

# **Sustainability Criteria for Bioenergy**

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## **Opening Remarks**

*Hermann Graf Hatzfeldt*

### **Situation**

The world faces today an unprecedented challenge: We are rapidly living up the capital of natural resources, accumulated over millions of years, and thereby destroy the very conditions on which life on earth depends.

*On the current path, further development is clearly unsustainable.*

The most up-to-date science tells us: If temperature growth of the planet is to stay below the critical threshold of 2 degrees centigrade (compared to pre-industrial levels), GHG-emissions must be cut by about half before the middle of the century to flatten out the trajectory.

Yet emissions from the energy sector have been rising and continue to rise dramatically. This is crazy! This is suicidal! The point of no return is in danger to be reached soon, probably in 10 to maximal 20 years. Time is running out – unless something is done.

### **Bioenergy**

The way out of a fiasco has three routes:

1. consuming less energy
2. making better use of existing energy resources: improving efficiency in conversion and use
3. harnessing renewable sources: deriving energy from biomass feedstocks

In the coming two days, our concern is with just the latter: bioenergy. At the outset, three observations:

a) *The three pathways must be followed simultaneously.*

No doubt: Bioenergy is predestined to make a crucial contribution to a sustainable energy future. But only if all energy sources are used sparingly and efficiently.

b) *Bioenergy is not new.*

Humans have depended on it since the invention of fire -- and still do so in many parts of the world. New is, potentially, the extent of biomass use and the technologies of conversion.

c) *Bioenergy is not automatically sustainable just because it is renewable.*

There is a great variety of different feedstocks and end uses. Much depends on how, where and which biomass is produced and transformed into usable energy.

### **Opportunities and Risks**

Spurred by high oil prices, the demand for bioenergy feedstocks is rising dramatically. This trend will, if anything, accelerate when 2<sup>nd</sup> generation BtL- and BtG-technologies come into place.

It is safe to say: The expansion of bioenergy production, use and trade will likely transform agriculture and forestry worldwide more profoundly than any development since the Green Revolution.

*The opportunities are enormous. But so are the risks.*

In the South there is a great potential to:

- Increase farm income and employment
- Strengthen the rural economy and rural communities
- Alleviate poverty

In the North:

- Energy security is increased by diversifying the fuel mix
- GHG-emissions can be mitigated cost-effectively
- Innovative new technologies are developed and could be exported

This is an ideal constellation for international markets in bioenergy: Both exporting and importing countries can reap multiple benefits from trade.

The beauty of it is: While industrial countries require bioenergy to meet their most pressing needs, less developed countries are best blessed by nature to provide it.

Yet, at the same time, there are concomittant concerns.

- Will the expansion of bioenergy, in all of it's implications, be truly sustainable?
- How should it be channelled and managed, accordingly?

Take land-use as an example. With rising demand for feedstocks, the pressure on - and competition for – land is bound to increase. There will be conflicts with alternate land-use, like food production or nature conservation. There might be conflicts of ownership.

However, land-use changes need not be detrimental, environmentally or socially. They could well be very beneficial compared to current uses.

If good care is taken, for instance, that:

- high-nature-value forests and arable land are not converted into bioenergy plantations
- “leakages” are accounted for and no adverse indirect impacts occur
- biodiversity is maintained
- soil and water are not degraded
- local food security is not endangered
- the value added remains in rural communities
- property rights and labor laws are respected
- etc.

### **Task Ahead**

To minimize the risks and to optimize the opportunities a coherent strategy must be evolved. For this, the major stakeholders in business, government and civil society at large need to agree on:

- a shared vision
- principles to follow
- minimum criteria to observe
- and the instruments and policies of implementation

The vision is:

- transforming a hitherto unsustainable fossile-based energy system into a sustainable one

The principle is stewardship of the global commons:

- reduce the dependence on non-renewable resources
- avoid destructive climate disruption
- increase, rather than decrease, the well-being of people, economy and nature

The task ahead is defining the criteria to be followed, evolving standards and translating them into policy instruments:

- what are the key indicators?
- how to ensure that the standards are met?
- is certification a useful instrument?
- what other complementary policies are needed?
- which mix of instruments is required?

These are major questions which we are asked to address today and tomorrow. Yes, they are technically complex and yes, they are institutionally demanding questions. But let us keep in mind, there is an urgent need:

- to find a common ground
- to come up with intelligent and creative answers

*For: If we not find such solutions, who will?*

## **Conference**

What is needed is a joint effort of stakeholders around the globe. For this reason the two organizers – Forum Umwelt & Entwicklung and the UN-Foundation – have brought us together.

Never before has there been a Conference on Sustainability Criteria of Bioenergy comprising so many experts and actors from so many countries. The concentration of so much expertise and experience in one room is truly astounding!

Today and tomorrow we have the unique historical chance to move the issue together onto a new level of understanding and strategizing. Let us make the best of this opportunity! We are in this together.

Let's get started. Good luck!