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Working Group 6: Climate Change, Resources and Conflict Prevention

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Summary from the author's point of view:

The hardest thing is not to get people to accept new ideas; it is to get them to forget old ones (J.M. Keynes)

Developed nations have to reduce emissions efficiently, strongly and fast to mitigate climate change. Their investment in alternative technologies and global public goods has to and will increase resource use efficiency, generate income and help vulnerable groups. It can also strengthen the cooperation between developed and developing countries in using renewable energy sources.

It is unlikely that high risk technologies as power sources will help mitigate climate change. The Fukushima event showed how trust in technology and governance are interlinked and can both be lost at the same time. A loss of political stability is hindering investments.

Security in general should not only be seen through the eyes of states, it is recommended to move climate change from a conflicting to a cooperative issue on all levels and scales. The transformation of the international system from nation-based to interest-based and the establishment of exchange platforms can foster trans-boundary cooperation and peaceful development.

Positive links between sustainable development and cooperation have to be regionally investigated and understood. The appearance of completely new actors, such as energy "prosumers" can be one part of the driving force of energy supply decentralization as well as social change. Education on lifestyles and the global impacts of individual behaviour has to complement the technical innovations to support a favourable ethical shift. The difficult questions of the future are socially based.

1) The conflict dimensions of:

- **climate injustice**

The widely perceived injustice related to climate emission measurements is causing international conflicts between industrialized and industrially developing countries and is therefore significantly hindering climate negotiations.

Historically, the now industrialized countries contributed a maximum of emissions during their revolutionary industrial development. These do not all account for the emission measurements but have had and continue to have a significant impact on the environmental and social structures of vulnerable countries and groups in the recent past.

While highly industrialized countries reduced emissions, many developing countries increased their emissions through activities like deforestation and land cover changes. Nowadays the 14 top ranking green-house gas emitters are developing countries.

Inside the discussion group there was a wide consensus that developed nations have to reduce emissions efficiently, strongly and quickly in order to mitigate climate change and to contribute to climate justice. High technology countries will be even benefit from doing so, because their

investment in alternative technologies can both generate income and help vulnerable groups, if the main precondition is met. The precondition for private investments in renewable energies seems to be the trust in a stable government.

Human individual security will also be affected by climate change in an unequal way. It has been acknowledged that the adapting capacity of a community depends also on its resource abundance and financial wealth. Financial support must therefore be given to vulnerable groups in order to help them adapt to climate change.

- **resource management issues with special focus on water**

Water scarcity as a potential source of conflict had been publicly acknowledged but stands in strict contrast to scientific evidence. It seems that in the case of water, a new model of explanation is needed which would not position the perspective of water wars centrally but would rather include a common ethical code of compromise and cooperation.

The shift in the perception of the problem will help develop more holistic and ethically-driven emancipatory approaches around the topic of water and security, which would not limit our possibility to react.

Security should therefore not only be seen through the eyes of states. “Hydro-solidarity” is perceived as a new concept of shared values and norms, which would enable water resource management and include cooperation, stakeholder involvement and participation in a cooperative agreement.

It has been argued that the basis for equitable agreements is the equal access to environmental data, which should be an open source for scientists as well as the general public.

In regards to a general management of resources, it has to be taken into consideration that any gain in the efficiency of a resource will result in a more intense use of the resource. An interdisciplinary approach is needed to not only strengthen the technical but also the social side of the solution. Education on lifestyles and global impacts of individual behaviour has to complement the technical innovations. Nevertheless, a more efficient use of resources should be the basic principle of every struggle aimed at mitigating climate change.

There has been the claim to move climate change from a conflicting to a cooperative issue on all levels and scales. Environment can have an important impact on social interactions, which can contribute to already existing conflicts but can sometimes even lead to more cooperation than before. Science should therefore focus more on conditions and driving forces of peaceful and cooperative action.

- **climate engineering**

Climate engineering is considered the quest for the silver bullet to solve all climate related problems and can only be seen as a last resort. Besides the high costs and massive technical challenges, climate engineering bears an abundance of risks and conflicts:

- citizens opposition
- international power issues and misconceptions
- double use problems - “climate warfare”

Therefore before it comes to climate engineering, other policy measures must be put in place.

2) <u>The weaknesses and potential threats of global climate policies</u>

The group discussed if a higher degree of pressure would result in a quicker solution. It was agreed that even so, future solutions will be more expensive than they are today and in addition to the cost, the world community would suffer from massive global changes in an unequally distributed way. Therefore an urgency to act in the next 15-20 years has been stressed to decarbonise on a global level.

Although the knowledge about climate change is widely available, the group wondered why there is remarkably little initiative and political will to react. As reasons for non-reaction of international institutions, the following have been discussed:

- path dependency and slow paradigm change inside organizations
- countries´ focus on internal development instead of international cooperation

- short term perspectives of local governments and fear of losing privileges

As key drivers of transformation the following have been identified:

- crisis
- visions
- ethics
- technology
- knowledge

As possibilities to address the situation the following ideas have been suggested:

- World Bank shift to low carbon funding policy
- International system creates a common global "good and bad" sharing system
- Transformation of the international system from nation-based to interest-based
- Ethical shift
- High investments in global public goods

In order to provide solid assessments as foundations for policies, it will be useful to not only model the future on the basis or current trends and policies, but also to identify and evaluate the options and pathways of measures to move development from the unwanted to the desired path.

3) Recent and future production, supply and use of energy and its related conflicts

The existing power structure is not technically suited for a low carbon power strategy; renewables will be more efficient than fossils in the long run. The same amount of money and time invested will generate a whole lot more energy, but the potentials differ by region and time. So countries with huge areas are in favour and still have an enormous yet undiscovered potential for energy generation. This might be the way to foster international cooperation on a global scale even if the status quo in some regions is disappointing.

Because of the effort they are currently making and planning for the mid-term future, it is widely thought that Europe and China will develop the most advanced energy technologies. At the same time, China and India are likely to be the most dynamic energy producers. Together with the United States, these will be the major drivers of the global process of alternative energy production. There are significant differences between forms of alternative energy with respect to their potential for conflict and cooperation. Particularly worrisome is the competition of biomass based fuels with food production. Solar energy is particularly ambiguous when linked to large scale projects and long transmission lines.

The new actors in the field of energy supply – the energetic "prosumers" (producers and consumers in one) are expected to be the agents of energy supply decentralization. This can have a significant social impact. Most of German investments into renewable energy had been made by private investors. In Germany alone there are around three trillion Euros available for investment – so a shift in the energy supply structure can be remarkable in the coming decades.

- **Global state of nuclear energy after Fukushima**

The group widely discussed the role of nuclear energy for future energy production after the Fukushima event. The group identified the main problematic areas in general:

- Safety and public trust
- Waste treatment
- Non-proliferation
- Economic competitiveness

After Fukushima there had been a crucial loss of public trust in nuclear energy in some countries and especially in Japan. The Government and the nuclear power providers had explained for decades, that there is absolutely no risk of a serious accident – this belief was shared by the Japanese population – and then Fukushima happened. People therefore not only lost trust in nuclear energy but also in their government.

A high internationally binding safety standard is now required to restore public trust. But safety standards need to be discussed: How can we guarantee that standards are high enough to ensure absolute safety? How can we guarantee that the nuclear consortiums would not betray the controlling agency and just build a reactor according to economic feasibility? Among others, transparency and

double-check attitudes would be necessary. But still, most dangerous events are unpredictable and it is hard to design a facility that would accommodate all possible risks – even more so because they are unknown.