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Policy Working Group meeting report

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I. General outcomes

This was the second meeting of the PWG following and partly building upon the first one held in April. The meeting started with a warming up exercise with a short discussion on what the participants felt could be the most effective policy decision for conserving biodiversity. Participants proposed various tools from properly implemented strategic environmental assessments and environmental impact assessments, through intensive communication campaigns and prioritisation of the issue to a tax reform, which puts the tax burden on the use of natural resources. The ideas were rather diverse, but many of them focused on the drivers of biodiversity loss, even if the concrete tools were not identified. It was emphasised during the discussion that a proper tool, which can respond on the problem of biodiversity loss will also respond on other environmental problems, let they be climate change or waste management challenges.

The DPSIR model, which was introduced and used at the last meeting, was the basis of more profound breakout discussions, which explored what environmental, social, cultural and economic mechanisms (i.e. cultural, institutional, structural level drivers) are behind the pressures on biodiversity. On one hand it was attempted to identify why certain mechanisms lead to excessive human pressures on biodiversity (e.g. why competition and competitiveness seem problems, though they shall not be necessarily) which are beyond the tolerance of ecosystems. On the other hand some responses were proposed, which could result in the total decrease of environmental pressures. These ideas included campaigning for changing

the attitude of people (less is enough or it is not a prerequisite for happiness to eat fruit off season), targeting the media and easing their dependence on the private sector (the audience shall finance the operation costs instead of the advertisers, which could decrease the commercial brainwashing through the media), holistic education, international environmental and labour standard and natural resources tax. The discussion was concluded by summarising what view the society has currently on drivers and what could be possibly the necessary responses on these drivers instead.

Drivers	Current views on drivers	Necessary responses
Cultural level drivers		
Values of society	Imbalance between material and immaterial values	Balancing material and immaterial values by introducing pricing or valuation of natural resources
History/conventions	Globalisation	Glocalisation instead of globalisation and localisation
Ideology, philosophy	Giving priority to economic growth	Integration of environmental and development issues meaning sustainable development
Politics	Particular views and interests, centralization	Decentralization, subsidiarity
Policies	Sectoral approach focusing on problems	Integrated approach focusing on root causes
Strategies	Several sectoral strategies conflicting each other	One strategy responding on the root causes of problems
Plans/programs	Particular plans and programmes under different strategies	Reconciled plans and programmes under the one strategy
Customs/habits	Consumption to meet demands	Consumption to satisfy basic needs
Knowledge	Imbalanced, technical, particular knowledge	Integrated, also on the links and relationships among issues
Views/wisdom	Analytical approach	Holistic approach
Institutional level drivers		
Legal regulation and implementation	Sectoral, crossing, complicated	Systematic, simple, understandable
Economics	Environmental services are for free	Environmental services are valued
State budget	Problem oriented	Oriented on preventing problems
Public administration	Bureaucratic	Servicing the public

Education	Analytic, sectoral	Holistic, looking also at the links
Health care system/health insurance	Post	Pre
Pension system	Not flexible	Flexible
Safety	Ensuring safety creates conflicts	Ensuring safety creates personal peace and closes social gaps
Information	Information asymmetry	Equal access to information
Trade	Global trade	Local market
Money	Money overrides goods	Equity of goods and money
Structural level drivers		
Production patterns	Energy and material intensive	Less energy and material intensive
Energy sector	Low efficiency, based on non-renewables, no limits for use	High efficiency, based on renewables, absolute limits for use
Industry	Linear, wasting materials	Connected in cycles, linking different cycles
Agriculture	Intensive, agro business	Ecosystems oriented
Transport	Global, expanding	Reduction of transport
Tertiary industry (services)	Big structures	Small structures
Consumption patterns	Wasting, meeting demands	Meeting basic needs
Spatial structures	Expanding, disconnecting ecosystems	Keeping the coherency of ecosystems
Urban structures	Big markets, high environmental pressures, paralysing rural structures	Thriving rural structures
Infrastructure	Expanding, global	Local

Table originally by Iván Gyulai

In order to build upon the first PWG meeting, some important principles and characteristics of sustainability were shortly presented (see attached file of the presentation), which were discussed at the previous meeting. Some issues could not be thoroughly discussed and agreement reached (about development and what the aims of development and the objectives of society are). It was debated if constant economic growth is possible or impossible, in theory economic growth could be achieved if it is constrained on growth of cultural services and an absolute limit of resource use is realised.

II. Recommendations on specific topics

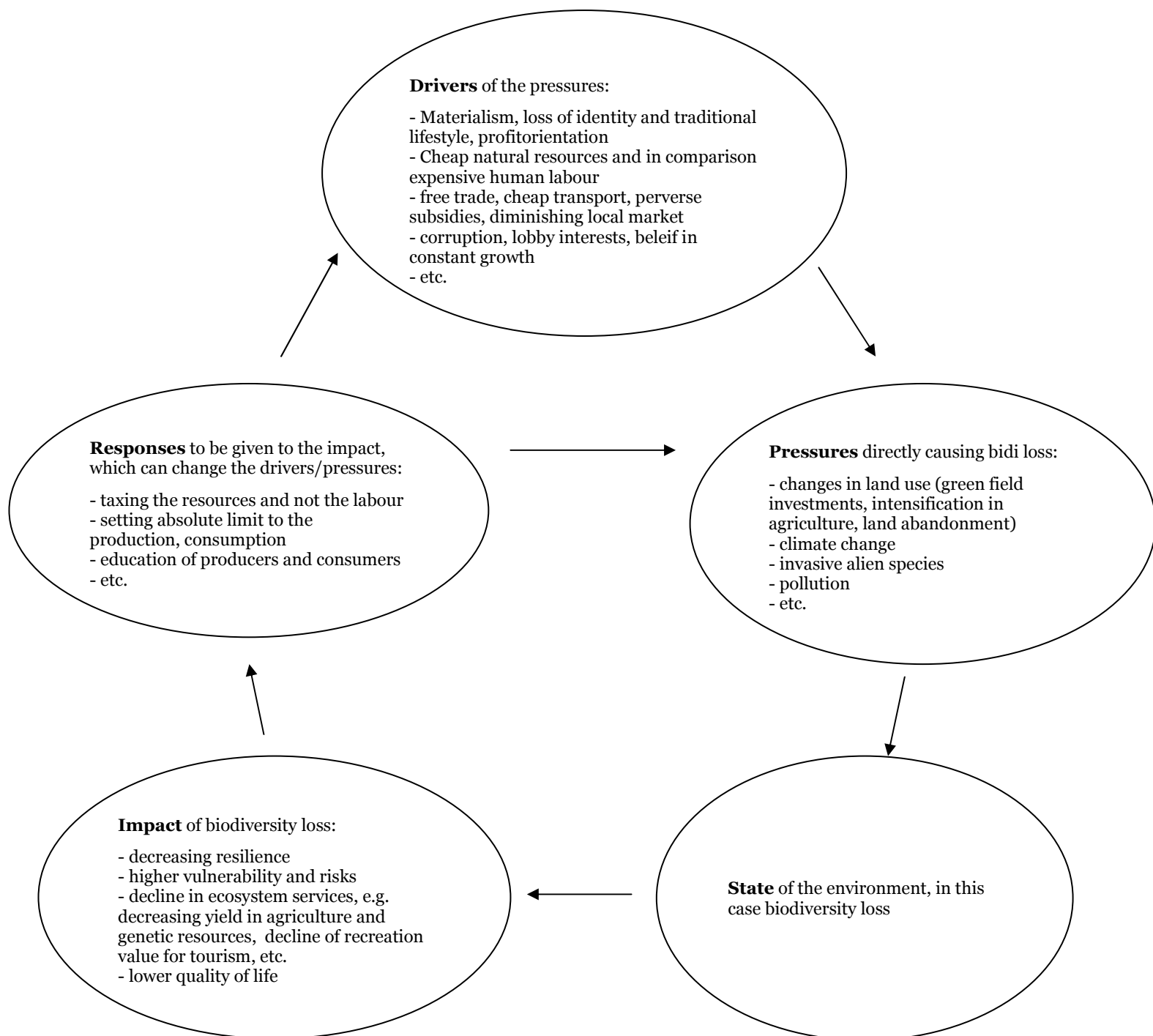
Biodiversity vision for the future

We would like to formulate policies which at the end lead to cultural changes, and a system of economic, legal regulations, institutions and structures that do not decrease biodiversity. Keeping this aim in mind a vision for the society and for biodiversity seems to be necessary before identifying the proper tools.

In order to kick off the discussion, Gábor Vida held an introductory presentation on the

Our vision is reducing the pressure on biodiversity as much as possible in terms of emission, use of natural resources and space, so that biodiversity can adapt to the more and more changing environment induced by human activities and can maintain its functions. Degraded ecosystems are to be rehabilitated if pressures are not increased as a result.

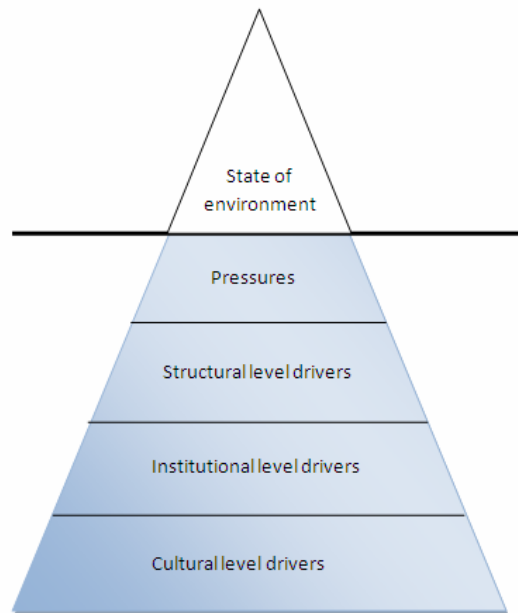
We understand that environmental pressures include emissions, e.g. chemicals from fertilisation, greenhouse gas from fossil fuels, wastes from industry and households; use of space, e.g. urban expansion, establishing infrastructures; and use of resources e.g. taking specimens from nature through logging, hunting, use of groundwater.



Picture 1. Simplified DPSIR model of biodiversity loss

The pressures on biodiversity and environment can be always three fold: using the space (e.g. habitat loss, fragmentation, land abandonment), using the resources (taking specimens, food, water, etc) and causing pollution (e.g. chemicals in transport or agriculture, emission of green house gases).

The system of drivers was further presented by Iván Gyulai, identifying different levels of drivers (see picture and table below). The most deeply lying drivers are in the culture of the individuals and the society, which largely determine the institutional and structural levels of drivers. It can be also recognised in the case of urbanisation (a structural driver), as people move according to their values: if instead of material values the value of nature and environment prevailed in the society, then people would rather move to the countryside.



Picture 2. The iceberg of cause- effects (Iván Gyulai)

Cultural level drivers of the society

- Values
- History/convention
- Ideology, philosophy
- Politics
- Policies
- Strategies
- Plans/programs

Cultural level drivers of the individuals

- Values
- Customs/habits
- Views/wisdom
- Knowledge
- Practice
- Behaviour

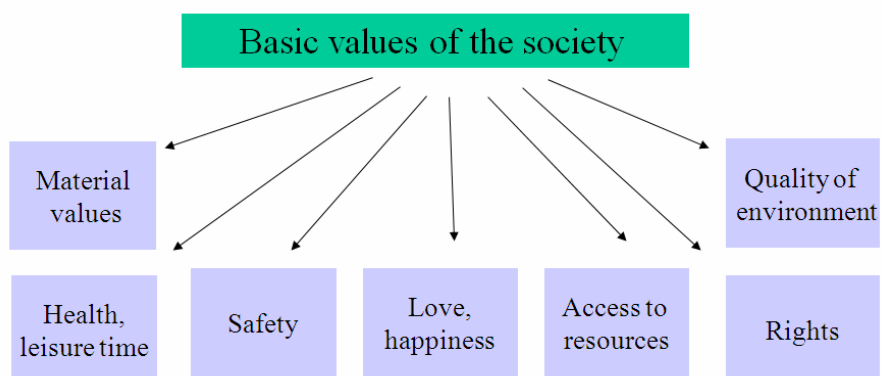
Institutional level drivers

- Legal regulation and implementation
- Economics
- State budget
- Public administration
- Education
- Health/health insurance
- Pension system
- Safety

Structural level drivers

- Production patterns
- Tertiary industry (services)
- Consumption patterns
- Spatial structures
- Urban structures
- Infrastructure

Table 1. Levels of drivers behind biodiversity loss (Iván Gyulai)



Picture 3. Values of the society (Iván Gyulai)

3. Introduction to sustainable development

Introduction to sustainable development was given, which was accompanied by intensive discussions.

Future scenarios

I. Catastrophe scenario

- We are over the turning point, we can't avoid the global catastrophe
- Develop faster to enjoy the rest of the time
- There is little chance that this will happen

II. Techno-optimistic scenario

- We have been solving problems since human have been evolving, we will overcome current problems as well
- Speed up and go ahead
- It entails a high risk, and there is the biggest chance that the society decides to go into this direction

III. Global crisis scenario

- A global crises is coming with heavy impact on human society
- We will be forced to turn to sustainability, nothing serious will happen until then
- There is biggest chance that this will happen eventually

IV. Sustainable society scenario

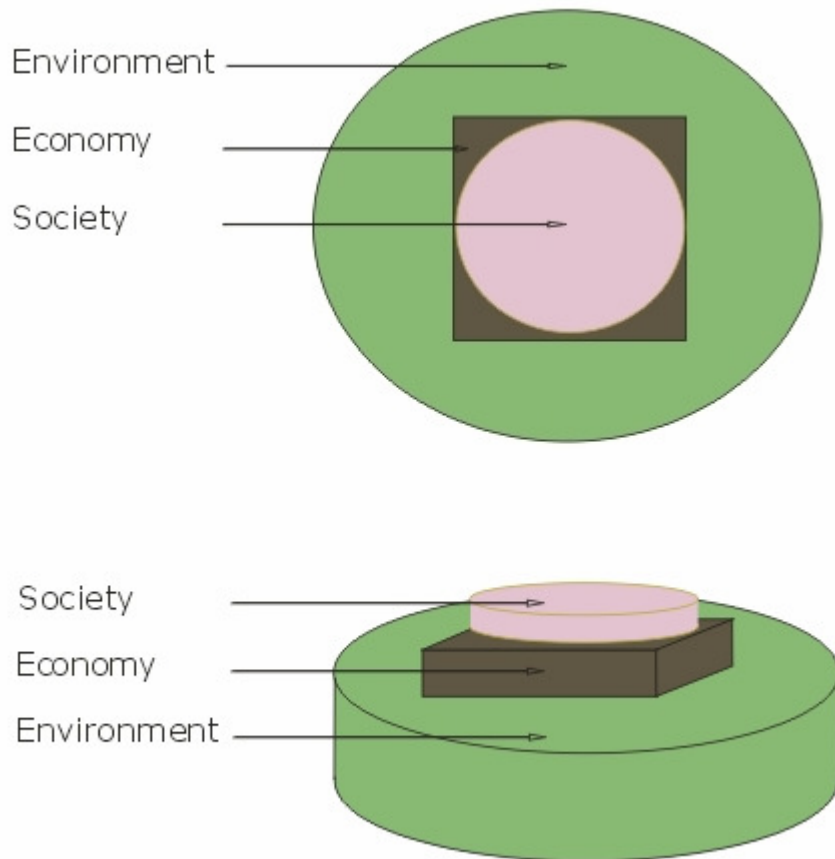
- We still can turn back from the current direction, if the society wanted
- For this the society needs to change its view, values, behaviour, production and consumption patterns
- There is no risk involved, but there is little chance that this will happen

The concept of sustainability

The most well-known definition of sustainable development comes from the Brundtland Commission: *“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”*. One of its shortcomings is that it only deals with humans and ignores other living beings. Besides the Brundtland report called for more economic growth and also said that for solving environmental problems just more financial resources and better regulation are needed. It also mistakenly accused poverty of environmental problems. However, the report correctly stated that all issues of environment and development are interrelated.

In this (current) paradigm of economic growth (also accepted by the Brundtland Commission) the aim is economy and humans and nature are merely considered as tools in the scheme.

Under a new paradigm economy is just a tool, not an aim. It is the interface between society and the environment. In contrast environment is a precondition, limit and opportunity at the same time.



Picture 4. The three “pillars” of sustainability. Nature, economy and society are not equal in their relationships, and thus cannot be considered as three pillars next to each other. Instead nature sustains society, while economy is the interface between nature and society.

In this new paradigm a different definition was given by Herman Daly, saying that sustainable development is “*progressive social betterment without growing beyond ecological carrying capacity*”. Instead of growing bigger, development means becoming better in this approach.

In addition, as it was argued, the aim of any development (whether of species or societies) is the better adaptation to the environment. In this context all inventions, techniques can contribute to the adaptation if the specific circumstances require this (for instance even an atomic bomb can save the earth if a huge meteor is approaching).

A heated debate developed about the definition of development (whether it is a human concept or not, whether we shall define it universally or we shall apply it specifically to society). It was also raised that if instead of adaptation (which is clearly a precondition for the survival for all species, including humans), an additional aim shall be agreed by society, like social betterment. No agreement could be reached on these issues among the participants.

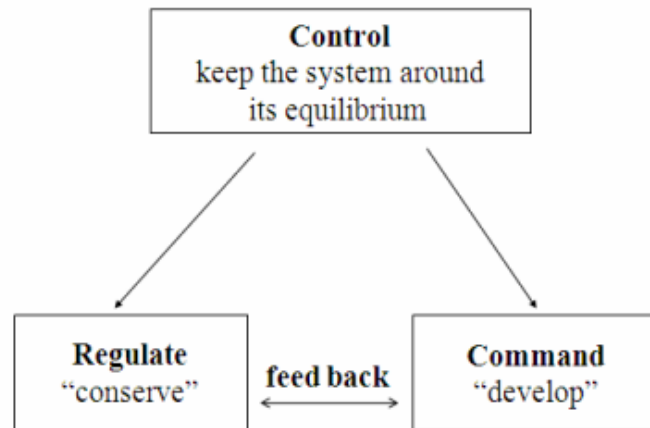
Sustainable development also raises the question, what to sustain? It is important to realise that human can sustain the society, but human can't sustain the system, the system sustains the human (i.e. the society, which is as a subsystem of the biosphere). It was also emphasised that sustainable development is an ongoing process in an ever changing environment, thus it is not possible to “meet” sustainable development.

Importantly sustainable development is not equal to environmental protection. Environmental protection, which has developed into a sector by itself, wants to prevent, mitigate, or solve environmental problems. Its basic question is how to do it? However, applying end-of-pipe solutions only contributes to even bigger environmental problems. On the contrary sustainable development wants to avoid environmental and social problems through careful decisions. Its basic question is what and why to do?

Basic principles of sustainability

- Holistic approach
- Social justice
- Sustainable use of resources
- Quality of environment

Holistic approach means system thinking, to try to understand how things are interrelated and to consider all potential effects of our intervention into a system.



Systems are always controlled to keep around the equilibrium that is appropriate in the given conditions. These conditions are determined by the bigger system, of which this subsystem is part of. An example for this control is the mechanisms of evolution. While mutation creates new traits (thus the individual “develops” in a given direction), natural selection regulates this development (conserves the traits within the population). This twofold control ensures that the species can best adapt to their changing environment, and getting rid of either side of this control would be fatal for the survival of the species.

However, lacking the holistic approach human tries to avoid negative feed backs and only contributes to the creation of bigger ones. Examples for this come from various sectors.

When people started to use cars, the newly emerging problem of accidents gave a negative feed back to people which indicated to them that they shall reduce the speed they drive. However, instead the seat belt was invented, and the cars could run even faster. As the growing speed of transport further increased the number of accidents, other technical inventions were introduced, like the air bag (first in the front , later also on the side). While we cannot solve the problems of accidents without dealing with all their root causes, we also generate other (social, environmental) problems with the increased car transport.

Such mechanisms also work in our everyday life. When we have headache, quite likely from the increased stress and unhealthy lifestyle, we do not respond to problem through changing these underlying causes, but get rid of this negative feedback with a pain killer. Needless to say, the problem in the long run evolves into more serious symptoms.

Altogether we think that we can get rid of the bad/uncomfortable/risky side of our actions and keep and even increase the positive side, but we forget that it is impossible to solve these antagonisms. Avoiding these negative feedbacks will just lead to even more serious negative responses later, which we have not even thought of before.

Consequently sustainable development means to break down the current problem spirals. We shall not earn money for solving problems, when at the same time this also contributes to creating more problems. If we are able to stop creating these problem spirals, we will save time, avoid high risks and eliminate growing burdens on the society and nature.

4. Different approaches to biodiversity conservation

Some of the limitations of the classical approach of **species and habitats conservation and ecological networks** were presented by Sarolta Tripolszky. She mentioned the following limitations: low representativeness of protected areas, illegal harvesting in spite of the protection regime, low connectivity of ecosystems, the great human impact coming from outside these areas, low management (a research on protected areas from around the world showed that only 12% of them have management plans implemented). At the same time protected areas and ecological networks shall respond to the growing global challenges such as climate change, the increase of agricultural areas and growing human populations.

As it was pointed out, a fundamental problem of the PA networks is **that in general they target species and habitats, not processes**. It is doubtful whether we can conserve the same species and habitats composition within a changing environment. According to the observations and future estimations, species and habitats need to shift more kilometres per year northwards because of climate change. In light of this fact it is questionable if the Natura 2000 network of protected areas can be an effective tool of biodiversity conservation. While enhancing the connectivity of PA networks can help, it is not a solution for all species (e.g. those unable to migrate). What is more, if we use extra resources for these actions, then we even create additional environmental pressures. This rigid system does not allow for effective biodiversity conservation.

At the same time the example was also mentioned that in the light of climate change oak is planted in the Hungarian Bakony mountains instead of beech, as according to the predicted climate change of the coming 50-60 years this species will be more adapted to this environment.

The lack of holistic approach to problems is also present in climate change mitigation. Although various factors contribute to climate regulation, the current regulation only deals with green house gas emission. It ignores the role that natural vegetation cover plays in local, regional and global climate regulation or the role of carbon sinks that we degrade (e.g. removal of marine species, which absorb carbon). Thus the correct approach would be on one hand regulating the input (the production of fossil energy) and on the other hand rehabilitate the natural vegetation cover.

In the case of invasive alien species the prevention would be also easier than managing or eradicating with additional energy and resources input the introduced species. This could be even contra productive.

The concept of ecosystem services, which provides a new approach in biodiversity conservation was also briefly discussed. Although the concept can be readily used in awareness raising, some doubts were raised if economic valuation can be a tool in their protection. Putting a price on ecosystems does not protect them, but can further aggravate the problems, as pricing is based on the current (unbalanced) values of the society and not on the indispensable role they play in the life supporting processes. For instance the practice of wetland banking in the US leads to the substitution of natural ecosystems with artificially created ones and to the additional environmental pressure from extra energy and resource input.

5. Working on a common vision for biodiversity after 2010

The European Union and most states of the world jointly made the commitment to halt the loss of biodiversity (or significantly reduce its current rate) by 2010. Although all signs show that this will not happen in Europe and in the world, the EU already starts to work nowadays on a post 2010 vision for biodiversity. CEEweb also would like to provide input into these discussions through various forums in the coming months.

Two possible targets were discussed. The first is about giving back land to nature, where natural succession can take place without human restoration, reconstruction activities (i.e.

without further energy and resource use). This approach could affect the pressures on environment on the input side (resource use and use of space affect the state of environment on the input side of human activities, while pollution affect on the output side of activities).

This way original natural structures could work. The target could be giving back 1% of the intensively used land each year to nature. This 1% could be easily realised through increasing efficiency and would not have serious economic consequences. On the contrary, it would create a competitive advantage for the participating economies, as cutting the resources use will be an inevitable necessity for each country in the future. Thus “early birds” could develop the ways of adaptation in time and gain an economic advantage compared to other countries.

The other possible target is to reduce the ecological footprint of Europe. However, some doubts were raised about the implications of such a target on the virtual footprint of Europe, i.e. if it would lead to a further increase of the virtual footprint outside Europe. Further investigation of this issue is necessary also through having a closer look at the calculation method.

6. Conclusions

Although formal decisions were only made about the work of the PWG and not on the policy itself, some ideas were raised which can provide input into the future CEEweb policy:

- The CEEweb policy shall first of all target the drivers behind environmental pressure and not the pressures themselves
- Changing the value of society is a core element in changing the drivers
- Economic growth cannot be sustained, a maximum limit must be set on the resource and energy use
- Regulation is much more effective on the input side, which would also imply a substantial change in the current climate change mitigation: dealing with fossil energy input and vegetation cover instead of CO₂ emission. A possible tool could be a tax reform, where resources are taxed and not human labour
- Efforts shall focus on giving space for natural processes and not on preserving the species and habitats composition, which would require a great change in the current nature conservation approach and practice (e.g. protected areas, Natura 2000)
- The valuation of ecosystem services is not acceptable because it is based on the current flawed values of the society
- Giving space back to nature (without active restoration) e.g. by 1% per year can positively reduce pressures
- Reduction of the ecological footprint could also reduce the environmental pressure

CEEweb for Biodiversity is a network of non-governmental organizations in the Central and Eastern European region. Our mission is the conservation of biodiversity through the promotion of sustainable development.