mechanism:*
There is a forecast that soil has a potential to absorb 5.5 gigatonnes of CO2 annually, and 90% is done through trapping carbon dioxide in the soil. Therefore, there have been attempts to reduce GHGs from the agricultural sector through what is called the LULUCF (Land Use and Land Use Change and Forestry) agreement, using techniques called biochar and no-tillage cultivation. The supposed $CO_2$ reductions could earn carbon credits under the Kyoto Protocol's Clean Development Mechanism (CDM). According to some critics, however, such schemes are likely to encourage land grabbing and impose the burden of GHG emissions-reductions onto small-scale farmers.

*As an affected sector:*
Climate change has directly affected agriculture yields. Increased temperature can affect pollination, increase pests and diseases, lead to higher evaporation and increased water requirements for crops. Irregular, unpredictable rainfall patterns, uncommonly heavy rainfall, increased incidence of storms and prolonged droughts can lead to recurrent crop failure, loss of livestock and reduced availability of fish and forest products. Extreme climate events are likely to be more frequent. Significant sea-level rises will bring salt water to coastal lands.

In Asia and the Pacific, more than 60% of the economically active population is dependent on agriculture for their livelihoods. According to reports from the ADB, if current patterns of warming continue, irrigated rice production in the region is expected to decline 14-20% and irrigated soya 9-18% in the next 40 years.

Despite indications of an imminent crisis for smallhold agriculture producers, there are few adaptation proposals in the UNFCCC with credible measures to tackle the impacts of climate change on food security and the livelihoods of small-scale farmers.

The Mekong river basin is the main 'rice bowl' for the Mekong region. The Mekong Delta has a very high population density and is especially vulnerable to

climate change impacts such as changes in upstream flows due to drought and heavy rainfall, as well as coastal storms and rise in sea levels. There are concerns that sea levels might rise by as much as 50cm to one metre by the end of the century. A rise of one metre would flood 5,000 sq. km. of the Red River Delta and 15,000-20,000 sq. km. along the Mekong River. A large variation in the flow of the Mekong makes this region highly vulnerable.

Climate change will greatly aggravate the problems facing small-scale agriculture, which is already troubled by existing crises such as indebtedness, shortage of land or the lack of land rights.

Climate change is used as justification by many governments and technical "experts" to promote irrigation infrastructure, which is linked to promoting agro-industry. Whilst this is claimed to improve food security (in a warming world) large-scale irrigation infrastructure negatively affects groundwater supplies and local rice production. Irrigation-fed agro-industry can also undermine social stability, for example, creating conflicts between upstream and downstream communities.

Climate change mitigation that only relies on CDM or market mechanisms that facilitate carbon offsetting in agriculture will mainly harm small-scale farmers and ignore the issue of local food production and security, which already receives little or no attention in a number of international fora.

### 5.False Solutions

The links between the capitalist economic system and climate change are evident and have been acknowledged in the famous quote of former World Bank chief economist and climate policy expert Nicholas Stern that "climate change is a result of the greatest market failure the world has seen". Despite this, there is a dangerous trend among most governments to look at the market and big business to show the way out of the climate crisis. The obsession with 'economic' solutions is evident in the UNFCCC, the Kyoto Protocol and in climate policies of most governments.

Not surprisingly, there is today a new climate for big business: from initially being skeptics and ardent critics of climate science many corporations now see tremendous profits in going along with the flow of scientific and public opinion.

The economic capture of climate policy has resulted in dizzying array of false and market-based "solutions" and quick fixes that allow big business and governments not only to avoid the problem of dealing with climate change, but to make money from the crisis as well. Communities, farmers, fish-workers,

forest and indigenous peoples therefore not only have to deal with the adverse impacts of climate change but also the adverse impacts of the market "non-solutions". The scenario today is that climate change policies in many countries, including developing countries such as India, are largely extensions, with some modifications, of current neo-liberal economic and development policies.

Below is an overview of how companies and governments are using the market and technology to frame "solutions" to tackle with climate change.

*Clean coal by Carbon Capture and Storage (CCS)*
Fossil fuel companies have been able to secure their interests in state policies on global warming by pushing the idea of clean coal technologies such as Carbon Capture and Storage (CCS). CCS is a technology based on extracting carbon from the emissions of factories and power plants typically power plants that burn coal and then compressing the carbon and carrying it through hundreds of miles of pipelines, and finally storing it in underground storage sites, including the sea bed. So rather than stopping pollution or replacing a fossil fuel, it allows current activities to continue. An influential climate study, authored by Nicholas Stern, states that development of CCS is essential for future climate policy.

This 'carbon sequestration' is primarily considered for coal power plants this is often used to argue that coal production could be "clean". The "clean coal" myth is exposed when the risks and the costs of CCS are counted: there is a high risk of "leakage", the technology may be able to capture only 30% of emissions, it is spectacularly expensive (projects have been abandoned in the USA because of spiraling costs), extra energy will be needed for capture, compression and transport of the $CO_2$ to the storage point (which has to be close to the power plants). So you need bigger coal power plants, more fuel and more energy. It has also been estimated that CCS-fitted power stations will need 90% more freshwater, which is a significant increase that is likely to lead to local water shortages and water-related conflicts. And it might be 2030 before it becomes "market ready."

*Agrofuels:*
The push for agro-fuels (also called biofuels) in climate and energy policies comes from lobbying by automobile and multinational agricultural corporations. Across the USA and European Union, governments are announcing policies for the inclusion of agro-fuels in the fuel for the automobile industry. Peasant groups such as La Via Campesina (LVC) an international network of peasant and family farmers unions and numerous researchers point out that agro fuels made from agricultural commodities such as palm oil, soy beans, corn and jatropha have as bad an impact on the climate

as burning fossil fuels. Most agro-fuels are grown on large monoculture plantations that require large-scale deforestation, disposess smallhold producers from their lands and eco-systems, displace food crops, deplete the soil and are water intensive, all of which actually contribute to climate change, as do the nitrous oxide emissions from applying the chemical fertilizers used to produce high yields. Emissions from oil are merely shifted to emissions from wasteful agricultural land use.

In many countries (for example, Brazil and Indonesia) rainforests are being plowed under for the expansion of agro-fuel plantations, destroying carbon stores vital to the regulation of native ecosystems and livelihoods. La Via Campesina also states that the Indonesian government policy will open up 750,000 hectares of sugar cane and 1.5 million hectares each of cassava, jatropha and oil palm plantations by this year (2010) for agro-fuels. According to a recent report by the environmental organisation, Friends of the Earth, in Borneo and part of Sumatra, some 4 million hectares of forest has been converted to oil palm plantations for the production of bio-diesel. In recent years the shift to agro-fuel production has contributed to the increased prices of grains. Consequently, staple foods are becoming less affordable for the poor and thousands have protested in Indonesia, Mexico and in many African countries.

Agro-fuel production has a real potential to out-compete food production, since the buying power of rich agro-fuel automobile consumers (in both the North and South) is greater than the buying power of the poor consumers.

Another market-driven non-solution is the promotion of genetically modified (GM) crops. So-called 'climate ready seeds' are being proposed for cash and food crops. It is feared this will grossly undermine food security, biodiversity and cause unforeseen consequences along with deepening the control of multinational corporations over the world's food supply.

*Nuclear energy:*
The nuclear industry is another sector to latch onto the climate crisis in the hope of staging a revival. Nuclear power is presented by its proponents as clean energy because no CO2 is emitted during the electricity generation process.

Yet huge amounts of energy are required for every other stage in the process, including the mining, milling and transportation of uranium; the construction of the power plants; and the reprocessing, storage and disposal of nuclear waste. At present, most of this energy comes from fossil fuels. Uranium is mainly mined in vast open-cast pits with obvious environmental implications and it is also very costly in India for instance the average increase over budget

for a nuclear plant is 300%. The safety of nuclear power plants is another serious concern.

In the Mekong region, Thailand and Vietnam have already put nuclear energy in their energy development policies. Thailand has proposed building five nuclear power plants between 2010-2030.

*Large dams:*
Yet another industry seeing a revival in the age of climate change is large hydropower. The World Bank has now stepped back into funding big hydropower companies in the Mekong region and in countries such as India. While hydroelectric dams do not require the burning of fossil fuels to generate electricity, they have deep ecological and social footprints and they still produce greenhouse gases. Newly-built dams flood thousands of acres of forests, killing trees and starting the decomposition of massive amounts of organic material. This accelerated decomposition releases methane and carbon dioxide ($CO_2$) into the atmosphere. Some reports indicate that the net release of $CO_2$ from hydroelectric dams in tropical regions is as high as the GHG emissions of a coal plant producing an equal amount of electricity (http://www.newscientist.com/article/dn7046 ) .

The Mekong River is the world's twelfth longest river and tenth largest in terms of annual water yield. Fed by numerous rivers and streams, it is highly seasonal in terms of water flows and the third most bio-diverse river in terms of fish species. Because of the abundance of rivers, favourable geography and high growth-oriented development models, dams have been promoted by the Mekong region's governments, bilateral donors and IFIs. These groups argue that energy and infrastructure for irrigation, water storage and distribution are needed to fuel productivity and economic growth in the region.

Plans for large-scale dam construction on the Mekong and its tributaries date back to the 1960s, although wars, conflicts and economic embargoes created a temporary hiatus until the 1990s. Over the past two decades, however, dam building plans have started to be realised at an alarming pace on the Mekong's tributaries as well as on its mainstream. China has already placed eight dams in the upper Mekong, and a cascade of eleven dams have been proposed for the lower Mekong. Scientific experts have joined local communities, civil society actors, public officials and journalists in pointing out that the dams will destroy the integrity and productivity of the Mekong aquatic system, and that a healthy river basin that serves millions of people with its natural abundance is infinitely more valuable than hydropower dams to serve regional energy needs.

*Market-based approaches to Climate Change: CDM and Carbon Trading*

Ineffective and abuse-prone market based solutions are at the very heart of the Kyoto Protocol in the form of flexible mechanisms that allow the industrialised countries (listed in Annex 1 of the UNFCCC) and companies to meet their emission reduction targets by buying carbon credits from developing countries. This is known as carbon trading, and it is a way of offsetting and bypassing their already meagre emission targets. The Clean Development Mechanism (CDM) permits trading in credits generated in developing countries through what is called additional sustainable development or carbon sink projects. (For more details on the CDM see Presentation 4 in Appendix 1. Market based approaches to Climate Change)

We are in an unprecedented situation. By burning fossil fuels over the past 150 years we have changed, and are set to continue changing, the composition of our atmosphere, transforming huge quantities of stored carbon into $CO_2$, a greenhouse gas (GHG) which absorbs and retains the sun's heat. The outcome of this experiment will be an increase in the world's average temperature, with a possibly irreversible impact on our climate and environment. Climate scientists warn that unless we massively reduce our use of fossil fuels, starting immediately, these temperature increases are likely to trigger tipping points, beyond which ecosystems change irreversibly, posing a serious threat to the fabric of human societies and economies.

Faced with the challenge, the governments of the world have, for nearly two decades, negotiated to adopt international climate treaties. These negotiations led to the UN Framework Convention on Climate Change and in 1997, the Kyoto Protocol intended to reduce $CO_2$ emissions in industrialised countries by an average of 5%, with the hope of eventually reducing further and replacing our economies' reliance on fossil fuels before it is too late. From the many different approaches proposed to achieve these reductions, governments chose a free trade, market-based system called cap-and-trade, more commonly known as carbon trading.

Many people, organisations and social movements believe that the enthusiasm for carbon trading is misplaced and the carbon market will fail to deliver, or even trigger, the structural changes to our economies that we need, in the timeframe we need to see them.

*Trading Carbon: How it's done*

Put simply, carbon trading is the process of buying or selling permissions to pollute. It is the system enshrined in the Kyoto Protocol and in the European Union's flagship climate policy the Emissions Trading Scheme (EU ETS). The

model used is called cap-and-trade, though in the Kyoto Protocol and EU ETS the cap is leaky (see below). A trading scheme does nothing to reduce emissions, it just allows polluters with emissions limits to manage the cost of compliance with the emissions target. The idea of the cap-and-trade scheme is that there is an overall limit on emissions (the cap) over a specific period of time, and a fixed number of permits. A polluting company must hold enough permits to allow it to release its emissions legally.

If Polluter A does not use all its permits, it can sell them to Polluter B that has already used up all its permits and needs more. The theory is that investment in emission reductions by Polluter A is rewarded, and Polluter B's failure to drive down its own emissions is punished, and so the market will drive down emissions.

In reality, at the end of the first phase of the EU ETS, total emissions by industries covered by the emissions trading scheme had risen by 1.9%. Defenders of the carbon-trading system will often accept that there are problems, but say these will be ironed out in due course. A closer look at the design of the EU ETS as well as the Kyoto Protocol's carbon markets however reveals that the problems are systemic and beyond remedy and therefore that carbon trading will fail to trigger the structural changes to our economies that we need in the timeframe we need to see them (see Chapter 2 of *Trading Carbon* for more details).

Clever bargaining by industries led to more permits being handed out than there were actual emissions during the first phase of the EU ETS and the economic recession since 2009 has also led to an overabundance of pollution permits in the second phase of the EU ETS, which runs from 2008-2012. Thus, as with the insufficient reduction target of the Kyoto Protocol, the EU ETS cap is the wrong size.

And the cap is leaky because the scheme allows the use of *carbon offsets*. Offsetting allows the polluter to exceed the emissions cap by paying someone else, somewhere else outside the cap, when they have run out of permits to cover their emissions. Thus instead of reducing their own emissions, they pay someone else to reduce emissions elsewhere instead. Offsetting is based on the assumption that it does not matter how or where emissions are reduced because climate change is a global phenomenon and emissions need to be reduced globally. Thus, emissions can be reduced where costs are cheapest - generally in developing countries in the South - while allowing emissions to continue in the capped country - generally the industrialised countries in the North, with least disruption to existing methods of production and at the lowest costs to those covered by the cap. In short, companies and governments pay

someone else to make reductions, somewhere else, because it's cheaper than doing it themselves.

Advocates of the offset system point to the many carbon reduction projects world-wide that are funded by the system; the savings to industry (and thus consumers and society at large); the flow of money from North to South; the export of new technologies to developing economies; and the incentives for innovation in low carbon technologies. The problem is, of course, that offsets do not reduce emissions, they just move them around from one place to another. Yet what is needed are steep reductions in emissions. In addition, the claimed benefits of offsetting are outweighed by other problems, such as the impossibility of verifying whether the reductions claimed are really extra reductions (see Chapter Three of *Trading Carbon* for why it is important and yet impossible to verify that offset credits are backed by additional reductions).

Contrary to the theory, few communities have been beneficiaries of offset projects. For the projects that generate the credits that are imported into the EU ETS, the someone else (paid to reduce emissions) is usually a large polluter located in an emerging economy in the South. The large majority of carbon offset credits approved by the UN's Clean Development Mechanism (CDM), the institution that decides which offsets can generate credits to be traded in the EU ETS, are generated in only a handful of countries: China, India, Brazil, Mexico and South Korea. Within these countries, it is the largest polluters who have been rewarded with certificates of emissions reductions by the CDM which they can trade to reap substantial profits. It is also important to remember that *offsets do not reduce emissions, they merely move them from one place to another*.

*Carbon Speculators*

Many people assume that carbon trading is a fairly simple process where companies with too many/few permits trade with each other, sell or buy offsets. That may be the text book version, but the reality is far more complex and convoluted. Today the carbon market uses many of the complex financial products that have come under such criticism for their role in the most recent financial crisis. Financial speculation rather than the need to comply with emissions targets is now driving the carbon market. The global carbon markets are now worth $144 billion. With the emergence of a new tradable asset, carbon trading has attracted all manner of speculators and investors, buying, repackaging and reselling carbon permits and credits. There is now a market in carbon 'derivatives' complex instruments mirroring practices found in other financial markets like the sub-prime mortgage market. There is now a market in 'carbon futures' and 'carbon securities', just like the mortgage-backed securities widely seen as key cause of the financial collapse of 2008.

Carbon is being marketed as a new asset class for investors. Some of the biggest players are now banks such as Barclays, Goldman Sachs, BNP Paribas and JP Morgan. These are not carbon emitters whose emissions are limited by the cap. They are in the carbon market, not to avert climate change, but to make money. These new carbon speculators profit from price volatility and instability the very opposite of the supposed goal of the market: to attach a predictable cost to pollution so that there are incentives for its reduction.

In reality, the market has consistently failed to find the 'right' price for carbon. The initial free distribution of carbon permits led to an over-allocation which led to huge windfall profits for some of Europe's largest polluters. The ten companies benefiting most will have gained an estimated €3.2 billion over 2008-2012 (see www.sandbag.org for updated figures). In April 2006, the price of EU ETS carbon permits plunged to just €10 per tonne of CO2. According to the market, the cost of pollution was virtually nothing as was the reward for reducing emissions.

The carbon market also provided financial support to some of the largest polluters during the 2008 financial credit freeze: Whilst non-polluting industries have suffered the full brunt of the lack of available credit during the most recent financial crisis, the large polluters within the EU who had received free carbon permits converted these free permits they had "earned" (ironically, for long histories of high emissions) into cash (by selling them). Thus, the polluting industries had access to cash when banks refused to lend during the financial meltdown in 2008. This option was not available to low-carbon enterprises that had not "earned" an allocation of free permits. Ironically, and scandalously, the carbon market therefore rewards polluters and gives them an advantage over their low-carbon competitors.

*Vested Interests*

The price of carbon has never been high enough to force genuine investment in low-carbon energy infrastructure. But even if demand for permits were ever high enough to make prices spike, governments have agreed to find ways of bringing the price of carbon down again. There are regulatory checks in place to ensure supply and demand will not be allowed to price polluters out of the market. Unlike commodity markets (oil, gold, wheat, etc), the carbon market does not buy and sell a tangible product. It was set up to accelerate the phasing out of the very source of the raw material that its trade is based on (fossil fuels) the opposite function of all other markets. And while trading itself does nothing to reduce emissions, it does create a new vested interest group with no desire to see the end of the carbon economy because carbon is the very object of their trade.

*Trading is a distraction that does nothing to reduce carbon emissions*
Trading itself does nothing to reduce emissions. The trading only exists to allow polluters a marginal reduction in the cost of complying with the rules to limit emissions, known as the "cap". The danger is that trading gives the impression of action, while the cap (the active component of the scheme) - remains at too large a size to avert runaway climate change and refining of the trading details is using up time and energy that could be much better used elsewhere. The frenetic activity of the derivative traders in the secondary carbon market, churning and re-churning credits and permits on their convoluted path from original owners to end users, adds nothing either - except to their own profits. They do however constitute a new vested interest group with no desire to see the end of the carbon economy - the source of the commodity they trade.

Carbon trading delays the structural reforms that the most polluting industries urgently need to initiate if they are to meet the longer-term reduction targets and help the transition to a low carbon economy. Three years ago, the Stern report on the economics of climate change argued that each year, if we don't take action, the cost of future action grows exponentially. As carbon trading is not reducing global carbon output, reliance on carbon trading as the central pillar of UN climate policy is building up unbelievable future costs.

All carbon trading does is to give capped industries and countries a means of meeting short-term reduction targets without making necessary changes. By focussing on short-term cost reductions, carbon trading will in the long run prove to be the more costly approach for everyone. Meanwhile, the more time that is spent trying to fix the problems of the carbon markets, the more careers, jobs and institutions that become tied up with carbon trading, and the more difficult it becomes to dismantle.

## 6. The International picture: United Nations Framework Convention on Climate Change (UNFCCC)

The countries that share the Mekong river basin, Cambodia, China, Lao PDR, Myanmar, Thailand, and Vietnam, are all members of the United Nations Framework Convention on Climate Change (UNFCCC) and have ratified its Kyoto Protocol (KP). This section provides an overview of the international process and negotiations under the UNFCCC and Kyoto Protocol .

The UNFCCC was adopted at the 1992 World Summit on Sustainable Development, in Rio De Janeiro, Brazil, followed by the legally binding 1997 Kyoto Protocol which entered into force in 2005. While the UNFCCC has been

ratified by 192 members, its Kyoto Protocol has ratified by only 191 countries (the USA has not ratified the Kyoto Protocol)
Parties to the UNFCCC are allowed to participate in the Conference of Parties (COP). The Convention provides a framework of key principles, and has established negotiation bodies for deciding on specific issues and targets, but it has not stated specific binding targets for reducing emissions for each country. The UNFCCC is a place for parties to gather and share information on GHG emissions, national policies and best practices, to launch national strategies for addressing GHGs and adapting to expected impacts--including provision of financial and technological support to developing countries for adaptation-- and to cooperate in preparing for adaptation to climate change impacts. A number of key principles clearly stated, and adopted by all Parties, have been fundamental to the climate negotiations, including

> *"The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities .,. The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects."*

Developed countries (listed in Annex 1 of the Convention) have to take the lead in reducing their GHG emissions, while developing countries (those countries who are not listed in Annex 1 of the Convention) will manage their emissions under a sustainable development pathway with financial and technological supports provided by developed countries. This indicates that the capacity of developing countries to reduce their emissions depends not only on their respective capacity but significantly on the level of support from developed countries.

The Kyoto Protocol is legally binding, and contains specific emission reduction targets for developed countries. These countries referred to as Annex I Parties are required to reduce their collective GHG emissions by 5.2% below the emission level of 1990, by the first commitment period of 2008-2012. To achieve this, three "flexible" mechanisms were proposed in the Kyoto Protocol: Joint Implementation (JI), Emissions Trading (ET) and Clean Development Mechanism (CDM). The first two can be implemented among developed countries while the CDM can be implemented only between developed and developing countries. CDM activities must be located in developing countries (also called host countries).

*Structure and negotiation groups:*
The UNFCCC has two main subsidiary bodies the **Subsidiary Body for Implementation** (SBI) and the **Subsidiary Body for Scientific and Technical**

**Advice** (SBSTA) -- which meet at least twice a year. The SBI oversees issues related to implementation (for example financing, rules and guidance) while SBSTA addresses technical issues before implementation (for example scientific studies, choices of technology, methodology, good practice guidance, technology transfer, capacity building, national communications).

Both bodies propose their outcomes to the full **Conference of the Parties** (COP) for approval. The COP is a formal negotiation space or forum for Parties to the Convention. Senior decision makers from each member country meet at the COP once a year, and it is at these meetings that political decisions are formally negotiated and adopted.

The outcome of the Bali Action Plan (BAP) in 2007, a comprehensive process to enable the "full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012" was the establishment of two formal processes to start the next phase of negotiations. The first is the **Ad hoc Working Group on further commitments for Annex I Parties under the Kyoto Protocol** (AWG-KP) where parties meet to draft technical and political recommendations for further commitments of Annex I after 2012. This working group prepares detailed recommendations on mitigation (reducing emissions and averting global warming) by Annex I and Non-Annex I Countries, also by different sectors, and also recommendations on response measures. The second is the **Ad-hoc Working Group on Long-Term Cooperative Action under the Convention** (AWG-LCA), where Parties meet to draft technical and political recommendations for long term cooperative action (based on the Bali Action Plan), i.e. shared vision, enhanced action on adaptation, mitigation, finance, technology transfer and capacity building.

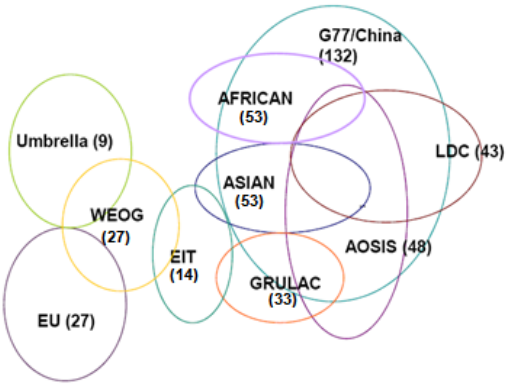
Elements of the BAP include mitigation both for developed and developing countries. For developed country Parties, mitigation will have to be 'measurable, reportable and verifiable (MRV) commitments or actions, including quantified emission limitation and reduction objectives in accordance with the provisions and principles of the Convention, while ensuring comparability of efforts among them'.

For developing countries, the BAP supports 'Nationally-Appropriate Mitigation Actions (NAMAs) in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner. Additionally the BAP includes enhanced action on adaptation, enhanced action on technology development and transfer, and enhanced action on the provision of financial resources and investment. All elements are to be given equal treatment and discussed in an integrated

manner'.

In addition to the formal structure of negotiations, informal processes also play an important role in achieving the agreed outcomes. These informal negotiations are where different negotiation groups come up with common positions. Key negotiation groups include 132 developing countries, who are allied to the Group known as the G77 and China (this includes all the countries of the Mekong). Among the developed countries there are several groupings, including the under EU (15 countries[7]), JUSSCANNZ (7 countries[8]), Umbrella Group (9 countries[9]) and Economies in Transition (EIT 14 countries[10]). The G77 and China comprises different interests such as Organisation of Petroleum Exporting Countries (OPEC), the Alliance of Small Island States (AOSIS), the Least Developed Countries (LDCs), the African Group, and the Group of Latin Americans and the Caribbean (GRULAC). The Association of Southeast Asian Nations (ASEAN) and Asian countries do not generally meet as negotiation groups distinct from the G77. The overall groups of countries are illustrated in Figure 1 below.

**Figure 1: Groups of countries in climate negotiations[11]**




7 Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and UK

8 Japan, U.S.A., Switzerland, Canada, Australia, Norway and New Zealand

9 Japan, U.S.A. Iceland, Canada, Australia, Norway, New Zealand, Russian Federation and Ukraine

10 Not yet a negotiation group, including Belarus, Bulgaria, Czech Republic, Slovakia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russian Federation, Ukraine, Croatia and Slovenia

11 Adjusted from Chaw Kok Kee's presentation in 2009 during a negotiation training workshop in Thailand. WEOG refers to the "Western European and Others Group",

There are always complications and difficulties to arrive at common positions, especially in groups such as G77 and China in which there is such great diversity of interests.

*Deviation from original intentions of the Convention:*
There have been a number of attempts particularly from developed countries to deviate from the original statements and intentions of the Convention. Developing countries are being influenced and are under pressure to take on binding targets for emission reductions, undermining the principle agreed in the Convention:

> *"Protect the climate system for the benefit of present and future generations, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof."*

In the Preamble to the Convention it is noted that

> *"the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low, and that the share of global emissions originating in developing countries will grow to meet their social and development needs".*

These quotations from the Convention text clearly recognise the principle of differentiation, and show that developed countries must take responsibility for reducing their emissions. The question of historical emissions is now being undermined.

Climate "equity" -- the principle that rich countries spent a century polluting the planet and now bear more responsibility for reducing it -- is in danger of disappearing from the international negotiations. A completely new interpretation is being promoted by developed countries of the cherished tenet that developed and developing nations share a duty to reduce GHG emissions but will go about it in different ways, based on each country's capacity and historical responsibility for polluting.

The "common but differentiated responsibilities" doctrine has been a cornerstone of climate negotiations since 1992. Additionally, Article 4.7 stipulates the key to the balance of common but differentiated responsibilities. According to Article 4.7,

> *"The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related*

> *to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties."*

We have not yet seen this repeated in the outcome of the negotiations. Rather, we see the inclusion of market mechanisms as a means to provide finance and technology transfer.

Regarding the objectives of the Convention,

> *"to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system… Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner".*

There are visible attempts to include the agricultural sector in the emissions reduction regime, which would threaten food security in developing countries and in fact, in the world.

**The 15th Conference of Parties (COP) at Copenhagen:**

Despite high expectations for an ambitious and binding outcome, before and during the Copenhagen COP in 2009, the result was a weak and ineffective 'Copenhagen Accord'. The Copenhagen Ministerial Meeting is now widely considered a failure. Frustration about the UNFCCC process and the need for improvements in the negotiation process especially in transparency and engagement with civil society is obvious. Trust building is needed after several breakdowns in the negotiations in Copenhagen. According to the Copenhagen Accord, all major emitting countries promised to reduce their emissions and rich countries promised funding for adaptation, technology and forest protection. Key developed countries, especially the USA, focussed primarily on how to ensure that mitigation efforts from major developing country emitters can be verified, while other countries want to focus more on ensuring that the US$30 billion will actually arrive by 2012.

Despite the failure at the official negotiations, Copenhagen also brought about positive momentum to the civil society movements on the other hand. It was an important moment for public interest groups, and there was tremendous support for climate justice demands such as keeping warming to a 1.5 degree limit, including from the scientific community and progressive governments such as Bolivia and Cuba.

7. **Climate Justice is the only way ahead: at local, national, regional and global levels.**

*Climate Justice Now Network:*
Since the 2007 COP in Bali, the concept of climate justice has gained considerable support. While the precise meaning of climate justice is not yet settled, the ideas and principles that inform groups advocating it include:

- Distributive justice: everyone should get the same share of resources and emission quotas
- Restorative justice: damages done to the ecology should be remedied
- Historical justice: Those most responsible for global warming must take the lead
- Moral justice: It is unjust that those who have contributed least to climate change are the most affected: the impacts are uneven, the most vulnerable are most affected
- Legal justice: Rights of indigenous and other marginalised communities must be protected
- Transformative justice: the system must be changed to ensure that the injustices do not happen again

While several groups have embraced the term climate justice (including governments such as Bolivia under Evo Morales), the Climate Justice Now (CJN) Network is among the most prominent. See Appendix 2 for the initial Bali Statement from the Network.

*What does Climate Justice mean in the Mekong region?*
In the Mekong countries, governments have claimed since the early 1980s that poverty legitimises the drive to use their country's abundant natural resources to generate wealth and income. This common situation across the region has created an artificial tension between the environment and people's livelihood. After a few decades of open market economy, not only has biodiversity loss occurred within each country, but also, the region is wracked with conflicts over natural resources both within and among countries. A range of actors including governments, the private sector and certain NGOs are responsible for the current situation.

Climate change comes in as a cross-cutting issue on top of the unsustainable development model that continues to be implemented in the region. In order to build linkages on these issues the ASEAN-Civil Society Dialogue on

Environment is urging the Association of South East Asian Nations ASEAN[12] to place strategic focus on the environment to address climate challenges in the Mekong region and other parts of the ASEAN. This process began in earnest at the ASEAN Peoples Forum in October 2009, where a new "environmental pillar" was proposed on which to build the ASEAN community as a necessary addition to the pillars of security, economy and socio-cultural harmony. The three core issues of the proposed environmental framework are large-scale projects, climate change and biodiversity. These three themes were perceived by ASEAN civil society groups as the key environmental issues that ASEAN governments should pay more attention to.

Advocates of climate justice are extremely concerned about the carbon markets, including the United Nations REDD programme which is expected to be part of a post-2012 carbon market. Concerns about REDD (see also section 5 on REDD above) include:

- Questioning its governance framework, design and implementation,
- Long-standing land tenure insecurity of forest communities,
- Failure to require that REDD programmes comply with international obligations in relation to human rights, including indigenous peoples' rights enshrined in the United Nations Declaration on the Rights of Indigenous Peoples;
- Lack of transparency in implementation at the national level, consultations are neither broad nor meaningful; and lack of assessment of forest governance and alignment with relevant national policies;
- Absence of attention to equity issues (who owns carbon, who benefits and who gets marginalized from carbon trading)
- Unclear plans to address deforestation and degradation caused by mining and industrial logging concessions.

In the Mekong region, for the people and civil society groups, what is crucial is the recognition of common concerns, the 'real issues' and ability to work together using regional platforms such as the civil society network on ASEAN.

*At the national level: Thailand*

Among the most vibrant climate networks in the ASEAN region is the Thai Working Group for Climate Justice or TCJ. The network is a member of the CJN network. It was formed in early 2008, by a group of environmental NGOs including the Biothai Foundation, Foundation for Ecological Recovery/Towards Ecological Recovery and Regional Alliance (TERRA), Alternative Agriculture Network (AAN), Ecological Alert and Recovery Thailand (EARTH), Focus on

[12] All Mekong countries are members of the regional forum called Association of South East Asian Nations.

the Global South and other members of the NGO- Coordinating Committee on Development (NGO-COD). TCJ has allies in other networks such as the Assembly of the Poor, Northern Resources Network, Thailand Land Reform Network, Surin Community Forest Network, Dong Khum Kham and Phu Kham Community Forest of Ubon Ratchathanee, Regional Alternative Agricultural Network, Thailand Indigenous Network, Southern Women Traditional Fisheries Network, Southern Traditional Fisheries Association, and Energy and Industry Network.

In 2009, TCJ questioned the false market-based policies and focussed on broadening the ambit of climate discussions beyond the issue of CDM and carbon credits. In a bottom-up process, TCJ and allied networks have consolidated local concerns, needs,and perspectives and written a people's position paper on the COP 15 negotiations at Copenhagen.

TCJ hosted the Asian People's Solidarity for Climate Justice, on 5 October 2009 in Bangkok where around 3,000 people from Southeast Asia and international groups called for the industrialized countries to deliver on GHG mitigation goals through immediate action back home. The issue of historical climate debt was also highlighted.

*Common threads on climate change across the Mekong region*

Based on the common threads that emerged from discussions over three days, workshop participants agreed that peoples' networks and coalitions, civil society organisations, researchers and academics need to collaborate in order to bring public attention to the social, economic and environmental impacts of the dominant development model in the Mekong region and how it is linked to climate change, and to build popular pressure on governments to take appropriate steps to change the development model and tackle climate change. Below is a summary of the types of actions that participants proposed.

*Community empowerment:*

- Create awareness of, and strengthen actions/movements for, the rights of communities to their resources;
- Work with local communities to analyse and understand links between their realities and the issues they face, and climate change;
- Show the impacts of climate change especially those that are already apparent--to highlight the need for changing the development model;
- Reinforce sustainable agriculture and fisheries;
- Reinforce traditional knowledge and practices that are genuinely climate friendly and sustainable;

*Public education*

- Use media to increase public understanding of the causes and impacts of climate change;
- Educate the public and governments about the causes and real problems of climate change, and of appropriate, and lasting solutions;
- Show the impacts of Economic Land Concessions (ELCs), dams, extractive industries, and production and consumption on the environment, people's livelihoods and food security;
- Build public pressure on IFIs to stop funding extractive industries and other unsustainable projects;
- Build public support for alternative sources of energy;

*National policy reform and Structural Changes*

- Push governments to disclose information about projects, plans and schemes;
- Show the impacts of ELCs, dams, extractive industries, and unsustainable production and consumption on the environment, people's livelihoods and food security, to the public and governments;
- Push the public and governments to rethink the development model, especially how our natural resources are used and for what purposes they are used;
- Build public pressure on IFIs to stop funding extractive industries and other unsustainable projects;
- Build public support for alternative sources of energy;
- Shift the climate discourse away from attention on forests alone (17.5 % of emissions) to the major sources of GHG emissions (82.5% come from industry, unsustainable production and consumption, overuse of fossil fuels, etc.);
- Share information among people in the region about development projects and climate change impacts.

## APPENDIX 1

List of presentations from the workshop. Click to access a PDF copy of the file:

1. Aug 9 2010 Climate Change and Future Development Challenges.pdf
2. Aug 9 2010 Economic capture of Climate change debate.pdf
3. Aug 9 2010 Politics in UNFCCC negotiations.pdf
4. Aug 9 2010 Market Based Approaches to Climate Change.pdf
5. Aug 9 2010 Aiding or Exacerbating Climate finance_WBG_forestry_Mekong.pdf
6. Aug 9 2010 FERN Tradingcarbon_why its controversial.pdf
7. Aug 9 2010 UNFCCC and the Climate Negotiations.pdf
8. Aug 10 2010 REDD_in_the_Mekong.pdf
9. Aug 10 2010 REDD Project Indonesia.pdf
10. Aug 10 2010 REDD Local People and Community Forestry.pdf
11. Aug 10 2010 REDD readiness in Vietnam.pdf
12. Aug 10 2010 REDD in Thailand.pdf
13. Aug 10 2010 Lao REDD.pdf
14. Aug 11 2010 Climate Change and fisheries.pdf
15. Aug 11 2010 Climate justice in the Mekong.pdf
16. Aug 11 2010 Climate Change & Agriculture.pdf

**APPENDIX 2** - 2007 Bali Statement from the CJN network

Climate Justice Now! is a network of organisations and movements from across the globe committed to the fight for social, ecological and gender justice.

Climate justice is based on the understanding that, while climate change requires global action, the historical responsibility for the vast majority of greenhouse gas emissions over the past 250 years lies with the industrialised countries of the North. Cheap energy in the form of oil, coal and gas has been the engine of their rapid industrialisation and economic growth.

Communities in the Global South as well as low-income communities in the industrialised North have borne the toxic burden of this fossil fuel extraction, transportation and production. Now these communities are facing the worst impacts of climate change from food shortages to the inundation of whole island nations.

Inside the global climate negotiations, rich industrialised countries have put unjustifiable pressure on Southern governments to commit to emissions reductions. At the same time, they have refused to live up to their own legal and moral obligations to radically cut emissions and support developing countries' efforts to reduce emissions and adapt to climate impacts.

Climate Justice Now! will work to expose the false solutions to the climate crisis promoted by these governments -- alongside financial institutions and multinational corporations such as trade liberalisation, privatisation, forest carbon markets, agrofuels and carbon offsetting.

We will take our struggle forward not just in climate talks, but on the ground and in the streets, to promote genuine solutions that include:

- Leaving fossil fuels in the ground and investing instead in appropriate energy-efficiency and safe, clean and community-led renewable energy
- Radically reducing wasteful consumption, first and foremost in the North, but also by Southern elites.
- Huge financial transfers from North to South, based on the repayment of climate debts and subject to democratic control. The costs of adaptation and mitigation should be paid for by redirecting military budgets, innovative taxes and debt cancellation.
- Rights-based resource conservation that enforces Indigenous land rights and promotes peoples' sovereignty over energy, forests, land and water.
- Sustainable family farming and fishing, and peoples' food sovereignty.

We are committed to building a diverse movement locally and globally for a better world. Climate Justice Now!