

Agriculture and the greenhouse effect

We explained in depth, in the preceding edition of *Valérian*, at what point ‘100% bio’ becomes a planetary urgency, and we promised you further information about global warming. So here it is – it will not fail to make you tremble!

You will see initially that deforestation, intensive farming and desertification are, more than ever, closely inter-dependent. That the arable soil of our old blue planet is literally plundered, and the carbon, which it conceals, scattered. You will see the absolute contempt that big capital has for vital ecosystems... We bring you along, for that purpose, to remote parts of Indonesia where primary forests and peat bogs are sacrificed on the alter of palm oil, which industry drip feeds, almost without our knowledge, into all our kitchens and bathrooms...

Then, beyond the emotion, which this reconnaissance shamelessly causes, we will try to understand the agronomic mechanisms that actually come into play; we will see why world agriculture must change radically, quickly. We will also see that, if a good half-century of bad husbandry unquestionably carries an enormous share of responsibility for climate change, these changes themselves will produce a considerable recoil and will deeply modify husbandry in the world. Suffice to say that nothing will continue as before - and, that already there is no time left to simply complain.

Palm Oil: A bomb on our plates

Text by Philippe Lamotte, Translation by Stephen Caudwell

Seldom mentioned as such on food labels - except as ‘vegetable oil’ -, palm oil has been imposed everywhere: in our kitchens, our bathrooms and, more and more, in our car petrol tanks. The production of this generates a panoply of environmental and social problems: forest fires, corruption in the allocation of forest concessions, tensions with village communities, emissions records for greenhouse gases... in the west of Sumatra (Indonesia), the devastation from this agro-forestry reaches fever pitch. Report from the country of the last Orangutans.

The scene is a touch surrealist, sufficiently so that it evokes the stereotypes of an introductory ecology textbook. And yet, the picture is quite real, one of afflicting contrasts. On one side, a luxuriant forest, almost impenetrable and bursting with tropical bird song. On the other, tens of hectares laid waste, a carpet of trunk and branch debris only animated by the monotonous song of the cicadas. Strange. That it would be this way, the border between the ‘wild’ world and that of ‘civilization’... Rectilinear like an abscissa, a line of demarcation seems to be traced in the forest by an insane geometrician. No transition enters the two universes. Not the slightest buffer zone, where the fauna and the flora could, at least, enjoy a reprieve before the ultimate carnage.

Suddenly, an interminable cracking splits the tropical torpor: a tree, from afar, collapses under the buzz of the chain saws. The tearing of its fall evokes a clap of thunder that keeps resonating in some alpine valley. Welcome to the forest massif of Tripa, located in Aceh province, in the north of Sumatra, Indonesia! According to *PanEco*, a Swiss NGO very active in the protection of the forests and village communities, this marshy forest

zone of 62,000 hectares - will indeed disappear in a few years. Five years, according to the most pessimistic.

Why such a prognosis? If the forest concessions allotted by the central authorities of Jakarta are implemented, the agro-alimentary multinationals present in this vast island of South-East Asia - more than three times the surface area of France - will have destroyed this jewel of biodiversity for good, one of the last refuges of the Orangutans, one of the planet's most threatened species. A brief glance at the landscape, which extends under our eyes, here, a two hours drive from the town of Aluebili, gives insight into how Tripa will look in a few years, if nothing is done. Freshly planted in the carpet of branches turned russet by the tropical sun, young shoots announce the birth of a new parcel of palm plantation. An identical copy of those we have crossed, as far as the eye can see, intersected with indigenous villages, during two hours of travel along the poorly constructed road.

An inexorable advance to the heart of the forest

Three months before our visit, this battlefield was still a piece of genuine primary forest - intact and overflowing with biodiversity. For derisory wages, a team of loggers was hired to erase this thirty hectare parcel. Gross profit: 55 Euros per hectare, cost of materials and fuel included. A godsend, certainly, for the manual workers of this province who, in spite of the abundance of natural resources, are plagued by poverty. A mere handout however, when taking into consideration the profits accumulated by the agro-food giants. Palm oil represents a colossal market. In the field of edible oils, it sits just behind soya in global consumption tables. Palm oil is present everywhere: in chips, pastries and spreads, margarines, prepared foods, biscuits, mayonnaises, cosmetics, shampoos, inks and, more recently, more and more, in car petrol tanks ...

Commercial exploitation of palm plantations in Indonesia goes back to Dutch colonization, between 1870 and 1930. But there has been a monumental surge these past two or three decades. Supported by the former dictator Suharto, deceased 2008, and by the 'all to be exported' of the World Bank, the oil palm monoculture has conquered territories increasingly in greater retreat. Since 1990, the chain saws have made 28 million hectares of forest disappear for the production of paper pulp, rubber, coffee, cocoa... But it is the production of palm oil, which beat all records in terms of speed of expansion.

And it is not over! While the worldwide production of palm oil in Malaysia and Indonesia - by far, the two principal exporting countries of the world - has sextupled these last twenty-five years, it is still scheduled, according to the estimates of the cartels financing it, to triple between 2008 and 2050! In question: the economic rise of emerging economies such as China and India, but also the demand of the whole planet, including Europe, for bio-fuels, considered as substitute products to fossil fuels for the car industry. The Chinese government, for example, estimates that bio-fuels will meet 15% of the national demand for fuels from now until 2020. India has decided to integrate 20% of bio-fuels into its diesel for 2012. Admittedly, palm oil will probably not be the bio-fuel of the future. However, the pressure exerted on other 'mixed' cultivation, i.e. that are both food and 'energy' at the same time, will probably make the demand for palm oil, for its food, cosmetic and oleochemical uses, explode.

Enormous carbon stocks in danger

At what price? Within the framework of the scientific work of GIEC (Intergovernmental Group of Experts on Climate Change), some Indonesian NGOs have tried to estimate

the gigantic carbon stock intrinsic to land, designated short or long term, for intensive palm plantation exploitation. In the event of deforestation and land cultivation, the most important sources of CO₂ occur at the same time, from the fires and draining of the coastal peat swamp forests. A scientific study carried out in November 2007, showed that the main forest of Tripa, in the Indonesian province of Aceh, Sumatra, contains at a low estimate, fifty to hundred million tonnes of carbon. Cleared, burnt, drained then cultivated, this territory alone could contribute significantly to global warming. Aceh is not the only province concerned. According to scientific studies quoted by *Greenpeace*, the nine million hectares of marshy forest of the neighbouring province Riau, to the South, represents the largest terrestrial carbon sink in the world. The size of Switzerland or Taiwan, this territory could store nearly fifteen giga tonnes of Carbon! 'The marshy forests of Indonesia occupy only 0.1% of the terrestrial surface of planet, but they account for 4% of the greenhouse gas emissions of the planet', estimates the headquarters of the international NGO.

Thoughtful, leaning at the edge of a small artificial drainage channel Susilo, our guide and biologist trained at the university of Medan, the capital of Sumatra, sifts in his hands a peat sample torn from a future palm plantation. 'One needed hundreds or thousands of years to manufacture this earth, resulting from the natural decomposition of vegetation. Barely a few months to destroy it and to release its carbon into the atmosphere forever.'

According to *Wetlands International*, an NGO specialized in the protection of wetland areas globally, taking into account the release of forest CO₂ in the calculation of greenhouse gas emissions, would make Indonesia leap from twenty first place in the international classification to third place, just behind China and the United States! The signature of a peace agreement in 2005, putting to end nearly thirty years of a civil war for independence in the province of Aceh, and the massive arrival of international funds after the tsunami of December 2005, evidently announced a thriving future for the exploitation of new oil palm plantations. Only the development of a 'clean' and certified production network, similar to the 'FSC' certification of wood, seems likely to be able to moderate the social and environmental devastation inherent to this agro-forestry. It is, alas, not without its stuttering. We will return to this very issue in the next edition of *Valériane* review.

The poisoned gift

On arrival by plane at Banda Aceh, the largest city devastated by the tsunami in 2005, one fully realizes the extent of the agro-forestry exploitation in this province and well beyond. As far as the eye can see, rows of oil palms spread out, lined up a little like fields of corn at home. Here and there, smoke signals the presence of deliberate fires, common despite the governor's decree prohibiting. After twenty-two years of exploitation, oil palm plantations are no longer sufficiently profitable. Typically, they are then replaced by new oil palm plantations! In Tripa, such a prospect heralds an absurd scenario: the programmed draining of the peat swamp forests, situated along the coast, progressively 'inhaling' the salt of the Pacific Ocean and probably condemning the second or third generation of oil palms. Whatever the timeline, the ecological evolution of this massif is not a doubt: although forming an integral part of the '*Leuser Ecosystem*', and for this reason, classified a UNESCO World heritage site like the *Grand Place* of Brussels or the *Acropolis* of Athens, Tripa risks annihilation, pure and simple, for the exclusive benefit of a handful of multinationals and very powerful locals. Among these: *Astra Agro Lestari*, subsidiary of the group *Astra*, the distributor of Toyota in Indonesia and itself subsidiary of the international group *Jardines* (UK based).

Agro Astra Lestari's insatiable appetite

Under the spotlight of *PanEco*, *Astra Agro Lestari* is a reflection of many Malaysian and Indonesian enterprises active in oil palm cultivation. Their true decision-making centres are primarily located in China, Europe and especially Singapore. Only in Indonesia, the *Astra* group alone holds concessions relating to 238,000 hectares and in practice intends to double this figure during the course of this year! In 2007, according to the magazine *Globe Asia*, the net profit of *Astra* increased by 58% compared to 2006, clocking up a not-so-trifling 125 million Euros in the process. *Astra Agro Lestari* knows pertinently that attention is drawn to its expansion policy in the Tripa zone. Last January, they proposed to *YEL*, a local NGO, which works with the Swiss NGO *PanEco*, to give up several thousand hectares of concessions previously allotted by Jakarta in the Nineties, under the era of the Suharto dictatorship. Incensed, *YEL* refused this poisoned gift. Like others, the NGO based in Medan recalled its absolute priority: to respect the moratorium proclaimed by the governor of Aceh on the peat swamp forests: neither fellings, nor plantations in the peat zones.

Alas! For want of control, this moratorium is abused and with greatest impunity. Last autumn, and until January at least, i.e. at the time of our visit, the loggers were at work in part of the zone. This non-observance of regulations, object of passionate polemic and multiple interpretations according to the interests in question, has serious consequences for the lives of thousands of local people. We will revisit this issue in *Valériane* No 78. The Tripa massif, placed under international spotlight by the Swiss Foundation *PanEco*, is however only the tip of the Indonesian iceberg. More to the South, two other peat swamp forest zones Singkil and Kluet - which are four times larger than Tripa, shelter the highest densities of Orangutan on the planet: a species which the United Nations does not hesitate to bluntly predict extinction by 2020, with unchanged policy. Theoretically better protected, but in reality there is still a fundamental need to actively protect them. This is key for the future of the country's biodiversity and, with just three years to the end of the Kyoto Protocol's application period (2012), for the planet as a whole...

REDD: a mechanism that makes you see red!

Can the tides turn? After having pushed Indonesia and other countries to intensively develop an agriculture directed towards export markets - with particular risks of enfeebling their economy and irrevocably damaging their environment, the World Bank is now trying to go in reverse. The goal of the operation: to encourage the countries with the largest remaining forest areas - Brazil, Democratic Republic of Congo, Indonesia... - to protect these in the name of the fight against Global Warming. This reverse however is only in its infancy. The reason making this partial reversal significant is in fact REDD (Reducing Emissions from Deforestation and Degradation), a recent mechanism issued at the United Nations Conference on Climate Change. It consists of transferring funds to countries engaged in maintaining their forests as carbon 'sinks' likely to mitigate greenhouse gas emissions, often summarized by the concept 'avoiding deforestation'. The sums concerned are anything but small. For the three following countries (Papua New Guinea, Costa Rica and Indonesia), the money invested in the World Bank's 'Forest Carbon Partnership Facility' would amount, in its first phase, to 250 million dollars. However, according to another source, Indonesia alone could profit, by a billion dollars per annum if it agreed to limit its rate of deforestation to a million hectares per annum...

The NGOs hesitate!

The implementation of REDD leads to great internal discussions within and among NGOs. Some are ready to participate in this mechanism. In their eyes, such sums of money would more easily allow the governments of the South, caught between the multinationals promises of investment and increasingly strict environmental requirements, to slow down the former in the name of the latter. Indeed, the prospect of seeing hard currency evaporate, which these governments need so much to repay their debts could be compensated by the promise of this new type of financial manna. 'The carbon stored in the forests will generate 'credits', which could be sold on the international market, predicts the headquarters of Swiss *PanEco*, an NGO very active in the protection of the forests and defense of social rights of the local village communities. And one could go as far as using the proceeds of this sale to restore the peat swamp forests. 'But things are not so simple. For *Via Campesina*, an international NGO, defending the rights of indigenous villagers against commercial and industrial appetites, REDD is nothing more than one means placed at the disposal of the rich countries to circumvent their obligation to drastically reduce their own greenhouse gas emissions. *Via Campesina* sees this as practically a new form of colonialism.

It should be said that the majority of NGOs, perfectly in tune with local realities, know what they are talking about when it comes to money. The press, in Jakarta, regularly makes echo of corruption affairs around the forest concessions of Jakarta attributed to foreign companies or nationals. With the implementation of REDD, the height of cynicism will be that the forestry authorities of Jakarta - the very same that have been highlighted for their 'affairs' most affected by corruption - have to themselves manage the sums of money issued by REDD. Certain observers, in Indonesia as elsewhere, even fear a perverse scenario: the authorities renowned for their support for deforestation, passively or actively, would be tempted to accelerate the allocation of new forest concessions before REDD is fully operational, in order to raise the bidding for the last forests to be protected. Beat that!

Corruption and repression

'The large sums of money which could be at stake in REDD pose (...) a very real risk of corruption, predicts Tom Griffiths, a specialist in indigenous populations' rights¹. One could thus see "the State equipping the forest protection bodies with jeeps, weapons, helicopters and GPS, according to an obsolete, anti-humane and police approach to protection." Some go even further. "With Bali's Climate Change Conference, the World Bank Fund had been launched in the middle of applause and self-satisfaction', recounts Simone Lovera, expert at *Global Forest Coalition* (...). This Fund offers an opportunity as dreamt by the donor countries to win at all levels: they appear to be generous in public and give each other the illusion of contributing to tropical forest preservation. If the initiative proves to be disastrous, one will always be able to blame the World Bank. '

Note

1/. Further reading, *Deforestation: causes, actors and stakes*, Point of view of the South, Centre Tricontinental, 2008.