Locating "Climate Justice" within a National Context

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Abstract

Many explorations of climate justice have focused on the international sphere, centring attention on the historical responsibilities of industrialised nations for the reduction of greenhouse gas (GHG) emissions and the financing of climate change policies, the imbalance in geopolitical power that has influenced and stalled decisions at the United Nations Framework Convention on Climate Change (UNFCCC), and the structural changes needed as the world re-thinks development. This article presents a discussion of articulations of climate justice in a national context, exploring the case of Thailand, a middle-income country with a fast growing economy and a high trajectory of increasing emissions, but not listed in Annex 1 of the UNFCCC. These articulations are grouped and discussed within a framework of justice amongst people, justice to a place, and justice through time. A more comprehensive consideration of climate justice at the national level could point Thailand towards substantially different approaches in the short, medium and long term, than those currently being implemented to address the climate crisis.

Keywords: Climate justice; system change; low-carbon society; Thailand

Introduction

While many communities in Thailand have lived with and adapted to annual flooding, the pressure of the floods at the brink of Bangkok in late 2011 marked a very vivid reference point in the public discourse on climate change. Over 800 lives had been lost, harvests from around 2 million hectares of paddies, upland plots and orchards ruined, and countless homes damaged. The waters brought many normally "indispensable" economic activities to a halt, some factories were stalled for months. As food distribution centres were flooded, major corporate food supply chains were stalled. Panic buying of tinned and dried goods set in, even though many of the city's wet markets remained stocked with fresh produce and rice, and continued trading throughout the crisis. Shortages were most conspicuous in the availability of drinking water. Electric power was cut off in a few areas, enough to raise concerns about how to live without

electricity - without rice cookers, refrigerators, fans, air conditioning, mobile phones and computers, amongst other machinery. In all, the flood put into sharp focus the serious and very visible impacts that a series of heavy rainstorms in a short space of time might bring upon economic, food, water, and energy security at local and national scales.

The distribution of impacts of the flood were not determined by nature alone. Non-transparent choices were made to protect and respond to different sectors of the population and the economy in different ways. Homes and communities on the wrong side[1] of the sandbagged flood barriers, such as Rangsit, Ayutthaya and Phuttamonthol, were left to fester under water for months for the sake of keeping the inner sanctum of Bangkok dry, home to the élites and key political and economic institutions. In the end, many barriers proved inadequate, some deliberately destroyed by aggrieved residents.

Climate change threatens to wreak extreme weather events more frequently, not least in the South East Asia region [1]. How to share the responsibilities for mitigating the climate crisis, and how to alleviate the inequitable burdens of climate impacts, have been central to the climate policy debate since the drafting of the 1992 Rio Convention. The United Nations Framework Convention on Climate Change (UNFCCC) enshrined in law the principle that 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" (Article 3).

"Climate justice" emerged as a call amongst various social movements and activists from around the early 2000s to contest the inade-quacy and inequity of the global response to anthropogenic climate change[2]. The concept has drawn together men and women involved in grassroots struggles, for example those fighting to preserve their land and other natural resource rights or against polluting industries, and those working on international campaigns concerned with north-south debt cancellation and the broader *altermondialiste* critiques of mainstream economic development policies [2]. Attention has centred on unmet historical responsibilities of industrialised nations for the reduction of greenhouse gas (GHG) emissions and for financing of policy intervention, critiques of the imbalance of geopolitical power within the UNFCCC, and proposals for structural changes needed as the world rethinks development[3].

The climate justice concept is evolving, in the context of the UN climate talks, in the crucible of the international social movements, and also at national level. Grassroots mobilisations on climate justice have been growing in many countries of the South, pulling into focus local and national leader-ship in the response to climate change. In Thailand the term has been in the public sphere since the preparations for COP15 in Copenhagen in 2009. To gather articulations of how climate justice is beginning to be understood within the Thai context, semi-structured interviews were conducted with 18 key informants in different regions of Thailand, from various sectors of Thai society whose work has led them to engage in national climate change debates. These included relevant government agencies (Office of Natural Resources and Environmental Policy and Planning, Thailand Greenhouse Gas Management Organisation, and National Economic and Social Development Board), business, community campaigners, academics, and NGOs. Their responses and some of the challenges for justice that were raised have been grouped and are discussed below under three headings reflecting justice amongst people, justice to place, and justice over time.

Out of the international spotlight

Thailand is not listed in Annex I to the UNFCCC and as such is not bound to a quantified target for reducing its GHG emissions under the current UN climate change regime. It is however bound by the general obligation on all Parties to reduce emissions to the extent feasible (Article 4). Nevertheless, one key government officer noted a general attitude that proposals to tackle the climate crisis are perceived as foolish in the absence of a firm legal or regulatory commitment on non-Annex I countries. This presents a major hindrance as, given the nature and extent of the problem, policies to address climate change must be cross-sectoral. Without strong backing, such as an election manifesto commitment or a "National Agenda" imperative directing all members of the Cabinet to tackle the problem together, actions proposed by one agency are rarely considered priorities for other responsible government agencies.

National GHG emissions are increasing, and have begun to take a steep trajectory (see figure 1). The country has steadily climbed in the global ranking of GHG emitters from 31st in 2000 to 20th place in 2011 [3, 4]. By 2030, carbon dioxide emissions are expected to rise threefold in comparison with 2005 levels if Thailand continues with "business as usual" (BAU) (11). Thailand's emissions intensity per GDP is now the highest among South East Asian economies at 789 tonnes per million US dollars. The ASEAN and world averages are 747 and 602 tonnes per million US dollars, respectively in 2010.

Average per capita emissions in Thailand were estimated at 4.3 tonnes of CO_2 per capita in 2009 [4]. In a BAU scenario, Thailand's national GHG emissions per capita are expected to rise to 8.2 tonnes of CO_2 per capita in 2030 [5]. In the capital, Bangkok, annual emissions have been calculated as

high as 10.7 tonnes of CO_2 per capita [4]. The city's per capita emissions have, for several years, surpassed those of New York, London and Tokyo.

The increasing use of fossil energy is the main driver of higher emissions. Data from 2000 shows that 70 per cent of Thailand's national GHG emissions are from the energy sector, mostly from fossil fuel combustion [6]. This is expected to rise; by 2030, final energy demand is expected to triple compared with 2005 levels under a BAU scenario [5]. By contrast, the total GHG emissions from other sectors are expected to remain relatively static, including agriculture, industrial processes waste,[*] and land use, land use change and forestry. The land use, land use change and forestry (LULUCF) sector has constituted a net carbon sink since the year 2000 [4].
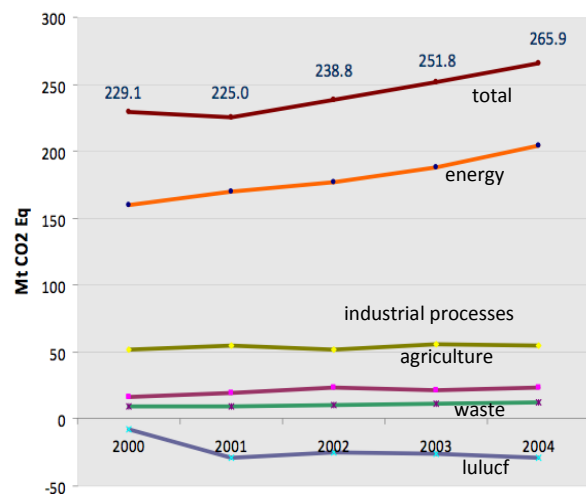
Figure 1 Total GHG emissions by source in Thailand from 2000-2004. Source of data: [6]

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[*] This category does not count industrial consumption of energy
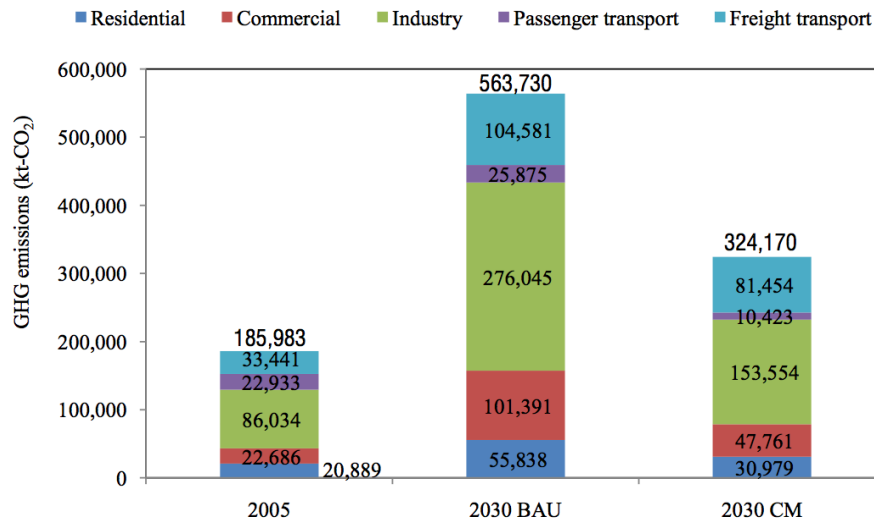
Figure 2 Projected GHG emissions based on primary energy demand from different sectors in Thailand 2030 comparison with 2005. BAU represents a business as usual scenario, while CM represents a countermeasure scenario. Source: [5].

1. Justice amongst people

The first group of articulations explored a sense of justice amongst people. Most typically, these reflected the need for a fair distribution, among different groups of people and sectors of the economy, of responsibilities for mitigating and sharing the burden of impacts, without imposing adverse impacts on the poor.

Distributing responsibilities

On reducing emissions, the need for a fair distribution of responsibilities for mitigation was raised by most interviewees. The Thai climate justice network have argued for applying a "common but differentiated respon-sibility principle" within the country, such that those who emit more should take more responsibility for reducing their emissions. The evidence for the year 2005 [5]. indicates that the energy production sector is where the greatest amounts of GHG are emitted. Emissions from energy are attributed primarily to demand from the industrial sector (46.26%), the transport sector (30.31%), including freight transport, (17.98%) and passenger transport (12.33%). Energy demand from commercial

and residential sectors amounted to 12.20% and 11.23%, respectively.

Interviewees from the Office of Natural Resources, Environmental Planning and Policy (ONEP), from the National Economic and Social Development Board (NESDB) and from the Thailand Green-house Gases Manage-ment Office (Public Organisation) (TGO) all affirmed that the primary efforts in mitigation must focus on emissions reductions in the industrial and energy production sector, based on the over-whelming contribution of these sectors to national emissions as outlined above.

However it was notable that in an interview with a senior officer within the NESDB, despite reaffirming the importance of industry in generating emissions several times, the discussion kept returning to how mitigation could be achieved by farmers, and how environmental destruction is caused by the poor, citing in particular farmers who burn the forest. It should be noted that the Directorate that responds on climate change issues focuses on Agriculture, Natural Resources and Environment, while matters related to industry are addressed by another department.

He was not alone amongst interviewees

from the capital in raising agriculture in the forests as the "first-in-mind" contributor to global warming in Thailand. It may seem odd that this opinion should be so tenacious in the face of clear official data that land use, land use change and forestry (LULUCF) in Thailand do not, on balance, contribute to global warming. The category of LULUCF combines an assessment of carbon emission (from deforestation and land clearing for example) on the one hand, with assessments of carbon sequestration (from forest regeneration, crop changes and new vegetation growth for example) on the other. Currently available figures show that from 2000 LULUCF results in a net carbon sink [4], helping Thailand every year to lower its contribution to global warming.

However, for decades, those most instantly associated with environmental destruction in Thailand have been the people who live in the forest zones. This narrative has been institutionalised in the Forest Master Plan which singles out "forest destruction by ethnic minorities" and places special emphasis on "shifting cultivation" which is practised only by certain groups in the forest zones. Political and socio-economic history studies have revealed a contrasting, more complex picture of the pressures on forest resources, factoring in demographic change, military-backed strategies to root out political insurgents, and policyled land use intensification and conflict [7, 8]. Furthermore, many community-based studies have described the ways in which different forest communities, despite significant pressures, continue to contribute to the conservation of the forests through a combination of traditional and adapted natural resource management techniques and practices [9] cited in [10]; see also [11] on carbon sequestration.

Yet, efforts to challenge the dominant narrative are hampered by the systematic disempowerment of people in the forest whose tenure rights to the forestland are not recognised. Communities demand recognition of their land rights, based on continuous occupancy and land use dating long before the unilateral decisions were taken by the government to establish National Parks in those areas. As long as the rights of forest peoples remain insecure, government attempts to "conserve the forest" are likely to perpetuate the injustices of exclusion, prejudice, and deprivation of livelihoods of the people living in the forest.

The dominant narrative of environmental destruction by forest dwellers has also been adopted now to attach blame to forest people for causing carbon emissions (see Figure 3). Throughout the country, small-scale farmers living and farming in nominal "State" forest land who cut down trees, regardless of whether they subsequently plant similar species, or allow the forest to grow back as part of their farming and cultural practices, are being criminally prosecuted and sued in the civil courts. Exclusion orders have been posted in recently cleared swidden fields, reportedly in all the Karen villages of the Northern region of Thailand, to indicate their seizure by the government, prohibiting that year's cultivation. One Karen villager stated, "When we go to negotiate with the government representatives, they tell us our culture is good, but then say we must stop destroying the forest. So instead of us negotiating, insisting to meet with the Prime Minister, demanding our rights in the [forest] area, we end up having to argue with them to convince them of all the ways in which we don't destroy the forest, how we live with the forest. They have a prejudice against us. A destroyed climate, or a destroyed planet, or the flood, these are all used as reasons to block our space to move forward in calling for the same rights as everyone else".

Since 2003, a standardised formula has been officially approved in Thailand to calculate civil damages for causing, amongst other damages,

Figure 3 Series of 3 posters on roadside from Chiang Mai to Chiang Rai. The three billboards say that 1 (left): Setting fire to the forest creates global warming, 2 (middle): causing major disasters (flooding), 3 (right): causing landslides and flash floods. Issued by the Chiang Rai Forest Fire Department. The term "setting fire to the forest" is used to describe man-made fires in the forest, including swidden field preparations. While studies have shown that traditional swidden practices are designed to conserve soils and water and do not result in a net emission of GHGs, government campaigns such as this serve to shape public opinion and incriminate swidden farmers.

increased temperatures, evapotranspiration, reduced rainfall, reduced soil infiltration, soil erosion, loss of soil nutrients as a result of cutting trees in the forest. A letter was issued on 19 Jan 2006 by the National Parks Department to pursue such civil damages more strictly against forest encroachers. The directive was expanded with effect from 1 October 2010. The most recent version of this formula includes a calculation of damages for causing reduced capacity of the forest to sequester carbon. In 2012, a group of small-scale farmers in Trang province, linked to the Land Reform Network of the Bantad Mountain Range, who have been held liable for hundreds of thousands of baht per head in damages for environmental destruction in such cases, began a challenge in the Administrative Court to the State's "unjust" use of this formula. One of the leaders of the farmers group argued "The [small farmers today] have been farmers [here] for a long time. Our grandparents' generation did the same as us, they planted rice, fruit trees, chillies, food just like us. Why is it that in the past, the world was never warm like it is now at present? Are we really the primary culprits?".

While prosecutions and civil cases are being carried out against individual small-holders living in the forest areas, far less critical attention has been placed by the Thai government or the public on corporations or individuals within the industrial sector. This sector is a major consumer of energy, and it is primarily for this sector that expansion in fossil-fuelled power plants is currently being planned. Direct mitigation measures, such as placing controls on the type of industrial expansion that requires substantial additional fossil energy supplies, could have a major impact on future emissions reductions, and yet there is a near silence amongst politicians on whether Thailand should go about this and how this might be achieved. Limiting emissions from the industrial sector has proven difficult. The largest industrial complex in Thailand is Maptaphut in Rayong province on the Eastern Seaboard of the Gulf of Thailand. It comprises five estates with over a hundred separate plants, including petrochemical plants, iron and steel mills coaled-fired electricity generation, oil refineries and natural gas facilities. Although many foreign companies have significant investments in industries here, much of the investment in Maptaphut is

controlled by five domestic investment conglomerates. These are amongst the largest in the country, and are reported to have close relationships with the political power structures of the country. A petition to the Central Administrative Court in 2009 by local people to halt the expansion of 76 additional plants in this Special Economic Zone on environmental, health and Constitutional grounds was initially successful. One year later, however, the injunction was lifted, and construction of 74 plants resumed.

The Maptaphut estates are associated with serious direct long-term health impacts for local communities [12]. While linkages are disputed, thirty years of exposure to carcinogens, endocrine disruptors and other toxins is the context in which many residents have become sick, died or moved away. Studies have highlighted unusually high cancer rates [13] as well as suicide rates [14] in the area. Remaining residents have to spend considerable sums to look after their health, buy water for drinking and cooking, while their incomes, previously based on tourism, rice farming and fruit farming, have diminished.

Even finding out the current extent of pollution is a challenge. Thailand is not a signatory to the Aarhus Convention and does not keep a pollutant release and transfer register. At present there is no precise, publicly available data about what is being released into the atmosphere from these estates. A policy analyst who has been monitoring the problems related to industrial development in Thailand emphasised the importance of this data: "When you cannot access the necessary information - exactly you cannot have justice. It's very basic, if you cannot access the facts, or know the extent of the impacts, so you cannot have a true problem analysis, and this results in a wrong direction in making policy, and in injustice in Thai society".

Distributing impacts: Burdens of climate events and climate projects

On the issue of adjusting to climate change, civil society groups raised the point that adaptive capacity varies among social, economic, and political classes/ groups, thus, the state should give special attention and resources to more vulnerable groups. Studies are beginning to focus on how to support the resilience of vulnerable communities in Thailand to future changes in climate.

The impact of specific climate events can be re-directed or re-distributed as the events of 2011 have illustrated. Floodwaters were blocked, and re-routed according to choices made by public sector decision-makers. To date, there has not been an open and public account of the chain of events that caused the worst of the flooding. In the year after the 2011 flood, the "defence" of Bangkok is set to continue to dominate the policy agenda for management of critical watersheds, water-ways, and floodplains. Massive investments in rural infrastructure development and flood prevention megaprojects are being backed with a 350 billion baht (USD 11.5 billion) government budget. Already "flood defence" projects, such as construction of the Mae Wong dam, have been hurriedly approved, seemingly without heed to protests from local residents and environmental campaigners, and amidst complaints that very little relevant information was made public. Reforestation plans have been accelerated throughout the country with substantial funding, raising fears amongst those living on land classified as belonging to the State that villagers' legitimate tenure rights would come under renewed threat.

Projects aimed at reducing emissions are similarly being imposed around the country without enough attention to justice for local communities. Renewable energy production plants such as biofuel re-fineries, biomass incinerators, hydropower generators or nuclear

reactors, purport to provide a technical solution for reducing GHG emissions but create localised impacts, raising questions of how these project sites are selected and managed. In this context, several interviewees from academia, NGOs and community groups explained in common that a justice perspective requires a closer examination of the context of the surrounding communities; what is likely to happen to the lives of these people. For some policy analysts, government officers and academics interviewed, this becomes a question of finding the right price, a fair price, to compensate smaller sacrifices required for technically-justified mitigation projects aimed at bigger goals. Justice in those terms - "the emitters, indirect and direct, have to help the victims…and of course I have to see effectiveness if you want my donation" - emphasises the agency in the hands of the polluters, but neglects the right of "victims" to call a halt to the damage.

For people negatively affected by climate policy projects, on the other hand, the most pressing questions focus on the need, the scope, the location, the scale, the management, the regulation, the monitoring and all the alternatives to the "development" in the first place. Having a voice in the decision comes before any question of remedy, compensation or even benefits-sharing. Referring to the new biofuel projects being proposed throughout Thailand, an NGO worker acknowledged that they may be defined in one sense as "clean" or "alternative", but in other ways they have an impact on the environment. "What we have to increase is justice….Its as if the value of being human is being lost,…when people's power is suppressed, [when they are unable to object to a project, or to improve their environment after it has been damaged], this is a very deep level of injustice". Expressed by community campaigners, justice for affected people was understood as a sense of seeking

justice amongst equals, such that the needs of one set of richer, more powerful agents cannot dwarf the needs of the less well-off who happen to be located in a potential mitigation project site and that all have dignity and value, as humans, to the protection of their health, and their security, amongst many other rights. They assert their rights to take part in the governance of their area, to begin a genuine discussion of what "sustainable development" means, and to determine their collective future.

2. Justice to a place

The second group of views concerned a sense of justice to a place. This sense was raised by community leaders and NGO workers, referring to the values of living simply, in harmony with nature, having respect for other living beings, limiting excess, as a mean of minimising conflict and promoting justice. A community leader concerned about the potential impacts of both biomass and nuclear power plants in her area expressed her view that "a culture has to be built, a method to live compatibly with nature, respecting nature. If people participate in decision making but that decision does not respect nature, then it is not possible to "live well" (*yuu yen pen suk*), nor to achieve climate justice".

Others placed more emphasis on the importance of healthy ecosystems to local communities. Whether an area or a community is able to tolerate or adapt to the developments proposed may be determined by several factors that can be adjusted. For example, a small biomass electricity generation plant or a micro-dam site may have environmental impacts which the local community may consider tolerable given their size, scale, and location, whereas the same technology or category of infrastructure at a different scale, with different technical specifications or a different location may bring about excessive problems for health,

living conditions and community conflict. Some operators are pushing for multiple facilities located in close proximity, that individually would not trigger the need for an Environmental Impact Assessment (EIA), but taken together as a set of phases or a group of facilities, can have a compounded impact on the environment and surrounding communities.

One major barrier to protection of local ecosystem integrity is that in Thailand, as elsewhere, the promotion of investment in high-earning industries tends to be valued more highly by the government than investment by community groups in sustainable environmental management practices. Successive governments have supported a plan to establish a special economic zone (SEZ) on the Southern Seaboard of the Gulf Coast, with industrialisation plans and energy projects spanning every coastal province from Prachuab Khiri Khan to Songkhla. This coastline is home to fishing and agri-cultural communities, while some communities have also developed additional eco-tourism economies. Much of the SEZ investment is being backed by foreign corporations, eased in through overseas aid budgets and the Asian Development Bank (ADB), keen to gain land on which to relocate GHG-emitting heavy industries, lowering their investment costs, and accessing an extra-territorial carbon budget into the bargain.

In Prachuab Khiri Khan province, for example, three coal-fired power stations have been planned, mostly to feed energy to a long-ago planned integrated steel processing industrial estate. Preparatory studies have also been carried out to consider locating a nuclear power station in the vicinity. One steel processing plant was built in the province's Thap Sakae district, almost 20 years ago, "before [the community] knew about environ-mental issues" as one member put it, that is, before they started to mobilise to oppose any further environmentally destructive "developments". Now, community members present various justice

narratives in their campaigns to protect their livelihoods and environment.

The community, on the one hand, and the project operators along with various public sector proponents, on the other, value the same resources, the same place, differently. One of the strategic reasons for investors to locate their industrial plants in such coastal areas is because all of the coal and many of the other inputs must arrive by sea. This area has been targeted for industrial development as a natural deep-sea harbour, which reduces investment costs of building a new deep-sea port. On the other hand, these naturally deep channels have been identified as breeding grounds of choice for important fish species such as mackerel (*pla thu*). The communities argue that increased numbers of large cargo ships will destroy such breeding grounds and that pollutants from industrial development, such as mercury emissions from coal-fired power plants along the coast could find their way into the fish species most commonly eaten by Thai people.

The Prachuab community campaigners question the justice in calling on every sector of the population and government, as well as destroying the integrity of the environment of the province in order to serve the needs of a single corporation, no matter how substantial the headline investment or its calculated contribution to GDP. Villagers articulate their challenge to the state's support for new fossil power plants in terms of, not only the social, but the environmental impacts that can be expected to follow. Among the high-profile species that campaigners say are likely to be impacted by various Southern Seaboard industries are whales, which frequent the coastline, and large sea turtles that come to lay their eggs every year on the beach where the Electricity Generating Authority of Thailand (EGAT) is planning a coal-fired power station. The majority of the 10,000 or so

families living in the 48 villages of the Prachuab Khiri Khan coastline derive their livelihoods from agriculture, fishing and tourism. Maintaining a healthy, functioning, local environment, they argue, plays an indispensible part in maintaining poor people's political, social and economic rights [15].

3. Justice over time

The third group includes articulations of a sense of justice over time, or intergenerational justice, which presented the most divergent set of approaches including reform of state policies and master plans, introduction of market-led initiatives, support for community-based activism and the need to strengthen the democratic system.

Thailand has begun a national discussion to tackle the large questions of reorienting its national development policies on a path towards a low-carbon society. The 11th National Economic and Social Development Plan (NESDP), developed with the wide participation of civil society, promotes a paradigm shift towards a "low carbon society" calling for a restructuring of the country's production and consumption behaviour towards a low carbon and environ-mentally friendly economy. This concept is tied with the philosophy of the "sufficiency economy" that has been promoted in Thailand for over a decade and is said to be based on principles of "self-immunity, moderation and reasonableness" [16]. However, even if, in principle, both ideas purport to promise a shift from unsustainable policy priorities, there seems to be limited political commitment to achieving these goals in government. Evidence is lacking, for example, for any attempt by the public sector to apply the "sufficiency economy principle" to the future transformation of industrial development or economic production sectors. Instead, the principle appears to be most often applied as a standard to be reached by small-scale and rural communities.

One structural problem, described by many interviewees, is the plethora of plans governing different policy sectors in the country. While the NESDP has much to say on low-carbon development, analysts point out that the dominant economic approach for the country is not necessarily to be found in this National Plan. Regional development plans such as the Eastern Seaboard Development Programme, the Southern Seaboard Development Program, the Khong-Chi-Mun Water Development Project and the Greater Mekong Sub-regional Development Project (GMS) collectively promote investment in regional transportation, energy, communication, trade and investment on "high-potential" industries (such as oil/gas, electricity generation, petrochemicals), environment and natural resource management. These plans play an important role in directing the nation's economic and industrial development, in particular towards export-oriented economic sectors, heavy industry and energy development. Beyond these, there are also sectoral plans, which appear to be dominated by the interests of the relevant corporate players within each sector, for example, the Master Plan for Petro-chemicals Development and the Master Plan for Iron and Steel Development. The private sector is deeply involved in the development of these plans, from their initial drafting through all revisions [17]. Unlike the NESDP, whose implementation requires funding from the central budget, sectoral plans are said to be self-funded to the extent that they give the go-ahead for investment plans that already have commercial backing. Until the real directives of government towards different sectors are harmonised within an overall vision for sustainable 'low-carbon' develop-ment and subject to democratic accountability, the likelihood seems remote that government will act to restrict growth of the high GHG-emitting industries and limit their impacts on local people.

An independent analysis of Thailand's Power Development Plan (PDP) has concluded that Thailand's energy planning process is in crisis [18]. Choices about power production infrastructure are being made now that will "lock-in" GHG emissions for many years in the future. The study finds that "[b]y selecting excessive amounts of controversial, expensive, risky, and polluting power plants over cheaper, cleaner, and safer alternatives, the PDP is at odds with both Thai energy policy as well as the interests of the vast majority of Thai people. The well-documented casualties are predominantly the rural poor" [18, page 7]. The report recommends that fifty-five new power plant projects of various types (nuclear, coal, gas combined cycle, imported hydropower and lignite fired electricity) that are included in the government's 2010 PDP are unnecessary. Reasons cited include the government's overestimated demand forecast, and an underestimate of the potential for substantial energy efficiency savings that could reduce final demand. Based on the analysts' alternative formulation for meeting Thailand's energy supply needs, by 2030 GHG emissions from electricity generation would rise by 3.7 percent compared to 2010, in contrast to a rise of 97 percent under the government's power development plan.

Two new government plans, the Alternative Energy Development Plan (AEDP) and the Energy Efficiency Development Plan (EEDP), propose ways in which the energy sector could be reformed to achieve lower emissions by 2021 and 2030, without revising Thailand's economic growth assumptions. Despite a subsequent revision to the Power Development Plan, purportedly to harmonise the PDP with the AEDP and the EEDP, contradictions remain among these three government energy plans. Several interviewees expressed a resigned conviction that Thai governments will not force the high-emitting sectors to lower their energy intensity and carbon emissions intensity.

Market-based, incentive-focussed proposals such as carbon trading are being explored within Thailand. However, it was acknowledged that given current low international market prices for carbon, generating and selling carbon credits does not adequately incentivize investment in greener technologies. Furthermore, restrictions in international carbon trading schemes[4] and many flaws of existing projects identified by critics and affected communities [3, 19] indicate that such mechanisms might not significantly curtail the development of a carbon-intensive economy in Thailand. Tentative hopes for longer-term attitude change were expressed by government policy makers and economists in carbon labelling on tangible commodities which looks set to shape demand from Northern markets, and could stimulate competition amongst Thai exporting companies to aim towards lower carbon footprints[5]. Life-cycle inventories are being prepared with analyses of the emissions generated by products on a "cradle to grave" or "gate to plate" basis, focussing on material procurement, manufacturing, transportation, use and disposal.

An alternative, non-governmental proposal for radical reduction in future GHG emissions has been advocated by a group of village activists in Prachuab Khiri Khan Province. Community leaders explain that the most concrete contribution they can make to preventing global warming is to carry out powerful community action to halt unnecessary and unwanted industrial plants that require huge energy inputs, and which will have serious environmental impacts. Fighting the plants, they argue, helps to secure justice not only for the health, livelihoods and dignity of local people, but for the environmental integrity of the locality, over the long term. So far, village activists have succeeded in blocking a

number of new factories in their community through a strong campaign. This was achieved at a high personal cost and involving an unsubsidised investment of time, energy and resources in order to access information and analyses, and gain public awareness and support. This view sees the power to change located in the strength of a community and society, and not in Government House or in the carbon market. "Our way of thinking may not be appropriate for other countries, which may have a good regulatory system. Our country cannot control environmental impacts – there is too much corruption. The easiest, best, most far sighted way [to keep emissions low] is to not build [new energy-intensive polluting industries]".

Discussion

Thailand has a complex history of distending economic and socio-political gaps between different groups. As long as electorates, and particularly elite groups, remain prejudiced against "other" communities such as those living in the state forest zones, it is unlikely that responsibilities for climate mitigation will be fairly distributed within the country. Almost every moment of urban living is linked to energy consumption; through everyday use of air-conditioning, private transport, etc., but it is only the forest farmers who are being prosecuted for their supposed role in bringing about "global warming" through agroforestry. The environ-mental impacts and overuse of energy in Thailand's industrial development expansion plans must be addressed. However, until there is clearer understanding within Thai society of the key role and responsibi-lities of the industrial and power generating sector for global warming, pressure for policy action on climate change repeatedly slips back, intentionally or by default, and the burden falls upon the traditional long-term scapegoats- low-income groups.

The decentralisation of natural resource management over the last decade has increased the role of local government in decision-making related to land and water resources. However, the political and financial pressures that weigh in behind particular commercial, industrial, and infrastructure projects, make it difficult to conduct a fair discussion about what is needed for development in each particular area. Low-carbon policies and other sustainable development ideas in Thailand will remain marginal to the debate unless there is stronger commitment to political justice, and in particular to the rights of people to maintain their livelihoods, to natural resource tenure, and to participate fully in determining the development of their own locality.

Questions of distributive and redistributive justice were central to the views of climate justice discussed by interviewees, in particular in the apportionment of responsibilities for climate action and in the distribution of burdens. However, other dimensions of climate justice were also articulated, relating to the need to maintain environmental integrity, the need for structural policy reform and strengthening of democracy in the reorientation of Thailand's future development path. There is a need to bring in greater coherence to what Thai society, and the Thai government, sets as its development aims.

A more comprehensive consideration of climate justice at the national level is likely to point Thailand towards substantially different approaches to addressing the climate crisis, in both the short- and long term. Real alternatives already exist for a low carbon path: the State could work with communities to provide support for those who are conserving their coastal areas, forest areas, rivers, rice plains and other resources. It could exempt environmentally sensitive areas from industrial expansion, and reject the implied idea that these areas are "underpolluted", as an "impeccable market logic" might put it [20]. Until the future development of the

highly-energy intensive industrial sector is addressed, small-scale initiatives will be insufficient to put Thailand onto a sustainable development path. Thailand must have an open discussion of how the country chooses to respond to the climate crisis, bringing in a justice dimension, to avoid taking a more destructive path into the future.

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Endnotes

[1] Broadcast maps of inundated suburbs stopped at the boundaries of the metropolitan area, rendering those living outside the area unseen, uncounted and unimagined cf [21].

[2] Note that other groups have adopted the term "climate justice" including the UN Department of Economic and Social Affairs and the Mary Robinson Foundation for Climate Justice, using different definitions.

[3] Consecutive sets of principles, values, and demands for climate justice have been crystallised by networks associated with a global climate justice movement at discrete moments of international policy making, which have begun to shape the movement's identity. Examples include 27 principles of climate justice developed in Bali prior to the "Earth Summit" at Johannesburg in 2002, the Durban Declaration on Carbon Trading in 2004; core demands on the formation of the Climate Justice Now! network during the 13th Conference of the Parties (COP) in Bali 2007; and the Agreement developed at the World People's Conference on Climate Change and the Rights of Mother Earth Agreement in Cochabamba in 2010.

[4] By January 2013, the EU Emissions Trading System, currently the largest international market for GHG emission allowances, will no longer accept trade in new credits registered to projects in Thailand. Credits from CDM projects registered after 2012 can only be used in the EU ETS if they originate from a defined list of Least Developed Countries. As of May 2012, only 13 Thai projects had been issued with Certified Emissions Reduction Credits within the UN Clean Development Mechanism system (another 109 projects are in the pipeline, hoping to make the deadline). Other smaller markets will continue to be open for trade including voluntary carbon markets, Japanese and Australian markets.

[5] As of 31 May 2012, 487 products from 120 Thai companies were certified by the Thailand Greenhouse Gases Management Organisation (TGO) and labelled indicating total carbon emissions per product.