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**ANNEX 6-3-4: Policy Development for the Production of Energy Crops in
Sub Sahara African Countries**

COMPETE

**Competence Platform on Energy Crop and Agroforestry
Systems for Arid and Semi-arid Ecosystems - Africa**

Responsible Partner:

Foederation Evangelischer Kirchen in Mitteldeutschland, Am Dom 2, 39104 Magdeburg,
Germany

Project Co-ordinator:

WIP, Sylvensteinstrasse 2, 81369 Munich, Germany

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Michael Madjera
Foederation Evangelischer Kirchen in Mitteldeutschland,
Am Dom 2,
39104 Magdeburg,
Germany
Tel.: +49 391-53 46 230
Email: michael.madjera@onlinehome.de

Basics
For the development of a policy
For the Production of Energy Crops
In Sub-Saharan Africa (SSA)

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1. Preface

Renewable energy from biological sources moved into the centre of attention in recent years. In view of climatic changes, for which fossil fuels were made responsible to a considerable degree, bio fuels were supposed to partly replace them. The target negotiated within the EU was, to make the blending of fossil fuel with up to 10% bio fuel compulsory by 2012. But whether this is going to happen is by no means certain.

Should a substantial blending of fossil fuels with bio fuels become compulsory, a high demand of bio fuel would be the consequence, in particular by the highly industrialised countries and the up-and-coming ones. At least for the EU it is most likely that the arable land available will not suffice to provide the necessary feed stock to produce the amount of bio fuels needed. And it is also most likely that the raw materials for bio fuels can be produced cheaper in SSA countries than in the EU. This points towards an import of large quantities of bio fuels to the EU with corresponding massive investments.

The countries in focus will be most likely the SSA ones since they are the nearest to Europe with large coherent land suitable for the production of energy crops. In particular because of the low production costs also other countries, which may have more land available than the EU, might approach African countries with regard to the production of energy crops to the EU.

In essence this means that energy crops could become a big business commodity in years to come. Billions may be invested, the trading figures could be Billions, the profit chances would be high and the chances of high revenue for African countries from export would be tempting.

And there is also the potential of energy crops to directly improve the living conditions in developing countries and to stimulate the overall development of their national economies by developing national and regional markets.

So far the positive aspects.

But a huge production of energy crops could include high risks: exploitation of labour forces causing serious damages to social infrastructures, neglecting food crop production for the sake of energy crops, destruction of biotopes, damages to bio diversity, serious development setbacks after some decades of a pseudo development and upswing.

Whether energy crops will be a blessing or a curse for Sub Sahara African countries will depend on the policy they themselves will adopt. It will have to be a balanced policy which will allow the positive elements to unfold its potential by supporting them. But also restrictive or guiding regulations will be needed to prevent negative side effects or wrong turns of the process.

The following thoughts shall serve as a working paper which shall assist on the way towards a final policy proposal to be submitted to the African decision takers.

2. Conclusion

Energy crops have a considerable potential to contribute towards a direct improvement of living conditions in developing countries. In addition they have an increasingly high export potential resulting in high income for the producing countries, with which they can and should finance economic developments. Since a number of products can be produced industrially from energy crops, the chances are good to include various industrial sectors. By doing so the development of the national economy of the producing countries would be on a broad basis making such a development lasting and sustainable.

Since a number of areas of concern exist with the possibility of serious negative side effects or even wrong developments, it is of utmost importance to prepare and adopt a policy with which positive side effects can be supported and negative ones can be brought under control.

Key elements of such a policy will concern the use of land by defining a balance between the production of food crops and energy crops and to stipulate the use of arable land accordingly.

Related to the use of land is the protection of biotopes and biodiversity.

The policy will also have to deal with the necessary guiding mechanisms to stimulate the acceptance of other products than energy or fuel from energy crops and the production and use of energy crops for a direct improvement of living conditions especially in rural areas.

In this context it will be important to stipulate, how the income from export can and should be used in order to stimulate the national economy as best as possible. The inclusion of the industry will be vital.

As soon as it has been decided to explore in principle the possibility of adopting such a policy, contacts and discussions on various levels with partners within the international community should take place in view of possible supports. In particular financial assistance should be discussed since various supportive activities from the side of governments will most likely result in losses of revenue. This might cause problems for developing countries.

Concerning the available time for developments it will be necessary to monitor the use of combustion engines. Developments financed with income from energy crops or bio fuels will have to be on a sound footing before traditional fuels will lose their importance.

Finally it is advisable that the Sub Sahara African countries should try to adopt a common policy to be accepted and followed by possibly all countries of the subcontinent in order to reinforce their position in view of the economic power they will face because of the investments to be expected.

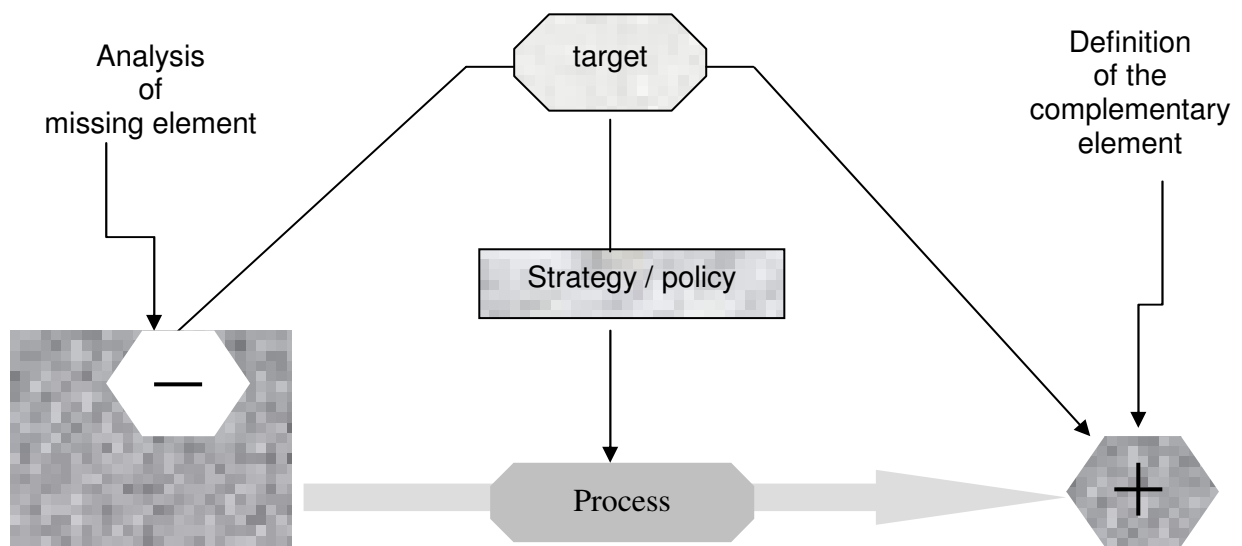
3. Main Criteria of the intended Process

A process is determined by the policy. It comprises of three core areas: the point of departure, the target and the way from the point of departure to the target.

In the following these core areas shall be dealt with at first in general followed by a look at the specific situation of the SSA countries and the one of the EU – standing for the industrialized and threshold countries – with regard to these core areas.

3.1. The Point of Departure and the Aim

The target of a process is often seen as its most important part. But it is rather the point of departure. However, both are identical with reverse signs. A process will only be set in motion if the present situation shows a deficit or, in more general terms, if a change is desired. The target or aim of the process is the positive counterpart of the missing element.



M.Madjera 26.05.2008

A wrong analysis and identification of the deficit results in a wrong definition of the aim with the consequence that the process will not show the results aimed at. One could compare it with a medical treatment: a wrong diagnosis by the medical doctor leads to a wrong treatment. It is therefore most important to carefully analyse the prevailing situation in order to determine precisely why the process should be set in motion.

3.2. The Aim of SSA Countries

During the last couple of years the interest in energy crops increased drastically because it appeared to be an – or even the – answer to curb on CO² emissions. Recent observations and conclusions have relativised this. But especially in view of the second generation of fuels from bio mass the discussion is not over yet.

However, since CO² emissions are mainly caused by the highly industrialised and up-and-coming countries, it ought to be primarily in their interest to curb on such emissions by producing environmentally friendly energy. In other words it would be the wrong diagnosis to assume that it is the prime interest of developing countries in SSA to produce energy crops to combat CO² emissions. Only because of the relation between CO² emission and climatic changes, the latter of which affects also SSA countries, they have a certain interest that CO² emissions are curbed with the use of Biofuels.

SSA countries must therefore find and determine their own prime interest in the production of energy crops. Such can be

- The use of energy crops for own – existing – markets or markets to be developed
- The export to international markets

Weighing the two options, a fundamental difference becomes apparent.

Whereas a national market is predominantly under the control of the individual country in SSA, the international one can only marginally be influenced by developing countries. Consequently any policy concerning a national market can be described as an “active process” in which the individual country can take the initiative. The dependency on an international market can be described as a “reactive process” because one has to wait what the international market is doing.

- To establish national markets will depend on the imagination, creativity and dynamics of the SSA countries and should be their prime target. The demand for fuel by SSA countries is limited compared to the one in the highly industrialized countries.

Nevertheless there are a number of reasons why to produce energy crops and products from it for SSA national consumption:

- The production of energy crops helps to stabilize the rural infrastructure
- Energy is the basis of modern living standard. The production of raw materials for generating energy for own consumption is an ideal combination
- The fuel production can reduce the dependency from fuel import which can under certain circumstances prevent strain on the national economy (e.g. in a case of soaring prices for fossil fuels)
- Energy crops can in general help to improve the living conditions in rural areas by providing food supplements, fertilizer, clean burning fuel for household needs, fodder, fuel for agricultural machineries and cash income from surplus sales.

- Most important and so far widely ignored is the fact that over 80 products can be produced industrially involving at least 6 important industrial sectors: chemical-, building-, food-, pharmaceutical-, cosmetic- and agricultural industries.

If these industries can be involved the production of energy crops and products from it can set the national economy on a sound footing and should have a lasting effect. It will be important to assess what kind of products can be produced (it will not be difficult to obtain the respective information from industrialized countries), which of those products are already used and therefore in demand by African consumers, which products are potentially in demand but not yet on the market because of unavailability or lack of knowledge, whether there are existing industrial facilities that can be used/expanded or how new ones can be established etc. (more to it under 5.4.)

- The export potential of energy crops and in particular bio fuels with the result of high income is enormous under favourable conditions. However, there are considerable risks involved, in particular if the international markets do not develop or perform as anticipated or in case of sudden changes.

Only a few years back there was hardly any critical voice noticeable concerning the production of bio fuels and energy crops. In the meantime a number of concerns have arisen, partly may be exaggerated but partly definitely to be taken seriously.

As a result the decision, to make the blending of bio fuels with fossil fuels compulsory has swayed from an almost stop to a delay. And the percentage of blending varies constantly. Such changes could have the effect of “no import required” up to huge imports with corresponding huge investments amounting to Billions. Certainly a situation that would make the development of a sound policy for a bulk production of energy crops for export purposes difficult.

Besides fundamental questions also political reasons can play a decisive role. Such make the implementations of a policy difficult since they are difficult to predict. Example: Germany was one of the driving forces behind the increase of compulsory blending of bio fuels with fossil fuels from 5.7% to 10% in 2012. In April 2008 the minister of environment announced that such increase will not be pursued for the time being because the 10% blending would affect more than 3 Million car owners who would be forced to use super plus fuel instead of super fuel. The price difference is 5 Cents to 6 Cents per litre.

However, despite these uncertainties, SSA countries are well advised to make provision for possible growing demands for energy crops and huge investments. This could become a valuable boost for their economic development. Since the preparation of a policy including its supporting and controlling mechanisms is a rather time consuming process. In contrast to this, however, will the investment for large scale production by the business world require only a few months. It appears to be advisable to move as quickly as possible on the policy issue (see Sec.7).

In conclusion it can be noted that SSA countries should develop a policy for the production of energy crops in the first instance to supply their own national markets that are to be developed. At the same time they should prepare themselves for possible high international demands and corresponding approaches for substantial international investments.

3.3. The Position of the European Countries.

It was already mentioned: a prime interest of the highly industrialised countries is the reduction of CO² emissions. If this can be achieved by using bio mass including energy crops their interest would be, to have access to such raw materials at the most favourable conditions.

Besides having difficulties finding sufficient arable land in Europe the production of it would be substantially cheaper in SSA countries. Consequently will investors in particular from EU countries have a considerable interest in a production in SSA and will make the necessary funds for investments available.

3.4. The way to the target

The way to the target is the process. It is a complex issue since it does not only require a step by step planning and the identification and determination of interim targets. The first category requires a clear vision of the moves, interim targets and interim results wanted. The second one, being perhaps even more complicated, is to understand the interaction of each move with the surrounding resulting in positive and negative side effects. The better such interactions are anticipated and recognised the more likely it is to find appropriate mechanisms to support positive and wanted – side – effects and to control negative ones.

Those areas in which positive results or effects are expected will be dealt with under Sec.4 as “Areas of Support”. Possible negative results or effects will be dealt with under Se.6 as “Areas of Concern”.

4.The Preparation of a Policy

Irrespective whether SSA countries will go on their own or rather want to enter into partnerships with other countries they will each have to develop their own policy in line with the specific situation in their country. Should it eventually come to cooperation and partnerships it will be easier to find common grounds or to discuss differences.

4.1 Key Elements of a Policy

The key elements of a policy are

- The analysis of the prevailing situation (discussed under 3.1.)
- The definition of the aim (discussed under 3.2.)
- The concept for the process from the point of departure to the aim (discussed under 3.3)

For SSA countries main topics of the aim may be defined inter alia as

- Improvement of living conditions in rural areas
- Industrial production of goods from energy crops on a broad basis, i.e. to include as many industrial sectors as possible
- Export of energy crops and Biofuels
- Stabilising effect on landscapes, in particular in arid/semiarid and soil erosion areas
- Contribution towards CO² emissions
- Less dependency on fuel import

These “main topics” can be subdivided into numerous intermediate targets which are part of the process. Such intermediate targets can be determined already with the preparation of the policy concept or they may arise during the course of the process. It should be stressed that a concept for a process is not static, it is a “living instrument” that requires a constant adaptation to the surrounding sphere and updating.

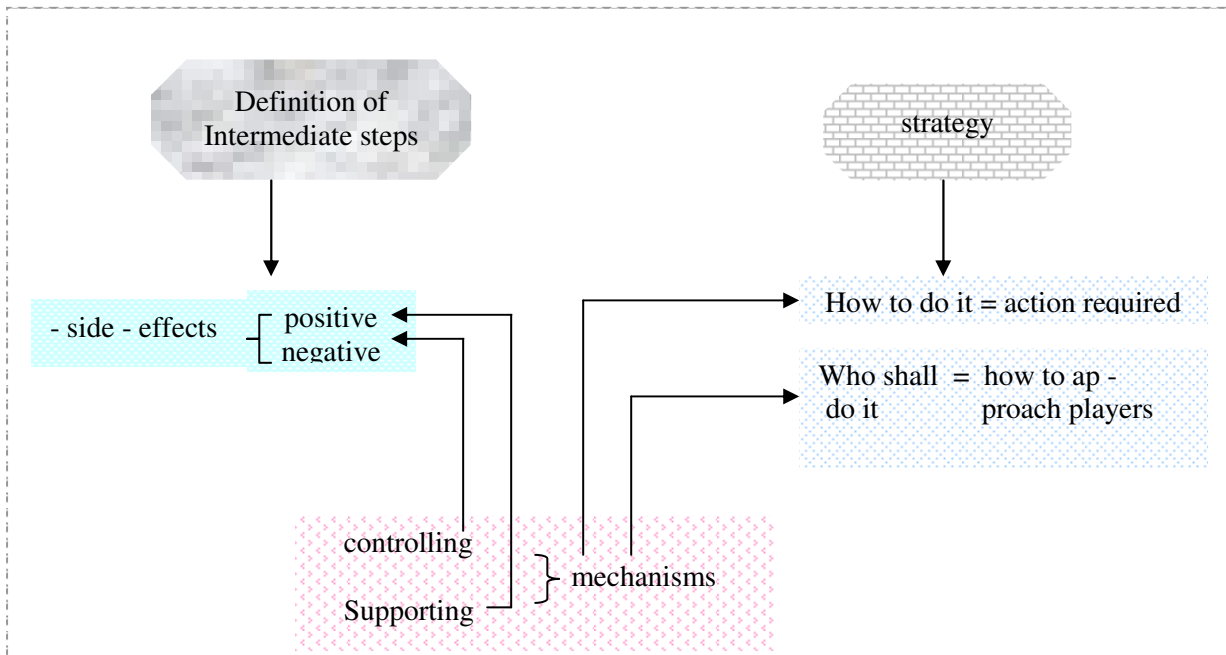
The process with which to reach the determined aim can be subdivided into three main parts:

- The definition of intermediate steps and aims
- The strategy, being the definition of the necessary actions and players wanted
- The assessment of possible –positive and negative – side effects

Intermediate steps and aims can be projects or preliminary regulations. Some examples are included under 5. and 6.

The strategy in particular concerning the selection of whom or which institution to entrust with specific tasks or as resource persons and how co-operation on various levels is to be organised in order to create synergetic effects will require a lot of imagination and a solid understanding of the way ahead. As an example see the graph concerning the combination of large scale energy crop production combined with community development under 7.

Most important will be the assessment or rather the anticipation of positive and negative – side – effects. After having them identified it will be equally important to find appropriate mechanisms to support the positive effects and to control the negative ones.



Support and guidance/control will also be important for the implementation of the strategy. If some activities are to be supported, this can be done either by ways of incentives, bene-

fits, awareness campaigns, advertising etc. or by ways of instruction or restriction and control. The same applies with regard to players to be involved.

Support and guidance/control will require appropriate mechanisms. It thereby has to be avoided that support and control interfere unduly with the development of natural economic and market forces such as competition, self initiative, responsibility etc.

4.2. The Importance of balanced Support and Control

Support and guidance contain the potential of or even a necessary interference with otherwise freely developing forces. This can eventually result in dominating and subordinated structures.

We have learned that a free market system did not meet with our ethical expectations. Social elements had to be incorporated to counteract exploitation. But we also learned that governmental dirigisme for a dominating social system, in which normal market criteria were only to have a serving function, did not perform according to expectations. They were simply not competitive. Therefore a way had to be found to incorporate social elements without preventing market mechanisms to unfold their potential. The result was the social market system.

The same applies to policies and policy mechanisms with regard to the production and use of bio-energy. The complexity of social developments as well as matters concerning environment and climate cannot be left to natural development forces only. Supportive mechanisms as well as guiding ones will have to be developed and tuned in a way that

they further the aim but do not undermine performance, efficiency, competition and initiative.

Guiding mechanisms will have to create frames, within which established and proven forces and systems can perform undisturbed: e. g. production and trade of energy crops according to normal market mechanisms: demand – supply – competitiveness.

But they will also have to prevent wrong turns such as an excessive production of energy crop for the sake of profit taking (especially in international trade) thereby neglecting the production of food crop. Or the destruction of biotopes for the sake of obtaining arable land for energy crops.

In the case of production of energy crops in African countries it will be up to them, to find the right controlling and supporting mechanisms for the benefit of their people and the protection of their land and their nature.

However, since the production of energy crops is an issue closely related to climatic changes and nature, both issues having global dimensions. The international community will be challenged to assist as much as possible national efforts in SSA countries. It is clear that eventually the responsibility rests on both sides and joint efforts in partnership will be to the benefit of the participants as well as to the whole issue.

This could improve the general economic situation in SSA resulting in an improved position of SSA countries as trading partners. A convincing policy for energy crops including mechanisms for the support of positive side effects and such controlling possible negative ones would pave the way for support by governments of European countries as well as the EU itself.

4.3. International Standards versus National Regulations

The quality of standards regarding their binding nature is a complex issue. Standards will face basically two groups with partly conflicting interests:

- The authorities: it will or should be their interest to prevent negative side effects such as unbalanced use of arable land, exploitation of labour forces, destruction of biotopes etc.
- On the other side economic developments will be welcomed and also the production of environmentally friendly fuel/energy. Those are positive effects that are to be supported.
- The business world: its main interest will be the production in a most cost effective way, i.e. maximum return with minimum input.

Whereas the first group will have to exercise as much control as necessary to curb negative effects and to support wanted developments, the second group will prefer as much of a free hand as possible. In practise this means that, should controlling regulations apply too much pressure by being too stringent, the producer will try to find ways to circumnavigate the rules or to even abandon operations. If they are too lenient and not precise enough, they will become difficult to be administered and will fail to perform.

Closely related to this is the question how binding the regulations are going to be. If they have the quality of a law they will be judicially enforceable. But this requires the necessary legislative authority. Such authority rests with the individual countries for their territories and national laws for the support and control of energy crop/bio fuel production in the country can therefore be passed.

The situation for importing countries or the international community is different and partly more difficult. As far as they have the legislative authority – as individual countries but also as legal entities such as the EU – they can stipulate import qualifications. The weak point is, however, that if other countries do not have such qualifications, nothing prevents the producer, who does not meet the required qualification, to export his products to a country which is not or less concerned about standards. The result will be that the purpose of the qualification will not be achieved. E.g. high emissions coincide with the production or labour forces are exploited, the qualification standards are to prevent this but the producer can sell to a country that does not have the standards.

A certain way out would be international standards adopted by international treaties. However, such standards are generally more difficult to be judicially enforced – in most cases there will be no competent court – and it will be difficult to impose sanctions or consequences in case of contravention.

Another weak point is that such international standards are to be designed in a way that they apply to the production in various countries under different social, economic and cultural conditions. They will have to use in many instances more general terms in order to accommodate those differences. The result will be an open door for arguments why a production did not contravene the standards: minimum emissions, balanced use of arable land, cooperation with communities etc.

Nevertheless, such standards are still better than nothing. But a satisfying solution can only be the combination of international standards and national regulations.

5. Areas of Support

Having dealt with basics concerning the development of a policy, the following shall address the necessary tools for implementing successfully such policy: supportive and controlling policy mechanisms. This shall be by no means conclusive but shall rather serve as examples. Areas of support and appropriate mechanisms will have to be identified and developed for each individual process including the intermediate steps.

There are various ways of support, be it advice or technical help, information or finances etc. Supportive is any action, that furthers a process towards a certain aim. The type and intensity of support varies and has to be adjusted to the individual needs.

5.1 Motivation: Lobby and Promotion

Perhaps the most powerful driving force behind performance is motivation. Such can be stimulated by making a specific performance attractive. But before such stimulation can successfully be applied, it is necessary that those who are supposed to perform know

about and understand the circumstances of a required or wanted performance or why it is advantageous to do something.

The same applies in the case of energy crop production. If a government of a SSA country is convinced that energy crops are a suitable tool to improve the living standard especially in rural areas and also to stimulate the development of the national economy and wants to promote it, it has to make sure that the necessary preconditions exist. It has to investigate inter alia

- What kind of energy crops are suitable for their country and for specific regions
- How can such energy crops contribute towards the improvement of living conditions
- To what extent are specific energy crops and its use known to the people
- What kind of products from energy crops are suitable for national consumption, i.e. does a national concrete or latent demand exist
- Who are the players who should and/or could be involved

The answers to these questions will enable the government to work out an action plan and the necessary strategy:

- Is an information campaign necessary (target groups)
- The strategy of such a campaign

If the production of energy crops should e.g. attract subsistence farmers or be integrated in community development programs the advantage of such production must be explained. It will have to be assessed, which type of energy crop is most suitable for a specific area and whether those, who are supposed to eventually shall grow the crop, are familiar with it.

Should the latter not be the case or should these people not know all the benefits they can obtain from such crop, the necessary educational work will have to be conceptualized.

With regard to commercial aspects the onus of preparing promising marketing strategies will rest primarily with the business.

In many cases ideas, concepts or goods will have to be introduced to people, will have to be explained and promoted. The target groups for a promotion campaign for energy crops and products from it will be

- concrete consumers: those who are aware of specific needs or demands
- latent consumers: those who are generally interested in or in need of the products but who are not aware of it
- potential consumers without need or awareness: the interest has to be created.

Business and industries will lobby and promote the crop as well as products generated from it in order to make it a business proposition.

But if the energy crop production as well as the industrial production of goods from it is the target of a government policy, it may consider supportive actions. It could organise similar campaigns as it does e.g. for aids prevention and other disease, for birth control, eating habits, anti smoking, energy consciousness, air pollution etc.

Such campaigns will have to tell the people, why energy crops are useful, what can be made from it, how products from it will help to improve living conditions, how community developments can be supported by energy crops etc. But also possible negative side effects, in particular with the neglect of food crops, should be addressed. Such campaigns can address the public in general or specific groups.

If a government and production and trade find sufficient corresponding interests, activities can support each other. Once information strategies have been worked out, various supportive mechanisms can be considered.

5.2. Financial Contributions

Financial support will be of major importance. It can be structured in different ways. In the following a few examples shall serve as an illustration. Eventually it will be advisable to prepare a comprehensive catalogue (this could be assisted by WP 5).

Generally one can differentiate between

- the financing of supportive measures
- direct and indirect financial support

5.2.1. Supportive measures: they cover a broad spectrum and depend on the characteristics of each project or program. Some examples:

- A number of subsistence farmers or communities in a specific area grow oil seeds. The transport of surplus crop to a mill is difficult and due to the modest harvesting results not viable from a business point of view. In addition, after having processed the crop, the residues, which are important for the producer to improve his living conditions (fodder, fertilizer), would have to be transported back to his home.

If, with the support by the government or any other organisation, a small oil mill would be provided at a centre point, the processing process could be made much more economical. Alternatively a small, manually operated mill could be mounted on a lorry and drive from one farmer to the next.

- In an area with reasonably good rainfalls the unused water drains off; it could be considered to provide a catchment area (without disturbing ecological balances or depriving other areas from water) but the communities or subsistence farmers don't have sufficient funds. The government or any other institution provides the necessary means for a catchment area
- Should in particular investors for large scale operations look for suitable land for the production of energy crops, it should be tried to combine the crop production with community developments. It will have to be decided whether this should be done by

ways of regulations or by negotiation and conviction. Because of the importance of this issue it shall be dealt with separately under 5.3. below.

- Land is traditionally a sensitive issue. But to have access to land is a precondition for growing energy crop.

The availability of land for the production of energy crops involves support and restrictions. In both cases it will be important to pre-plan, which land should be available for which purpose. Restrictions of land use are common all over the world: nature conservation areas, water schemes, military areas etc.

Support, encouragement and restrictions will only be possible in a well balanced way if a master plan for the use of land exists. Such will necessitate access to comprehensive data and information to be compiled in a data base (see Sec.10.). In particular large scale investors requiring substantial areas of arable land will need quick and clear answers in which areas they may operate, about possible restrictions, settlements, responsibilities etc.

- Information and contacts are vital for those who are not – yet or sufficiently – familiar with the production of energy crops or the market. This is not restricted to technical knowledge about growing energy crops but includes social, climatic, logistic, culture specific and other questions.

To be able to hand out as much relevant information as possible the respective data will have to be available.

It will be advisable to establish an information centre for the production of energy crops, its processing and the production of goods from it with a data base as the central element. All relevant data for subsistence farming operations as well as for bulk farming operations, for foreign investors as well as national ones, should be collected and compiled.

Details of such a data base will have to be discussed with national experts, to be supported by their international counterparts (more to it under section 10).

The specific investigation and knowledge of Compete WP's 1 to 5 concerning the present and possible use of arable land for energy crops, technical aspects of crop production, the south-south and north-south technology and information exchange as well as criteria for financing mechanisms could be of assistance and may be called up.

Due to the international line-up of the Compete team and in particular the invaluable participation of representatives from African countries as well as from the up-and-coming countries of Central and South America and Asia, the prospects of coming up with some useful concept ideas pointing the way towards a sustainable production and use of energy from biological sources seem to be good.

- Any policy and policy mechanisms aiming at the promotion and support of the production of energy crops must include some guidelines, how to handle the various administrative processes efficiently. This applies in particular to a commercial pro-

duction. Possible large scale operations with large international investments can be of great importance for the economic development.

Should it come to such investments, a good understanding of and foresight about the various inquiries and applications will be of advantage. A transparent process and application system would pave the way towards an efficient and speedy dealing with inquiries and applications. As the saying goes: time is money. And especially in business life cumbersome and time consuming administrative processes can be lethal. A transparent system of preconditions to be met and application to be lodged by an investor who wants to embark on an energy-crop scheme, will make investments attractive.

- In general it will be necessary to do a lot of research work in order to be able to support the production and use of energy crops. Because only a comprehensive knowledge about all relevant facts will make planning and support successful.

5.2.2. Direct and indirect financial support:

- Electrification projects in rural areas are of great importance since any improvement on living conditions depends on access to energy. Electricity produced by simple generators driven with fuel from energy crops grown by a rural community would be a first step for an autarkical power supply. In most cases initial investment costs for the first production of crops and the generator and technical appliances may have to be pre-financed or financially supported. This could be done by the government or through NGO`s.

Any of such support should only help to overcome financial or logistical problems that can not be solved by the community or the subsistence farmer by own efforts. It must be avoided to create the impression of an easy way out.

- Tax concessions will be an important tool to make the production and use of energy crops attractive. But it will be in the first instance interesting for the commercial production of energy crops and products made from it.

Some examples:

- subsistence farming: in most cases the producer has little income, his tax commitments will be low or even zero. In this case the possible incentive could be a bonus system
- bulk producer: possibility of income tax concessions – investment costs may be partly written off against income tax – reduced sales tax on products(VAT)
- industrial producer: possible income tax concessions – investment costs may be partly written off against income tax – reduced sales tax on products (VAT)
- products from energy crops: reduced VAT

Examples of tax concession in Germany:

- until recently bio-diesel was exempted from mineral oil tax. Because of this exemption it was competitive since the selling price was even lower than for fossil diesel despite the production costs are considerably higher.
- The installation of solar panels on existing private houses is subsidized by the government up to a certain amount. The amount accepted is deductible from income tax by the house owner over some years.
- For small scale producers guaranteed prices will be important. This will be, however, be difficult to regulate since this should only apply to delivery onto the national market and not for export. And if some regulations to that extent are introduced they should also apply to the large scale producer in accordance with the principle of equal treatment.
- Another important instrument is an obligation to take delivery or an underwritten guarantee ensuring the – small scale – producer that his surplus yields will be taken over. Such a guarantee exists e.g. in Germany with regard to wind or solar energy which has to be accepted by the grid owner to be fed into the grid.
- Since developing countries may have problems in making finances available or to forfeit revenue income, it could be negotiated with the international community to find ways for financial assistance by ways of direct or indirect compensation. As it was said earlier on, the international community must be and will be interested in the economic improvement of developing countries. It will therefore also be prepared to assist in keeping a coinciding massive increase in air pollution and greenhouse gas emissions with the improvement of living standards in developing countries as low as possible. The international community will be therefore prepared to contribute to respective convincing concepts.

5.2.3. Supportive Frame Works and Guidelines

It would be helpful to introduce some frame works and guide lines for the various possibilities of support as indicated above. They would provide objective criteria under which individual cases could be subsumed. The advantage would be that the handling of each case will be predictable and transparent and it would reduce the risk of capriciousness.

There are numerous examples of guide lines within the EU. As a more recent one have the Netherlands, Germany and Great Britain prepared an action plan containing 31 moves to support the production and use of biomass

- New EU legislation for the use of renewable energy for heating and cooling systems
- A possible revision of the bio fuel guidelines of 2006
- Preparation of national biomass action plans
- Development of a "Biofuels Technology Platform" to be headed by the industry
- Research in bio fuels of the second generation for the development of new engines/propellant devices.

5.3. Large Scale Operations and Community Development

As it was discussed under 3.2. the main demand will be coming from the highly industrialised countries, the one for national consumption in the SSA countries (except RSA) will be moderate. Consequently such production must focus on export. The price will be orientated on the production costs in the importing country minus a certain amount to make the import attractive.

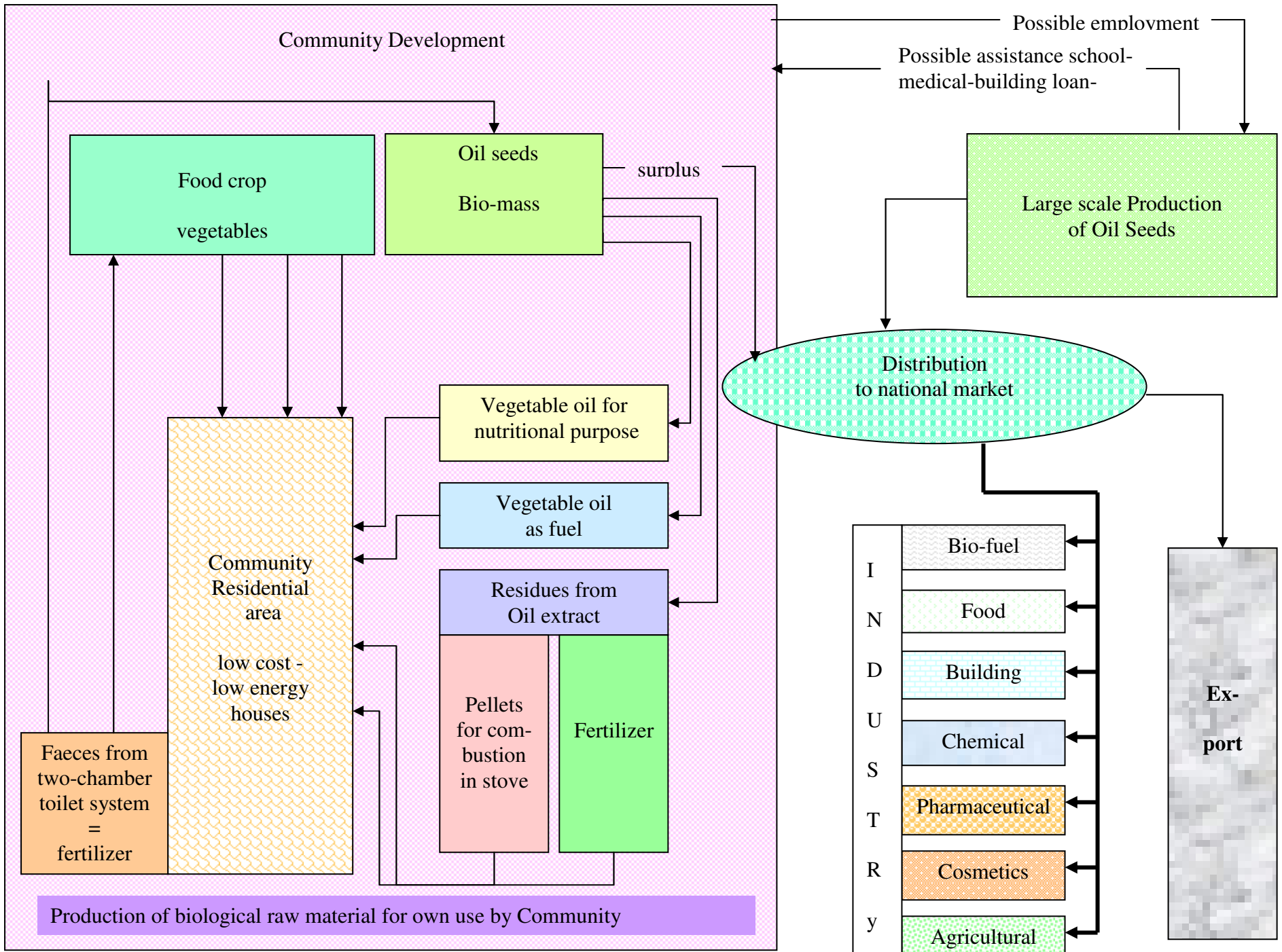
Since the cost of labour as a major production cost factor is high in the industrialised countries a foreign investor in a SSA country would benefit from the cheap labour in SSA. It would result in the exploitation of labour forces in SSA.

One way of regulating this could be to levy an export duty. One could work out the international market price for the energy crop product and compare it with the production costs in the SSA country. The balance minus a certain amount, to make the SSA product attractive, could be the tax amount.

However, it would have to be safeguarded that only those reduced production costs related to the national economic power, in particular the cheap labour costs, are taken into account since otherwise it would cause an interference with the competition criteria. E.g. it must be avoided to include lower production costs achieved by a producer because of a better organisation or higher efficiency.

The precise attribution of savings might be partly difficult. A further disadvantage is that, even if the income generated by the government for such tax would be allocated for community developments, it would not be in a direct relation to the process of value creating. By that it is meant that the income generated should directly relate to improved values such as improvement of living standard, cash income, extended variety of consumer goods, leisure and leisure activities etc.

The solution could be a compromise by leaving apart of the price difference with the state as tax and the other part with the producer on condition that he meets with it corporate social responsibilities. The following chart shall illustrate this:



The large scale producer has to employ a number of farm hands. They can build a village. The houses will have to be build and financed by the occupier/families. The producer can give them a loan – perhaps at favourable interest rates - and deducts the repayment instalments from the salary.

The producer contributes financially to the building of a school, the salary of the teacher, perhaps some medical care centre. Should it be possible to allocate for each family a small plot adjacent to their village to grow some energy crops themselves, the producer could assist the in various ways.

All these contributions by the producer can also be done in cooperation with the department of community development. Such a project would leave funds for the benefit of those who are directly involved with the production of energy crops. The labourers would directly participate in the results of their work.

6. Areas of Risk and Concern

Due to the different interests and priorities of the various players it is inevitable that there will be sometimes a clash of interests: what is worth striving for to the one could turn out to be negative for the other. But also short sighted approaches could have negative side effects in the long run, which should be avoided.

The pre-calculation of possible clashes of interest and/or negative side effects are the challenges for a sound policy and its mechanisms.

Except for community development and the direct improvement of living conditions in rural areas the production of energy crops and the processing of goods from it will be business. Since the driving force behind business is profit, it has to be expected that for the sake of profit taking other “values” may be ignored or even sacrificed. The better the preconditions for a production or the lower the production costs the higher are the profit margins.

In the following, seven major areas of risk or concern shall serve as examples. But this is by no means final. It will be important to analyse the prevailing circumstances thoroughly since the complexity of the issue makes it likely that we will only gradually learn about the interwoven links and connections.

6.1. The possible Neglect of Food Crop Production

Should the production of energy crops become an interesting business proposition to generate a good income, this might also serve as an argument to rather grow energy crops instead of food crops. With the income from the sale of it the food needed can be purchased.

This, however, does not take a number of hitches into account:

- To purchase food from the proceeds of sale of energy crops works only as long as such an income is higher than the food cost.

This might be for some time the case. But it is questionable whether energy crop growers will enjoy the full benefit of high returns on sale due to high world market prices for bio fuels. This is in particular questionable for medium and subsistence farmers, since they will in most cases have no direct access to the world market. They will depend on agents who will most likely skim the major part of the profits.

- The increasing production of energy and bio fuels from food crops has led already to substantial increase in the food price world wide, with a growing tendency.

It is therefore questionable, how long the income from the sale of energy crops (from which in any case only the lesser part of the population benefits) will be in balance with the food price.

Thirdly, and here it is referred to 3.2., the neglect of growing food crops will result in a dependency on the world market price for energy crops/bio fuels. Any substantial drop in demand or price will result in a reduced export and consequently in reduced income.

- Even for the energy crop production on community levels the possibility has to be taken into account that some “clever marketing strategists or agents for energy crops” might “convince” community members that energy crops means good income.

It will certainly be a challenge for a government to find the right way between “protective educational work” and regulation. But in any event it will have to keep a watchful eye on this issue.

6.2. The balanced Use of Land

To secure a sufficient production of food it will be necessary to find a way for a balanced use of arable land.

Already on community levels it must be ascertained that an energy crop production does not displace the production of food crops. In particular it should not be ignored that communities often have control over considerable land that might attract investors and bulk growers.

Bearing in mind that investors are business orientated, it is obvious that they will try to get access to land of the best quality, to operate on the easiest conditions (topographic structure, traffic-wise connection) and to have a secure water supply (rain fall, irrigation). Optimal conditions will result in minimal production costs with optimal harvesting results and therefore maximum profit.

Needless to say that the same will also apply to food crops. Or, to phrase it in a negative way: if the most suitable land for crop production is used for energy crop, food production on second or third degree land will require higher input costs (land preparation, fertilizer) with lower harvesting results. As a consequence less food will be produced at a higher price making food in general more expensive.

To put it in a provocative way: if - at the cost of food crop - prime land is used for energy crops and fuel generated from it, being destined in the first instance for export to the highly developed and wealthy countries, the wealthy countries benefit from it and the poor countries pay the bill.

One may argue that with the considerable income from the export the poor countries could cover the higher production costs on marginal land. But even if this should be correct, the question remains whether a larger part of the population would benefit from such income and whether it would reach those farmers producing the food crops (at higher costs).

In addition the financing of food crops from export revenues would create a dependency which could cause serious problems in case of set backs in export. Such could happen in case of lower prices for bio fuel (see 3.2) and in case of low harvesting results (which would also affect the food crop production on marginal land) etc.

In the context of land use another argument shall be dealt with. It has been repeatedly claimed that one of the advantages of *Jatropha* be its property, to grow on marginal land. It therefore does not clash with the production of food crops.

This argument holds as long as *Jatropha* would only be grown on marginal land. But it is a fact that also *Jatropha* shows better yields if grown on fertile land. If it comes to business it is therefore obvious that even with the production of the undemanding *Jatropha* an investor would opt for fertile land. This is supposed to have happened already in Tanzania.

Because of the necessity of food crop production and the likely rivalry between energy crop and food crop it will be advisable to find a *modus operandi* to safeguard a balanced use of land.

If a quota system would be introduced it would presumably not be simply based on a one to one percentage figure. It will rather depend on a number of factors such as the population of a country, how much land is needed to secure a basic food supply, what are the export chances etc. It will be a task for experts to stipulate a balanced figure (also in this context the attention is drawn to the importance of a data base).

6.3. The social component.

Labour costs are a major part of the production costs. To cut down on labour costs results therefore in a higher profit.

Accordingly most entrepreneurs will try to offer conditions of employment which are advantageous for them but not necessarily for the employees: low wages and salaries, long working hours, inexpensive working conditions, minimal social security such as sick leave, unemployment insurance, pension fund, medical aid etc.

Referring to 5.3. and the corporate social responsibility it should be reminded that at the beginning of the industrial revolution responsible entrepreneurs accepted their social responsibility, looked after their employees and even built the villages which are still existent.

They have been replaced in the meantime by social protective mechanisms during the course of the development of the social market economy have in order to prevent exploitation and social injustice. There are three major stabilizing factors in a well developed economy:

- Labour and social legal regulations
- Labour unions
- The employment situation

In weak economic infrastructures which are in a development process, supportive and protective mechanisms for the work force are generally underdeveloped and on a low level. This results almost automatically from an economy which is predominantly characterised by subsistence operations rather than by extensive business operations.

Subsistence production is characterized by small quantities with limited labour forces, i.e. in particular only a few employees if at all. The owner of the business and often family members are the core of the work force. It is therefore not necessary to have well developed and efficient labour and social protective mechanisms such as laws or unions.

Also the employment situation has no stabilizing effect. In cases of a high employment rate job seekers are scarce and employers will have to make lucrative offers if they want to find suitable candidates. With a high unemployment rate there is an oversupply in labour force which tends to make labour a cheap commodity. This results in entrepreneurs still finding enough candidates even if they offer a low salary or poor conditions of employment.

Ample experience with regard to social justice or at least acceptable conditions of employment during the last century has shown that employees need some kind of protection because of the stronger position of the employers. They control the money. But it has also shown that governmental protection often had a paralysing effect on economic development and growth.

With regard to the SSA countries it will have to be carefully assessed whether the existing labour and social protective mechanisms are sufficient to protect the labourers. This in particular in view of big investments in order to produce million of tons of energy crops and to export millions of tons of bio fuel annually from African countries. The amounts to be invested will be billions of Dollars. And the investors will try to employ the labourers needed at favourable conditions – as far as production costs are concerned.

On the other hand it has to be accepted that e.g. an investor from Europe could not pay wages applicable in Europe even if he would like to do so. This would erode the labour conditions in a developing country. Wages and salaries are an integral part of the national economy and reflect its economic power. Because of the difference in the price of goods to be imported by wealthy countries and the comparatively low production costs in a developing country the likelihood of exploitation is on the cards if no guiding regulations – can prevent this. Possible solutions have been discussed under 5.3.

Although international agreements and also qualification standards for the import of bio energy products are in preparation – which inter alia will also make reference to the ILO regulations – reason for concern remains. It will not be too difficult to bypass such regulations if they are not anchored in the individual countries. It will be important that the indi-

vidual SSA countries will pass the necessary laws and regulations to make them their own regulations being judicable on national levels (see 4.3).

All this is certainly not new. There will be a lot of knowledge and experience amongst African countries and in particular countries like Brazil, India and South Africa and others. An inner African dialogue on this issue as well as a south-south exchange and some assistance from European countries should result in regulative frame works with an appropriate protection of labour forces.

6.4. The national Economy

Much has been said already about the necessity to create a national (or even better a Sub Sahara African) consumer market for energy crops and products generated from it.

Besides the concern about the dependency on international markets it is also a matter of concern to try to get stability into the national economy of the various African countries. Such a stability requires to involve as many sectors of the economy as possible in order to place the same on a broad footing.

By now over 80 products can be produced industrially from energy crops, in particular from oil seeds. Industrial branches such as agriculture, food, chemistry, building, pharmaceuticals and cosmetics can be involved.

It will be a challenge for an “**African Policy on Energy Crops**” (APEC) and the politicians in the various African countries to support a respective industrial development. Referring to “Areas of Support”, the various governments may consider to work out appropriate promotions and support.

In view of the production of energy crops, developing countries have to be concerned that they do not face a similar result as the one in connection with their mineral resources: the raw materials are exported, converted into goods by other countries and the goods are imported to the countries from which the raw materials came. What used to be an exploitation of minerals could easily turn out to become an exploitation of arable land.

As it was discussed under 3.2. it is important and possible for SSA countries to use energy crops for the industrial processing and the production of other goods than solely energy or bio fuels: e.g. varnish, paint, tooth paste, insulation material, edible oil etc. (see Chart below)

Vegetable Oil, Fat and Grease

Oil containing Plant	Examples of Products and Use	
<ul style="list-style-type: none"> ▪ Rape Seed (Canola) 	Lubricant Hydraulic oil Two stroke engine oil Shuttering oil for concrete casting Plastic production additive	Filling material for rubber Supporting material for oil drilling Paint Varnish

<ul style="list-style-type: none"> ▪ Flax 	Fatty chem.. Industry (Linolacid) Varnish Paint Linoleum Paper-,Leather-,Oil-, Cloth Industry Carrier for pesticides Special soap	Printing ink Softener PVC stabilizer Putty Water proof texture Binding agents for dust

<ul style="list-style-type: none"> ▪ Soya 	Varnish Paint Soap Lubricant	Alcyd resin Softener PVC stabilizer

<ul style="list-style-type: none"> ▪ Castor Oil Plant 	Basic agents for softener for Synthetics Lubricants for high rev engines Rubber production Paint Varnish Printing ink Alcyd resin	Soap Solvents Perfume Leather industry Hydraulic fluids Cosmetics Pharmaceuticals Linoleum

For some of such goods a consumer market should exist already in SSA. For others it will have to be developed.

Governments would be well advised to instigate and stimulate a respective market analysis concerning products as well as existing production facilities or how to attract investors. The industry is in any modern economy an important part and to include the same with the processing of energy crops would help to put the economic development of SSA countries on a broad basis.

6.5. Nature protection.

Biotopes are defined as areas where plants and animals live in a symbiotic way together. Many of them are characterised by specific species. Some are isolated, some are interconnected with others. And some are of high ecological value.

Biotopes can cause an obstacle to the production of energy crops for various reasons. In such a case it will be tried to either reduce or to even destroy them. In most cases business reasons will account for it.

Apart from biotopes being of utmost importance for our life and the climate they are of high spiritual value in particular in modern life which is dominated by technological developments and achievements. The result is a growing distance or even separation from nature. But since we are a part of nature we can not deny our affinity to it. If our life and our scientific, technological and economic progress can not be brought into harmony or at least into balance with nature, this must lead to distortions, as we experience it already.

Another aspect concerns the CO² emissions. Although the prevailing scientific opinion claims that the use of biomass is carbon dioxide neutral, a considerable number of voices advocate the opinion that the conversion of natural ecosystems to energy crop plantations may result in higher CO² emissions due to an accelerated disintegration of organic matter.

Finally it has to be borne in mind that any destruction of biotopes results in the reduction of living space for various forms of life with the consequence of reducing or even exterminating it. Since our whole nature is a huge system of countless interwoven and interconnected elements, any disturbance must have consequences, no matter to what extent we become aware of it.

We are facing the consequences of our limited understanding over decades of the consequences of the massive use of energy from fossil sources which has been an interference with the ecological system. We should learn from it and avoid making similar mistakes again by underestimating the value of biotopes.

7. The Time Factor

Depending on the interest pursued by the individual partner the time factor will be different.

The development of national markets will have to consider the cultural circumstances and the specific stage of development of its population. The adaptation of consumers, the way they will grow into a market and the pace of the market development will be interconnected. If no sufficient time is given to the consumer he will not accept the products and the market will fail to develop. Nevertheless, time is pressing since the improvement of living conditions is essential for humanitarian reasons. And to reverse the present tendency of a widening economic gap between the industrial nations and the up-and-coming ones and the developing countries the economic development of the latter should accelerate.

With regard to energy crops as an alternative to fossil fuels the situation is different since – and in this context it is assumed that bio mass will be a means to curb on CO² emissions – the drastic climatic changes require immediate action. It may be stressed that the climatic changes we experience are the result of our energy management 20 years ago. This means we will experience in 2028 the results of our energy management in 2008. Looking at the climatic effects of the “moderate” energy consumption in 1988 which we see today and considering the drastic increase in energy consumption in the past five years with a still increasing tendency, it is no glooming prophecy to say: the worst is still to come. And it may be added that some of these changes are irreversible such as the melting of glaciers and the ice of the polar regions. The necessity of swift and efficient action is evident.

On the other side it has to be taken into account that we are looking at a counter development to the one that has developed over approx. 130 years resulting in the climatic problems of today and the foreseeable future. Such new development will have to be carefully considered in order to avoid a cure that replaces the present dilemma with plenty of new problems. A development would require time, time which we actually don't have.

Another time factor relates to the limit of fossil energy sources, in particular crude oil. But since it is not clear yet whether bio mass will be a real substitute as fuel for new propellant devices or only an interim solution, this aspect shall not be pursued at this stage.

Besides such “future aspects” and perhaps the most pressing reason for the speedy development and implementation of policies and the necessary mechanisms lies in the different process of investments and the establishment of a policy.

The first one will take only a few weeks or months, the business world is ready to move as soon as the market prospects are promising. For the sake of completeness it shall be noted that in many instances already the beginning of investments create a factual situation which is difficult to change or to reverse: e.g. the preparation and in particular the cultivation of land, the laying of foundations of an industrial plant etc.

The development of policies, however, is a time consuming process involving a lot of departments and stakeholders with often diverging interests and visions. Regulatory frame works as mechanisms to execute the policy are to some extent laws which requires the process of passing. Adding to this, the necessary research work to collect the data and information required and the processing of the same and the building up of a data base as a reservoir for the decisions to be taken is a long and cumbersome process. This will require at least one to one and a half years.

Should regulatory frame works not be in force by the time large scale investors start their operations it will happen that business activities have created a factual situation by the time controlling regulations are adopted. This would result in those regulations being to no avail or even causing a contradictory situation and friction.

In conclusion it has to be noted that generally the necessary activities require a good pace – but with a good eye for the complexity and requirements of the various developments.

8. A possible Play Off of African Countries against each other

It is a part of competition to be either better than the other or to play the one off against the other in order to get the best deal out for oneself. This works in business and in politics alike.

With regard to energy crops and in particular in view of the areas of concern dealt with above, it may well happen that a big investor approaches a country with tempting investment proposals. However, the terms and conditions might not match with the adopted policy of that country. It therefore tries to negotiate and change the conditions which would, if the investor has to accept it, make his investment less lucrative.

If the investor has the alternative to approach another country and it may happen that he would succeed with his original plans, he would be able to use this as a leverage in his negotiations: accept my conditions or I go to the neighbouring country. If the first country approached can be certain that the investor would also there not succeed (e.g. in both cases biotopes would be affected), it could adopt a firm stand point.

Should the first country be in doubt, it could eventually back off in order not to be the loser – to the detriment of nature, its labour force etc.

To prevent something like this to happen, countries with a common interest would have to adopt a common policy. As the saying goes: unity is strength.

To adopt clear regulations with regard to the protection of the people against exploitation and of nature and land against damaging activities will be certainly endorsed and supported by most of the international community.

The EU is apparently presently in a process to work out qualification standards for the import of bio mass and bio fuels with the aim, to curb on operations with regard to bio fuel which are detrimental to the environment or in other ways. And the protection of biotopes and biodiversity is internationally in discussion.

But a good position with the necessary load bearing capacity would be a common policy and strategy by the SSA countries, The best bet would be a policy on AU level. This might be, however, a bit optimistic (although it would be worthwhile trying).

The second best would be a policy for a group of states, e.g. the SADC. A policy just on national levels is the third best option – or this should rather be called a must.

9. Partnerships

The nature of partnership shall be defined as follows: Partnership lives on common interest, difference of experience and knowledge and the inter-exchange of it.

Concerning the “common interest” one can differentiate between

- A partnership with an internal purpose
- A partnership with an external purpose.

In the first case the partners expect to personally benefit from the partnership e.g. by business expansion, profit, influence etc. The partnership is meant to serve the partners interest.

In contrast to this, partners join forces in the second case to serve an aim from which they both do not benefit directly. The interest of the partners is rather of a kind of intrinsic nature.

One could describe the difference also as “what is in for me” in the first case and “what can I contribute to further the aim” in the second case. In the case of energy crop production and the relationship between the SSA countries and Europe we have a mixed scenario.

The prime interest of the SSA countries is or should be the improvement of their economies whereby the possible export of energy crops could be one important facet. But as it was discussed under 3.2 it should be the prime target of the SSA countries to develop markets they can influence or control. These are in the first instance the national ones and also very important the SSA ones. SSA has a population of approximately 800 Million people which are potential consumers. The problem for SSA is that this consumer potential has not been developed satisfactorily.

The SSA countries have basically the same interest in the production of energy crops, i.e. the direct improvement of living conditions in rural areas and the overall improvement of their national economy with a strong accent on the industrial development. The prime interest of the highly industrialized countries is the access to bio fuels and biomass at favourable prices. Whereas the interest of SSA countries calls for cooperation towards common goals (the development of the EU may serve as an example) is the common interest between SSA countries and highly industrialized ones more characterised by a business relationship. This should by no means be understood as a valuation.

However, the coinciding interest of SSA and the European countries/the EU generates enough common grounds to approach a production of energy crops in SSA in partnership.

- “Difference of experience and knowledge” is by no means limited to technical know how about the production of energy crops, products generated from it and modern market and economic structures – about which the European countries might be in the lead.

In particular the development of markets requires a deep insight knowledge about cultural characteristics, tradition, attitude towards life and society, use of land, consumer behaviour etc. In as much as Europe experienced in its past developments which have the same roots and are comparable to the SSA situation and developments to come, the situation for Africa will be different. And only Africa will have the necessary insight to determine appropriate policies and strategies for building up African markets.

The African experience and knowledge blended with the European one could well result in a fruitful partnership for the production of energy crops and the establishment of the necessary markets to the benefit of the partners and beyond.

10. A Data Base

In the course of what has been discussed it became repeatedly apparent that the establishment of a policy and its mechanisms as well as its implementation depends on comprehensive information.

Just to recapitulate a few topics: location of arable land; settlement patterns; food crop needs and production potential; crop ratio; quality of soil; water supply; relationship between certain energy crops and products from it and consumer acceptance; tax incentives; existing industrial potential etc.

For experts it should not be a problem to build up the structure of a data bank. Such experts will be available in Africa and they can be assisted in the south-south communication or from European partners. The professional knowledge about the various subjects will be partly available in Africa and can be supported from other international resources as we have it e.g. especially within Compete in WP1, WP2 and WP5.

Should the basic idea of a policy along the lines set out in this paper be acceptable and pursued, it will be a challenge to conceptualize a data bank and also the ongoing work of keeping it up-to-date.

11. Strategy for the preparation of a policy concept

The process from the first draft of a policy paper to the final act of adoption and implementation will involve a number of different players on national levels as well as with regard to possible discussions on SSA levels and with other potential international partners. The potential participants will have to be identified and contacts and discussions between them should be started at an early stage.

For the “spadework” and the preparation of the concept one could think of two different approaches:

- Various government departments that may be affected by or involved in the energy crop policy can be requested to work out a specific part of the policy that falls within their area of work. The results can be collected and submitted to a commission.

Such procedure can be sluggish because possible deficits or missing parts in the document will only be discovered once the paper has been completed, submitted and analysed.

A further delay may be caused due to the commission only being able to prepare its itinerary, agenda, strategy and to do the necessary planning once it has been appointed.

A further hitch could be that once a department –led by a minister – has prepared documents containing proposals and recommendations it might be difficult to change such opinion.

- As an alternative one could appoint a commission right at the beginning with the task to prepare the draft of a policy paper including regulatory frameworks. As members experts should be called in, the chairman should be an independent person. The commission would liaise with the various departments and would involve and employ the resource persons and institutions needed.

The advantage would be that such a commission could work out its strategy, action plan intermediate targets and information or reports etc. right at the beginning. Accordingly it can continuously monitor the process, make corrections at an early stage and can ascertain this way that the process develops in the right direction without time consuming detours.

Once the final draft has been completed it will be presented to the authority in charge for the final decision.

This alternative would also be of advantage in view of possible partnerships or common policies with other countries. The same commission could start the necessary preparatory work with corresponding commissions in other countries to put the decision takers into position to discuss and negotiate policies officially.

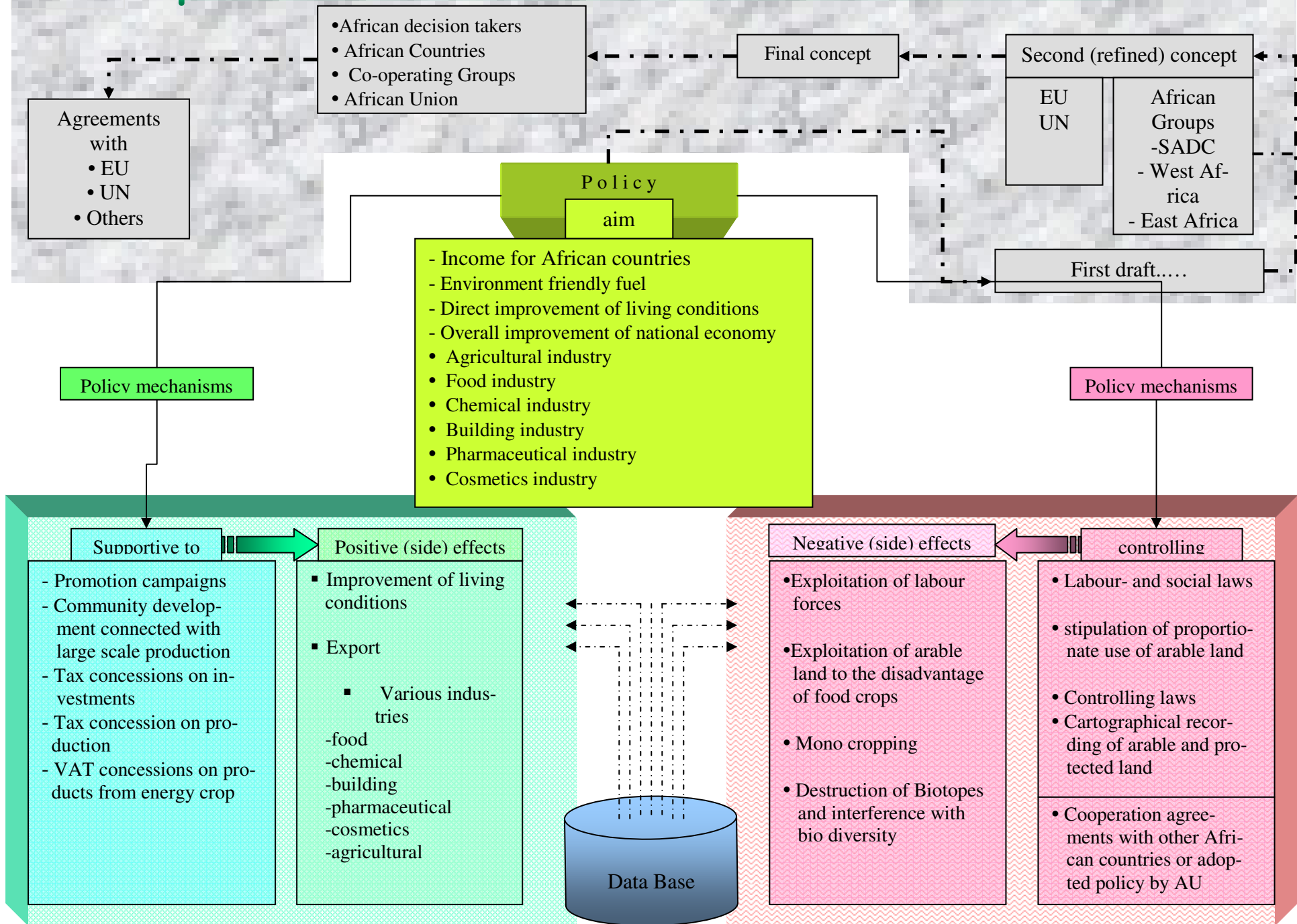
In this context the importance of developing joint markets and joint policies as explained under 8. and 9. shall be reiterated: to try to activate the consumer potential of SSA, to try to co-ordinate the energy crop policy within African countries to avoid exploitation and to avoid that African countries are off against each other.

Hopefully will Sub Sahara African countries discuss and adopt a joint policy. This can be done bilaterally or multilaterally amongst existing groupings in western, eastern and southern Africa. Exploratory talks during the course of the preparation of the concept might help to include essential contributions by partners.

Enriched by the various contributions and opinions of African groups, the EU and the UN, the final concept should be of such a comprehensive quality that any policy based on it should secure a fruitful production of energy crops.

The following diagram may serve as an indication, how the process of finding and determining the contents of a policy (the lower part of the diagram) and the strategy for discussing such a policy with various potential partners (the upper part of the diagram) can look like.

Strategy for policies and its mechanisms for the production of Energy Crops in Sub-Saharan Africa



**COMPETE Project Coordination
WP7 Coordination - Dissemination**

WIP Renewable Energies
Sylvensteinstr. 2
81369 Munich
Germany

Contact: **Dr. Rainer Janssen**
Dominik Rutz

Phone: +49 89 720 12743

Fax: +49 89 720 12791

E-mail: **rainer.janssen@wip-munich.de**
dominik.rutz@wip-munich.de

Web: www.wip-munich.de

WP1 Coordination – Current Land Use

University of KwaZulu-Natal
School of Environmental Sciences
South Africa

Contact: **Dr. Helen Watson**

E-mail: watsonh@ukzn.ac.za

Web: www.ukzn.ac.za

WP2 Coordination – Improved Land Use

Utrecht University
Dept. Science, Technology and Society
The Netherlands

Contact: **Dr. Andre Faaij**

Dr. Edward Smeets

E-mail: **A.P.C.Faaij@uu.nl**

E.M.W.Smeets@uu.nl

Web: www.chem.uu.nl/nws

WP5 Coordination – Financing

Energy for Sustainable Development
United Kingdom

Contact: **Michael Hofmann**

Stephen Mutimba

E-mail: **michael.hofmann@esd.co.uk**

smutimba@esda.co.ke

Web: www.esd.co.uk

**COMPETE Project Coordination
WP3 Coordination - Sustainability**

Imperial College London
Centre for Energy Policy and Technology
South Kensington Campus, London, SW7 2AZ
United Kingdom

Contact: **Dr. Jeremy Woods**

Dr. Rocio Diaz-Chavez

Phone: +44 20 7594 7315

Fax: +44 20 7594 9334

E-mail: **jeremy.woods@imperial.ac.uk**
r.diaz-chavez@imperial.ac.uk

Web: www.imperial.ac.uk

WP4 Coordination – International Cooperation

Winrock International India

Contact: **Sobhanbabu Patragadda**

E-mail: sobhan@winrockindia.org

Web: www.winrockindia.org

Stockholm Environment Institute

Contact: **Francis Johnson**

E-mail: francis.johnson@sei.se

Web: www.sei.se

European Biomass Industry Association

Contact: **Stephane Senechal**

E-mail: eubia@eubia.org

Web: www.eubia.org

WP6 Coordination – Policies

Food, Agriculture and Natural Resources Policy Analysis Network of Southern Africa South Africa

Contact: **Khamarunga Banda**

Lindiwe Sibanda

E-mail: khamarunga@hotmail.com

imsibanda@fanrpan.org

Web: www.fanrpan.org



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