

Annex III Discussiepaper macromonitoring

The irrelevance of macromonitoring of the indirect effects of biofuel production in developing countries

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This discussion paper is meant to give a clear understanding of the concept of macromonitoring of the indirect effects of biofuel production (see Box 1.) and the main obstacles that will occur in practice. This paper is meant for policy makers in the field of development cooperation to show a vision on macromonitoring from a development perspective rather than an environmental perspective, which is dominating the debate.

In recent years the sustainability of biofuels has been a 'hot' topic and still is. Most initiatives have focused on the development of sustainability criteria to be used for certification, but along the way it became clear certification is only half of the story. Due to the focus of certification on the production level, certification is not sufficient to also cover the indirect effects which occur outside the 'scope' of the biofuel producer. For the other half of the solution, policy makers often refer to macromonitoring of those indirect effects. At the moment the European Commission is working out the different options for dealing with the indirect effects (by including a special indirect land use change factor in the calculations of emissions reductions for example), but those measures are focussing on the environmental consequences of the indirect effects and not on the socio-economic consequences (see Box 2.). Especially in relation to poverty reduction, I do not see macromonitoring as a solution. In my opinion the following can be stated:

Macromonitoring of the indirect effects of biofuels is irrelevant.

In the first part of this paper I will defend this statement by providing different arguments. Next to this, a different approach for dealing with the indirect effects of biofuel production in relation to poverty reduction will be provided.

In the second half of this paper I will come up with an alternative, namely the creation of a 'readiness' fund for biofuels comparable to the already existing REDD readiness fund (see Box. 3).

Lack of a definition

There is no international accepted definition of macromonitoring. In negotiations on investments in macromonitoring, the definition should be clear to all stakeholders. Without a clear definition it will not be possible to come to an international macromonitoring system.

Macromonitoring: a measuring instrument, not a solution

Macromonitoring is a measuring instrument, not a solution. It is a tool, which can be used for measuring the indirect effects of biofuels by collecting relevant data (socio-economic, physical etc.) at a certain moment in time. By comparing these data with so-called baseline data and data of the biofuel sector, the indirect effects can be identified. Different data collection methods can be used for this purpose, depending on the kind of data. However, identification will not result in the elimination of negative effects. This implies a more crucial role for the step after macromonitoring where policy makers should interpret the data and come with effective policy solutions.

Box 1. The concepts indirect effects and macromonitoring

Indirect effects are effects, which occur outside the scope of a biofuel producer and should therefore be dealt with at macro-level.

A division between socio-economic and environmental indirect effects can be made:

- **socio-economic indirect effects are:**
impact on food prices and other aspects of food security, impact on land prices, displacement of indigenous people due to land rights issues, impact on employment and income level,
- **environmental indirect effects are:**
indirect land use change leading to deforestation and loss of biodiversity, net greenhouse gas savings along the supply chain, competition with other commodities, like food.

Macromonitoring can be defined as: 'reporting on an appropriate set of macro-indicators'

Source: The Netherlands Environmental Assessment Agency (2008). "Monitoring macro-impacts of bioenergy"

Box 2. Indirect effects in relation to the EU's Renewable Energy Directive (RED)

The Renewable Energy Directive is the leading directive concerning biofuels. Next to a target of 10% sustainable energy in road transport (which in practice will mostly be reached by the use of biofuels), sustainability criteria for biofuels are included. Next to this,, the RED states the following on the subject of macro monitoring:

'The Commission shall report every two years to the European Parliament and the Council on the impact on social sustainability in the Community and in third countries of increased demand for biofuel, and on the impact of EU biofuel policy on the availability of foodstuffs at affordable prices, in particular for people living in developing countries, and wider development issues. Reports shall address the respect of land use rights..... The first report shall be submitted in 2012. The Commission shall, if appropriate, propose corrective action, in particular if evidence shows that biofuel production has a significant impact on food prices.' (Article 17(7), draft RED)

'The Commission shall, by 31 December 2010, submit a report to the European Parliament and to the Council reviewing the impact of indirect land use change on greenhouse gas emissions and addressing ways to minimise this impact. This report shall where appropriate be accompanied, in particular by a proposal, based on the best available scientific evidence, containing a concrete methodology for emissions from carbon stock changes caused by indirect land use changes, ensuring compliance with this Directive, in particular Article 17(2).' (Article 19(8), draft RED)

Both citations show reporting obligations for the Commission, but nothing is said yet about how data will be collected. Concerning this last citation, there has been developments: the European Commission has come up with a preparatory list of possible elements of a policy approach. This list will be discussed within a formal consultation exercise in autumn 2009 and contains the following elements:

- A: extend to other commodities/countries the restrictions on land use change that will be imposed on biofuels consumed in the European Union
- B: international agreements on protecting carbon-rich habitats
- C: do nothing
- D: increase the minimum required level of greenhouse gas savings
- E: extending the use of bonuses
- F: additional sustainability requirements for biofuels, from crops/areas whose production is liable to lead to a high level of damaging land use change
- G: include an indirect land use change factor in greenhouse gas calculations for biofuels
- H: other policy elements that respondents may wish to raise

Effectiveness of policy adaptations

In case of the Netherlands, the European Renewable Energy Directive (RED) is leading for the biofuel targets and insurance of the sustainability of biofuels, including dealing with the indirect effects. It can be questioned to what extent this policy can be adapted to avoid indirect effects. There are several options; decreasing the targets, the use of an indirect land use change factor (ILUC-factor) etc. However, the EU is limited by WTO-agreements, especially concerning the socio-economic circumstances in developing countries. Next to this, it is hard to prove to what extent the European policy is causing indirect effects, because other big countries like Brazil, China and the United States are also stimulating biofuels. The success of dealing with indirect effects will depend on those countries working together on this issue.

Scope and scale of a macromonitoringsystem

Concerning the scope of a macromonitoringsystem, the choice for monitoring the indirect effects of biofuel production is too narrow. A striking example is the production of palm oil, which can be used for different purposes. Should we only monitor palm oil production for biofuels? No, for two reasons; not every farmer will know what his products will be used for at the moment of selling. Secondly, indirect effects do already longer exist, but have never been acknowledged until the production of biofuels. Other sectors, like the flower industry, which also cause indirect effects, are mostly more mature and bigger industries and therefore there is more to gain by widening the scope of a macromonitoringsystem.

Investing time and money for proving a high likeliness

It can, however, be questioned to what extent macromonitoring will be able to prove the link between biofuel production and indirect effects, like the effects on food prices, deforestation and indirect land use change. According to Jan Ros (PBL), macromonitoring will only be able to show a high likeliness of the link between certain effects at one place and biofuel production elsewhere.

But at what cost? Especially, a global macromonitoring system asks for huge investments to realize the development of accurate models. Next to the financial consequences, the time scale is relevant; development of a (global) system will take years, while biofuel production will keep on rising and thus indirect effects will increase too. Is it worth it to invest in a system, which probably will not be able to prove a strong link? Is it worth it to postpone a solution for a couple of years?

In case of designing a system reinventing the wheel should be avoided. There are already different programmes monitoring progress in relation to for example deforestation, biodiversity and the progress in achieving the Millennium Development Goals.

Place of production versus place of consumption

In general the discussion around the indirect effects of biofuels production is too much focussed on the place of production, especially in countries like Indonesia and Malaysia. In my opinion a condition for structural changes is the inclusion of the demand side in solving the problem of indirect effects. For biofuels, this means more attention should be given to current fuel consumption; are we doing enough to get consumers out of their cars, is everything done to produce fuel-saving cars? And how can we justify the choice for ineffective use of biomass by using biomass as fuel rather than for electricity in the light of the indirect effects?

Trade barriers in relation to poverty

As said above, the current focus is on the production side of biofuels. I already stated that I miss the focus on the consumption side of biofuels. However, there is an important step in between production and consumption, which can not be missed: trade. In the case of macromonitoring the focus will be too much on the production side, while the

Box 3. Readiness fund for REDD

Reduced Emissions from Deforestation and forest Degradation (REDD) will be part of the post-Kyoto Protocol, which will be established in Copenhagen in 2009. In the Kyoto-Protocol deforestation was left out, but this subject will play a significant role through REDD in the new Protocol. Through the Forest Carbon Partnership (FCPF) the World Bank has been involved in the development of REDD. Forest Carbon Partnership Facility (FCPF) consists of two funds; the Readiness Fund for REDD as launched in 2008 and a Carbon Finance Fund (to be launched probably in 2010).

Concerning the Readiness Fund the following is meant with 'Readiness':
'*Readiness* involves the preparation of target countries for implementation of REDD, including a coherent national strategy, development of skills, infrastructure and legal frameworks.'

Tropical countries which are not listed in Annex 1 of the Kyoto Protocol are able to apply for the Readiness Fund. The Netherlands have contributed 15 million euros to this Readiness Fund. In total 74 million euros is contributed by governments, which makes it possible to support twenty countries to 'prepare' for REDD.

Sources: '*REDD: a steep learning curve, Notes from a session at the Asia Pacific Forestry Week, Hanoi, April 2008*' and
http://www.forestcarbonpartnership.org/fcp/sites/forestcarbonpartnership.org/files/2.a_REDD_Country_Selection.ppt#318,5,Country_Submissions and
<http://static.ikregeer.nl/pdf/KST126246.pdf>

trade phase of the supply chain determines who benefits and who does not benefit. For example, it makes a difference whether biomass is exported as raw materials or as processed products ready to be mixed. In case of export of raw materials processing will be done somewhere else, for example in the harbour of Rotterdam and the value related to this part of the supply chain will not benefit the poor. Therefore a critical look should be taken at the steps in between production and consumption, resulting more in a value chain approach.

Lack of priority and capacity in developing countries

Biomass production and related environmental problems are not high on the priority list in developing countries. Governments have more urgent problems to deal with in order to reach social and economic goals rather than providing the energy security and deal with the environmental concerns of the Western world. Next to this, developing countries already have a lack of capacity and by demanding efforts on macromonitoring capacity will be requested which is simply not there.

Macromonitoring risks exclusion of the poorest

By the establishment of an international macromonitoring system a high risk exists for excluding the poorest at the village level. Macromonitoring can for example 'prove' a rise in the GDP in Tanzania or Mozambique at the national level, while small villages are experiencing a lack of income. In relation to the realisation of the Millennium Development Goals it is important to know how the poorest are affected. A monitoring system can prove the link between the macro and the local level; the Bioenergy and Food Security (BEFS) programme of FAO does also include the household level, but it can be questioned if macromonitoring is the most appropriate research method or that other methods are preferable, like case-studies and a more value-chain approach.

Conclusion

Overall it can be concluded that I do not see macromonitoring as an effective and useful instrument from an environmental perspective and therefore additional policy is needed to also guarantee benefits for the poor from biofuel production.

A Readiness fund for biofuels

In the previous part of this paper, establishing an (international) macromonitoring system is not seen as an effective tool in order to decrease indirect effects. It is easy to criticise without coming up with an alternative. Therefore, this part will describe what I see as a more realistic approach. According to me, the focus should be on the integration of preventing measures in the national policies of developing countries. The following arguments will explain why:

From a development cooperation point of view a 'readiness fund' for biofuels is more effective in relation to the indirect effects of biofuels and poverty reduction.

Competing claims

First of all, the complexities at national level that come with biofuels should not be underestimated. National governments face the challenge of governing different markets, which become more and more related to each other. Due to biofuel production governments have to deal with competing claims; on the hand the world is facing a growing demand for agricultural land for food production, on the other hand the demand for agricultural land is growing by a higher demand for biofuels. In this light the design of a general agricultural roadmap for the future is more needed than just a biofuel policy.

National biofuel strategies

In several developing countries, like Tanzania, the biofuel business is booming, but still in the phase of different foreign investors showing interest in producing biofuels, which has triggered governments to think of related issues. Under what conditions will foreign

Box 5. The case of Tanzania

National policy

Tanzania is at the moment in the process of developing a national biofuel strategy. A Biofuel Taskforce, with representatives from different ministries, has been established to develop the Biofuel Guidelines, which serves as an interim document until a national biofuel has been developed. The Biofuel Guidelines includes the procedure for new biofuel investors. Because of the lack of a national biofuel policy, investors take a big risk by investing in Tanzania not knowing how the biofuel market will be governed in the future and what kind of consequences this will have for export possibilities. Due to the absence of the national biofuel policy, biofuel production falls under the country's agricultural policy.

Obtaining land by foreign investors

Different companies (Bioshape, Dilligent Energy Systems, SunBiofuels) have invested in Tanzania. However, most of these companies are not already in the phase of exporting jathropa and sugar cane, but waiting for the plants to grow. All those investors had to follow the same two year during procedure in order to obtain land. First of all, it has to be mentioned there are three different types of land in Tanzania:

- General land
- Village land
- Protected land

A foreign investor can only lease land from the government according to the following procedure:

- First of all, an investor needs to go to the the Tanzanian Investment Center (TIC) to request land and let approve the business plan
- With approval of the TIC an investor can go to a local government to negotiate on a compensation for the amount of land wanted
- The deal between a local government and investor has to be approved by higher governments to avoid unfair deals for local people. At the same time a feasibility study is conducted to assess if the local people can miss the amount of land requested by the investor.
- In case of approval the village land is converted to general land and an investor can now lease this land from the national government.

Dilligent Energy Systems (smallholders model) and Bioshape (plantation model) produce both according to the Cramer criteria. This shows a dependency of foreign producers on the sustainability criteria as demanded by the target markets and not by the national government of Tanzania.

Macromonitoring

The FAO has since 1.5 year been very active in Tanzania by the FAO Bionergy and Food Security Programme (BEFS). This programme is focussed on macromonitoring and wants to make the link clear between biofuel production and the effects on food security at the household level. In two regions, FAO has so far succeeded in this, but the organisation is also confronted with the difficulties that come with data collection.

Data already available at the national level is collected by the Tanzania Statistics Unit. Each five years a household budget survey and an agricultural census are hold. Those data are not appropriate to perform an analysis in relation to food security. Available data is also not crop specific. Stakeholders interested in the indirect effects of biofuels could therefore support the Tanzania Statistics Unit in order to collect other data needed for the analysis. The World Bank for example did this.

The absence of a national biofuel policy and a lack of attention for macromonitoring can, according to the interviewed stakeholders, be explained by the following factors: the biofuel market in Tanzania is too small to pay so much attention to, the government has other priorities like the establishment of a good food policy and lacks the financial means and capacity.

Source: interviews with Steef van de Berg (Dutch Embassy in Tanzania), Ina de Visser (Bioshape), Ruud van Eck (Dilligent Energy Systems), Rommert Schram (on personal title, FAO Tanzania)

investors be accepted and how much land can be used by those investors without negative consequences for the local people? Those concerns have mostly resulted in the design of a national biofuel policy. The biofuel markets are immature in developing countries and governments are in the design process of a national biofuel strategy. Therefore the focus should be on incorporating sustainability concerns in these new policies rather than on collecting data. Because most investors are not yet producing biofuels, the only purpose of macromonitoring can be collecting data for a base line. Knowing this, it seems more appropriate to support developing countries in the development of biofuel strategies and institutional arrangements needed for a national sustainable biofuel production.

Contribution to solving other problems

Secondly, supporting preventing measures, like assuring land rights in national policy, will not only prevent indirect effects related to biofuel production, but will benefit the community in general. Effects will still be there even if the biofuel 'hype' is over. On the contrary, the effects of the policy adaptations in the EU are insecure as discussed earlier.

A 'Readiness Fund' for biofuels

The question is how above statements can be worked out in practice. I suggest to introduce a 'Readiness Fund' for biofuels similar to the REDD Readiness Fund (see box.3).

First of all, by installing a fund for developing countries, which have a high biofuel potential, those countries will have the financial capacity to improve their institutional framework and strengthen their capacity in order to regulate biofuel production.

Secondly, a 'Readiness Fund' can bring the responsibility back to the countries, which stimulate world wide biofuel production. By providing the financial means for the fund, importing developed countries pay for their own priorities and do not let developing countries pay for Western priorities.

Thirdly, having one international Readiness Fund for biofuels managed by for example the World Bank ensures harmonisation of resources. This avoids an 'explosion' of different initiatives, like has happened in case of the development of sustainability criteria, and thereby an ineffective allocation of resources. One international fund will not only result in an effective use of financial resources, but at the same time can also function as a platform where experiences and knowledge can be exchanged.

Box 6. The case of Mozambique

National biofuel policy

On March 24, 2009 the government of Mozambique has approved the National Biofuel Policy and Strategy, which: "establishes a regulatory framework for production of biofuels by the public and private sectors, based on principles of transparency, social and environmental protection."

The strategy consists of three phases:

- Pilot phase until 2015
- Operational period until 2020
- Expansion of production

The Mozambican government also has created the National Biofuel Council: 'a body that will coordinate, supervise and evaluate the policy and strategy, which focus on production of ethanol and biodiesel.'

Different donors contribute to the development of the biofuel sector in Mozambique, like DIFD, the World Bank, the EU/EC, the government of Italy and the government of the Netherlands. The government of Italy performed a Biofuel Assessment. The Netherlands have a Biofuel programme with CEPAGRI, which is part of the ministry of Agriculture, mainly focused on sustainability criteria rather than on macromonitoring.

Foreign investors can obtain land by going to the CBI (the investment promotion center) and with the permission of CBI can go to the CEPAGRI for a land request. In the national biofuel policy it is stated that biofuel production can only take place on marginal lands. However, the concept of marginal land is not well defined.

Macromonitoring

The issue of macromonitoring has not been addressed in the national biofuel policy. In 2007/2008 a land zoning exercise has been performed, which can serve as a baseline year for land. Like Tanzania, Mozambique has also difficulties with data collection and access to data, especially in the case of electronic data. The national census and social census can serve as input for macromonitoring, but both are only repeated every five years.

Source: interviews Celia Jordão (Dutch Embassy in Mozambique), Anna Lerner (GTZ Mozambique),

http://bioenergy.checkbiotech.org/news/mozambique_government_approves_national_biofuel_policy_and_strategy