

Research Notes

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International Institutions for Sustainability

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DIW Berlin

German Institute
for Economic Research

Opinions expressed in this paper are those of the author and do not necessarily reflect views of the Institute.

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1 Introduction

The DIW Berlin conducts a research project on “Sustainability and Economics“, which is funded by the German Federal Ministry of Education and Research (BMBF). The project consists of several workshops on economic and related sciences' approaches to sustainable development and a questionnaire on “Economics and Sustainable Development”. Also, a number of sustainability-related issues have been surveyed, comprising "Intergenerational Justice and Sustainability”, “International Institutions for Sustainability”, and “Measuring Sustainability”. This paper summarises the findings on current research regarding sustainability issues of international institutions. It gives an overview on different approaches to problems stemming from economic globalisation and summarises research recommendations.¹

2 Globalisation and the International Institutional Dimension of Sustainability

This part of our survey project on the institutional dimension of global sustainability departs from the economic globalisation which has been observed, analysed and also discussed in a controversial manner during the last decade. Globalisation is not a new phenomenon, but the term has become popular only since the early 1990s. Globalisation has several dimensions. From a political perspective, the end of the Cold War led to a change from political competition between East and West to a market competition with loss of bargaining power for national governments. Another dimension is technological. The rapid diffusion of new telecommunication techniques has changed linkages between different locations world-wide, especially large financial transactions can be made within seconds nowadays – a fact that has contributed to a tenfold increase in foreign direct investment between 1980 and 2000. Last but not least, trade activities among leading export nations, but also between industrial and industrialising economies surged with increasing speed: between 1980 and 2000 world trade

¹ The authors would like to thank all participants of the workshop "International Institutions for Sustainability", held on the 12th and 13th June 2003. The proceedings from all workshops of this research project, including the questionnaire results will be made available at the website <<http://www-sustainableconomics.de>> in 2003 and 2004

grew twice as fast as domestic production.² Globalisation, however, has many social, environmental and institutional dimensions as well. Among the outstanding and mostly unresolved problems are the dwindling influence of national and regional governments on economic actors (e.g. due to tax competition), the intransparency for citizens of global political and economic processes (i.e. also lack of democracy), the structural effects on domestic industries and (un)employment, the unequal distributions of gains from trade and financial transactions between North and South and within countries (e.g. technological divide), and last but not least the increasing exploitation of natural resources due to terms of trade effects, debt burden or other global market pressures in developing countries.

As an issue for future economic sustainability research we consider the international dimension of sustainability and the institutional facts and needs which could support an international sustainable development. The workshop, held on 12th and 13th June 2003 at DIW Berlin, we focussed on the following issues: Where are the interesting links between sustainability science and economics? Where do we find promising economic contributions to the sustainability debate? And in which fields does sustainability research need more and better economic advice?

For achieving Sustainable Development on a global level, we found it especially important to focus on two aspects of globalisation. In the next chapter we address the severe conflicts over the distribution of resources between developing and developed economies. The increase in international transactions (trade, investment, migration) is affecting the North-South-relationships in many ways and has led to new dynamics of social, economic and environmental changes. In order to illustrate this, we consider as an example the institutional problems of and challenges for international trade and environmental policies. Theoretical economic analysis of trade is known for making strong assumptions which make a one-to-one application to the real world inadequate. Nevertheless, the institutional settings for world trade are based on this restricted view. A broader, sustainability-oriented approach could lead to a reconsideration of trade regulation where some kinds of protection of local culture, health and environment is legitimate. In chapter 4, we highlight selected issues of global governance, comprising the international institutional order, the role of civil society and the creation of more sustainability-focussed institutions. Also in this area, economic

² An overview on globalization sources and effects is given in Deutscher Bundestag (2000a, 2000b).

research has an important role, when analysing if the present international institutional framework is appropriate to deal with the challenge of Sustainable Development, or how institutional settings (in a broader definition) could provide incentives for different actors. We present research recommendations in chapter 5.

3 Trade and Environment Issues, and North-South Conflicts

The advantages of free trade, i.e. trade that is not hindered by tariffs, quotas or other regulation, have been derived in traditional economics very early from the work by economists like Adam Smith. After World War II, the General Agreement on Tariffs and Trade (GATT) was established as part of the Bretton Woods system of new international organisations. The GATT, which has been integrated into the World Trade Organization (WTO) in 1995, is based on the neoclassical concept of gains from free trade based on comparative advantages.

The dominance of the free trade paradigm has been criticised by many authors. Söderbaum (DIW workshop proceedings 2003) pointed out the following: "In the one-commodity world of neoclassical theory, wheat is regarded as homogenous and sold at a monetary price in the market. Sellers and buyers should look for the best possible price. If the price is low, this suggests that the suppliers have been efficient and that few trade barriers have affected trade. The low-cost suppliers may be located in some other region or country and their sales may outcompete local suppliers of wheat in their own region. The losers should start producing other food products, it is argued, where they may be more efficient and can compete in local and international markets – or perhaps seek employment in other companies successfully producing other commodities. Another option is to migrate to the countries where production at the time is efficient in terms of international competitiveness. Flexibility in this sense is regarded as a key to efficiency improvements and economic growth. However, this story is only a partial story and it is a matter of ideological judgement whether the impacts mentioned and other impacts (not being part of the story) represent progress in society or not."

If Sustainable Development is interpreted in a multidimensional way, the simplistic and static economic analysis of the gains from trade does not qualify as sustainability analysis. It ignores not only the dynamic economic effects, but also, amongst others, the differentia-

tion of goods based on production methods, or externalities. A farmer, for example, produces in terms of open landscape with aesthetic qualities (this reasoning is found in the 'multi-functionality' argument used by Norway, Switzerland and the EU in WTO-negotiations). Moreover, costs of domestic structural adjustments are ignored, but they are a major motivation for protectionist trade policy. Transportation externalities are another example of how trade can become harmful instead of beneficial. At the DIW-workshop. Harald Trabold argued that only rich countries can cope with the structural adjustments brought about by trade integration. Nation states with safety nets can take over costs of structural adjustment. Developing countries mostly lack these systems (see DIW workshop proceedings 2003).³

The liberalisation of trade, nevertheless, is regarded by most nations as an important driving force for economic development. The asymmetries between developing and developed countries are striking. Industrial countries tend to protect their markets (e.g. against imports of agricultural products, textiles and other resource-intensive goods), while asking developing countries to liberalise. Negotiations to decide on a new WTO-liberalisation round in Doha 2001, were successful only because it was labelled as a "development round" with special trade concessions for poor countries. But the distribution of the gains from trade between North and South is crucially dependent on the industrial countries' willingness to accept the structural adjustment costs free trade brings about. The Doha-Round faced a collapse at the 2003 Cancún meeting, because the industrial countries did not deliver the concessions announced for the traditional sectors (esp. agriculture), but rather asked for more liberalisation in new areas, such as direct investment.

Global distributional conflicts also persist related to environmental issues, e.g. over global pollution issues, the sharing of environmental risks, or over the access to natural resources. Many developing countries argue that more global environmental protection could reduce their development potential— a prominent example is the allocation of emission rights under the Kyoto Protocol. Also, developing countries fear that commitments in international environmental agreements would reduce their options for economic specialisation. Many of these countries heavily depend on resource-intensive exports, not least to pay for foreign debt.

³ The scepticism about the neoclassical idea of 'free trade' is not a new phenomenon. Even Charles Kindleberger in a book from 1962 (p. 245) pointed to a number of sceptics or persons being less enthusiastic

Since the Rio Summit in 1992 the concept of Ecological Debt has been coined – mainly by NGOs – in order to express the unequal distribution of environmental burden between North and South. According to this concept, a debt is built up by industrialised countries, first, because they purchase raw materials at prices which do not internalise global or national externalities and second, because they consume a disproportionately high share of global resources without compensating less developed countries (Martinez-Alier 2003).

These issues in international environmental protection and international trade have been subject to long-standing theoretical and empirical analyses in economics. Nevertheless, since the 1992 Rio Declaration, the concept of sustainable development has brought new issues on the agenda. Both, sustainability issues and globalisation, have added new impetus to the analyses of trade and environment.⁴

The negotiations and agreements on international environmental protection and on free trade have been increasing steadily during the 1990s. While the 1992 Rio Summit was followed by negotiations on global environmental issues, the 1993 Uruguay Round of the General Agreement on Tariffs and Trade (GATT) decided to found the WTO in 1995, replacing the GATT and upgrading the international institutional setting for free trade as well as its enforcement. These two types of agreements determine parts of the overall global institutional framework which is relevant for sustainable development. The current framework for negotiating environment and trade issues includes on the one hand, a global environmental policy regime - which in turn consists of a number of different Multilateral Environmental Agreements (MEAs), regional and bilateral agreements as well as the United Nations Environment Programme (UNEP) – and, on the other hand, the WTO.

3.1 Economic Approaches to Links between Trade and Sustainability

The links between world-wide trade liberalisation and environmental quality (as one dimension of sustainability) as well as environmental policy have been subject to fierce public debate and thorough analyses in mainstream economics (see Nordström/Vaughan 1999

about the 'gains from foreign trade'.

⁴ The research agenda on globalisation is broad, reaching from international financial markets to issues of human rights (see Enquete Kommission 2002a, b).

for an overview). The neoclassical economics view and its free trade paradigm is a building stone for the WTO, and the institutional settings following from it have been criticised by ecological economists based on several grounds. One major point is that the concept of comparative advantage is misleading as long as the impact of trade and of the underlying production and consumption structures on the natural environment are not included in the picture.⁵ Besides the harmonisation of environmental standards or internalisation of external costs - both being pointed out in neoclassical analyses of global environmental sustainability - environmentally sustainable trade depends to a large extent on the scale of material and energy flows, as well as on the scale of land use.

Contrary to this view, neoclassical trade-and-environment theories claim that free trade will lead to economic growth, enabling governments to raise their taxes for compensation of pollution or environmental protection measures. Due to low income elasticity of demand for environmental-intensive goods higher income of households could lead to higher demand for non-pollution-intensive goods. Widely discussed has been the hypothesis of the Environment Kuznets Curve (see Stern 2002). It states that there exists an inverse U-shaped relationship between GDP and environmentally harmful emissions. Empirical findings partly support this view, leading to the interpretation that in an early stage of economic growth pollution should be tolerated, because in a later stage these harms will decrease and early-stage damages could be compensated for. However, the assumption, that environmental damages are reversible is certainly most questionable.

Martinez-Alier (2003) points out, that the relationship between growth and promotion of sustainable development is the great divide between environmental and ecological economists. The latter deny a positive relationship. When certain natural resources are exploited for export purposes, they can be irreversibly lost, e.g. the biodiversity of rainforests. Thresholds can be passed once a country has reached a certain income level and it might be too late to be "green" (Martinez-Alier, Muradian 2001a). Ecological economists consider the economy as a part of an open system with in- and outflow of energy. According to their view, ecological unequal exchange between North and South is prevailing. For instance, inequality arises because of undervaluation of labour and natural resources in exporting countries, which deteriorates the terms of trade. Also terms of trade deteriorate due to a fall

⁵ For an overview on economic approaches to trade and environment analyses and critique see v. Beers and

in world-market prices for primary products over the last decades (Prebisch-Singer thesis), not least because of subsidy policies in industrial countries (e.g. agriculture).

Following the criticism of the neoclassical trade theory, Martinez-Alier (2003) uses the concept of environmental terms of trade. Terms of trade are defined as the price ratio of exported to imported commodities, i.e. their relative international price. Martinez-Alier (2003) defines *environmental* terms of trade as “total entailed environmental pressures in exports in relation to total entailed environmental pressures in imports”. Export goods of the developing countries, especially raw materials tend to be underpriced as the existing prices do not take into account the external effects.

The question arises how to quantify environmental trade effects and their valuation. For assessing environmental terms of trade, the multitude of impacts on the eco-system have to be understood and measured. Economic activities related to trade are rather broad and a crucial issue is what specifically to include, and how to value. Also, the term "environmental pressures" includes the interactions between human beings and the environment. Extraction of renewable and non-renewable natural resources goes along with massive destruction of ecosystems as can be observed e.g. with timber production in Indonesia. Marginal social costs of economic activities for export purposes are thus very high and by far exceed the marginal private costs – a neoclassical concept which helps to approach the issue. This divergence represents an implicit subsidisation and thus distortion in the price mechanism (often coined as “ecological dumping”). Furthermore, externalities can exhibit distributional dimensions in the trade context.

In order to apply the concept of environmental terms of trade, several issues have to be clarified. Among the environmental impacts that could be linked to trade are global warming, and micro climate change, ozone depletion, biodiversity and deforestation, acid rain, or noise. Moreover, there are complexities due to risk and uncertainty, or the time-horizon: length of appearance and especially of impacts, assessment problems with complexity and interdependencies of ecological processes, reversibility, public and private externalities. And last but not least there is the social dimension of externalities: health, life expectancy and quality of life, changes in labour productivity. An important issue also is who should choose the terms of valuation, mode of estimation and especially what to incorporate into

v. Bergh (1997).

the concept of environmental terms of trade. Alf Hornborg (1998) sees two dimensions of conceptualising, the “objective, material conditions and subjective, cultural construct” of economies. Both, Neoclassics and Ecological Economics face problems when dealing with valuation.

In order to tackle the ill-paid energy and material flows from South to North, Martinez-Alier (2003) suggests to take the following ideas into account:

- the scope and limits of Fair Trade, its roots in consumer awareness and debates on declining terms of trade,
- the conditions under which commodity chains are amenable to “fair trade”, e.g. “green” wood imports, “green” coffee, but not “green” copper or oil,
- the scope for international environmental commodity agreements,
- theories of ecologically unequal exchange vs. comparative advantage, vs. theory of growth – problems of measurement and the policy implications,
- the links between the (low) price of raw materials imports, and recycling policies in rich countries,
- calculation of environmental terms of trade, computations of embodied pollution and of carbon intensities of exports/imports.

Economic research has to contribute to the quantitative analysis of material flows on the international level. However, this analysis must be based on a strong theoretical background. Also a fundament of valuations of traded resources is needed. Without this background, the figures on material flows (e.g. Giljum and Eisenmenger 2003) do not help to identify sustainable and non-sustainable flows of trade *per se*. Currently, international economics is based on neoclassical approaches which focus on the advantages of the international division of labour. If at all, the environment is included in this type of analysis as an input to production or as a consumption good. Environmental policy analysis has been reduced to its competitive impacts (“strategic environmental policy”, “Porter Hypothesis”). Although neoclassical policy guidelines have been challenged by ecological economic analyses, there is no level playing field for those approaches that pronounce the negative impact of freer trade on sustainability.

The following issues should be guiding future research:

- What economic approaches deliver a concise theoretical background to explain observed connections between environmental degradation and economic development (Environmental Kuznets Curve), and which could act as policy guidelines for national governments (Porter-Hypothesis)?
- How can environmental terms of trade be calculated by national governments and local producers? What are the underlying concepts? How could they become subject to international agreement and institutionalisation?

3.2 Integration Versus Separation of Policy Areas

For the future of *institutional* management and negotiations on trade and environment a crucial question is whether there should be more institutional integration or strict separation of these policy areas. Observing the current international negotiations and trade-and-environment conflicts, it is evident, that the WTO has a powerful dispute settlement mechanism which dominates all trade-related Multilateral Environmental Agreements (MEAs), because the latter lack a single global institutional body as well as own sanction mechanisms. This leads to a ranking between the WTO and MEAs (except for the Cartagena Protocol, 2000, in which signatories recognise that trade and environment should be mutually supportive). Without fundamental reforms the WTO will remain the dominant institution to settle disputes over trade and environment issues. This is even more important as for many developing countries the issues of trade, economic development and environmental policy are interrelated to a degree that seems to make unconnected solutions impossible. Nevertheless, these countries reject attempts made by some WTO members (e.g. the EU) to integrate to a larger degree environmental issues into WTO rules, not least because they suspect that international green policy instruments applied to traded goods – such as ecological labels or national standards on production methods – are simply disguised trade protection by industrialised countries. At the DIW workshop two views on the topic of issue linkage were discussed: the game theoretic view and the perspective of developing countries.

3.2.1 Game Theoretic Insights on Issue Linkage

Linking issues in international negotiations seems appealing. It might help to overcome many trade and environment disputes in a framework of voluntary assent. Game theory is a powerful tool to study institutional arrangements among independent negotiators. Game theoretic models demonstrate that linking of issues in negotiations is a strategic choice which enables negotiators to enlarge their payoff space, i.e. result in beneficial solutions for all parties. Under specific assumptions countries would agree to co-operate on linked policies, while without linkage the dominant strategy, e.g. given the incentive structures in global environmental policy, would be non-cooperation (Finus 2001). A prominent example of a successful linkage between environment and trade issues is the Montreal Protocol (1989) on the depletion of the ozone layer, where trade sanctions are allowed for to enforce compliance. Two caveats, however, must be made. First, the Montreal Protocol trade sanctions were never actually used and second, substitutes for the regulated pollutant CFC were readily available.

Free riding is being regarded as the major problem in international negotiations and agreements on global public good. Finus (DIW workshop 2003) gave an overview on the two types: 1. Non-participation (Membership models) 2. Non-compliance (repeated game models)

(Non-) Participation

The linkage of a *public good* agreement with a *club good* agreement in a theoretical model can lead to participation of countries in an agreement on a public good. A public good is available to anyone, even though he or she has not contributed to its provision. A prominent example is the global climate. A club good is only available to a defined group of members. Examples for club good agreements are research and development agreements and trade agreements. If these two types are linked, a new member can only enjoy the benefits of the club good if he contributes to the public good agreement as well. In theoretical analyses, there must not be large spill-overs. The driving force would be the degree of excludability from the club agreement which has to be high.

However, the theoretical insights face severe qualifications for their application to real world problems. First, empirical evidence is rather weak. Second, transaction costs might

be high for issue linkage. Third, in theory mixed membership is not possible whereas in reality it is a practical issue that has to be solved. Other critical issues on the theoretical side of issue linkage are the lack of generality of the results and welfare conclusions. From the number of participants one cannot conclude the success of a linked agreement, and the club agreement must be exclusive, otherwise there is no driving force for the linked agreement. The new literature on coalitions shows that one can trade the club agreement as negative externality for outsiders, i.e. a incentive for them to join the club. An international environmental agreement would be a positive externality (reducing emissions). Another issue is open versus exclusive membership.

(Non-) Compliance

A second case of free riding is the non-compliance of members once they have signed an agreement. This behaviour can be modelled in repeated games. The basic motivation to comply with an agreement could be the linkage of asymmetric games and package deals. The driving force is that the linkage increases the number of strategies for each player to achieve an objective. Again the problems with this approach are related to empirical evidence, and to the consideration of transaction costs and mixed membership. Also, there are several critical issues from a theoretical perspective. First, how could this type of model be motivated? In the literature, authors argue that in reality we have transfers. Then they model issue linkage. In a static game this would not work, but in a dynamic it would. Instead of paying transfers, negotiators exchange concessions on policy issues (e.g. free market entry for more climate protection). So far, however, the literature lacks an explanation why issue-linkage should be more successful than transfers. Other critical theoretical issues are prisoners' dilemma games, degree of asymmetry, stability concept (credibility of sanctions), additive payoffs when issues are substitutes (positive effect) or when issues are complements (negative effects).

Among the issues identified for game theoretic research in this field are:

- When is an inefficient but equal allocation better than an efficient but unequal one?
- When is low participation better than high participation? When is exclusive better than open membership? When are regional better than global agreements? Does a minimum participation clause raise participation?

- How can existing game theoretic research on treaty design be generalised and expanded? How could game theory be combined with political as well as institutional sciences and empirical research?

3.2.2 The Perspective of Developing Countries on Issue Linkage

Developing countries perceive the application of environmental standards to exports as limiting their development potential in the short run. Since their economic specialisation is often natural-resource dependent, economic growth is necessarily associated with environmental costs. Since some years, however, trade unions, NGOs and other grassroots movements are voicing the social impact related with these environmental costs and force public and private investors to revise their cost-benefit analysis, even in the short run. Therefore, a major question is: who should pay for additional costs of avoiding the negative balance? Many developing countries rightly claim that they do not have the necessary resources. Certainly, this is a crucial distributional issue linked to the application of the Rio Principle of common and differentiated rights (as mentioned already above). As to the history of multilateral environmental agreements, such as the Rio conventions, the real benefits accruing to developing countries in terms of financial aid and technology transfer are still very small, despite all pledges made since 1992. There is not only an enormous gap between local and global challenges, but also between northern countries' discourses and what the north is willing to pay to the south when it comes to the protection of global environmental goods or national environmental goods of global relevance. In this respect, there is a real dilemma for developing countries to make decisions between development and environment in the short run (DIW workshop proceedings 2003).

If developing countries are to make environmental commitments, their specific situation implies that issue linkage would call for technological and financial assistance if environmental commitments are made. This assistance is necessary at national and local levels where help for capacity building is needed, in order to enforce and implement environmental policies. Those local processes are crucial also for international environmental goals. Otherwise implementation problems at other levels will prevail. Accordingly, related property rights have to be defined at the local level.

The bargaining power of developing countries could be strengthened in some important cases by linking issues when negotiating multilaterally. Many reservoirs of natural resources and important biota and ecosystems are located in developing countries. However, due to lacking effectiveness of bargaining conditions, countries cannot transform this fact into better bargaining positions. Thus, more momentum is needed for linking environmental and trade issues.

The other argument is to separate environment from trade issues. On the one hand, many developing countries want to prevent the WTO to include environmental issues in its mandate because they perceive the WTO as a powerful organisation dominated by industrialised countries and their political priorities. In general, developing countries do not have the necessary human resources to participate in international trade negotiations on an equal footing with the industrialised countries.

Future research should address the following:

- Can dynamic learning processes between the international level and local public and private actors be fostered?
- How can power relations develop into learning situations where economic, social and ecological costs and benefits are evaluated in a different way?
- Innovation theory and routines regarding organisations and institutions should examine which factors foster learning by government, civil society and economic actors. The focus should be on dynamic processes and the corridor for technological and institutional innovations (evolutionary economics). Also, the importance of multilateral processes for the evolution of national processes should be considered.

4 Global Sustainable Development Governance

There is an obvious need to find an international institutional framework appropriate to deal with the challenges of Sustainable Development. Therefore, we focus on the current and on the alternative institutional framework which could be promising to meet this challenge. The discussion of international regimes for the governance of sustainable development has become increasingly interdisciplinary, bringing together economics, political sciences and international law. The most pressing issue seems to be how the existing institu-

tions (in a narrow definition, i.e. international organisations) could interact and co-operate effectively and how non-governmental stakeholders should be integrated in these processes. Taking a broader perspective on the definition of institutions (as norms and practices), the second issue is the identification of new institutional concepts and tools for global sustainable governance and the role economic analysis should take.

4.1 A New World Environment Organisation?

The debate on international institutions for the management of the natural environment has focussed on the increasing number of separate MEAs and the lack of a single, powerful global environmental institution. This debate has led to proposals for the creation of a World Environment Organisation (WEO). Certainly, a major question is, whether one more world organisation should be added to those that already exist. Should the many protocols of the present global environmental governance regime be co-ordinated through one organization? How could this organisation work, what should be major tasks and how should it be related to other international organisations?

Lodefalk/Whalley (2002) list 17 WEO-related proposals made by individual authors (mainly economists and political scientists) as well as international organisations. For example Whalley/Zissimos (2002) argue that a WEO could provide a bargaining framework for trades and exchanges of commitments on various environmental issues such as biodiversity protection in return for cash, policy change and other considerations. They expect a WEO to finally evolve to a “global power broker” with other currently existing institutions realigning their activities. A WEO, according to these authors, could provide a less restrictive bargaining framework than the WTO currently does, not least as there should be no membership obligations. Instead, a WEO should concentrate on internalisation deals between countries. Walley/Zissimos, however, acknowledge that a crucial issue with respect to developing countries is, whether such an institutional approach would increase or decrease their bargaining power compared to the current international regime (see e.g. Biermann 2002 on the WEO role for developing countries).

The incentive problems related to a WEO have been summarised by Wohlgemuth at the DIW workshop as follows (see DIW proceedings 2003)

Table 1 : Comparison between WTO and WEO characteristics

| WTO | WEO |
|---|--|
| <p>A club based on: voluntary membership non-discrimination & reciprocity enforceable compliance, workable dispute settlement</p> | <p>Club or mandatory membership? ? ? ?</p> |
| <p>Problem situation: mutual benefits exclusively for members (no free-riding) strong economic incentives to be member PD intra-national, but NOT: Inter-national The more members join, the less attractive to stay/opt out</p> | <p>Problem situation: No excludability from environmental benefits Strong economic incentives to free-ride (tragedy of commons ...) PD at all levels with: the more members join, the more attractive to stay/opt out</p> |
| <p>Necessary rules: General, non-discriminatory Open (mostly proscriptive) Certain, simple (stabilising expectations) “universalisable” (Hayek/Kant) Provide members with rights (market access)</p> | <p>Necessary rules: More result-oriented More prescriptive More uncertain, complex programmatic mutual commitments Define obligations (targets, behaviour...)</p> |
| <p>(Non-) compliance is easy to determine Independent of available resources and attained results: omission is not scarce (“Unterlassen ist nicht knapp”) Strict rules, due process Clear mandate Little need to agree on common tasks & actions</p> | <p>(Non-) compliance is difficult to determine Dependent on “capacity”, behavioural changes and environmental impact “soft law”, diplomacy Complex equivocal mandate Much bargaining on joint commitment / action</p> |

However, the WTO is not a general blueprint for international organisations. Rather, it delivers an example which has been regarded as a success story, although it has lost some of its legitimacy in relation to other governmental and even business actors. Many citizens and Civil Society Organizations are worried about the present situation. The same is true of actors connected with churches and even the World Council of Churches.

Research on a WEO needs to address:

- What should a WEO or a similar new international organisation look like, if sustainability criteria instead of purely environmental ones would apply?
- What mechanisms could contribute to a WEO as a powerful and effective institution?

4.2 International Institutional Order

Currently, the United Nations Organisation and the Bretton Woods organisations (WTO, IMF, Worldbank) dominate the global institutional order. They all have been subject to criticism and reform proposals, not least because they are, though to a different degree, dominated by the national interests of a few member countries. All of them still lag behind in integrating and supporting the global development approach announced in Rio in 1992. Especially the international organisations of the Bretton Woods system (IMF, Worldbank, WTO) still manifest North-South structures and have not been able to fully integrate the social and ecological dimensions of sustainability in their practices. The United Nations Organisations and Programmes cannot fill this “institutional gap”. On the contrary, UNEP's role has weakened over the years, mainly because of lacking financial resources, but also because it has been promoting a large number of multilateral environmental agreements (MEAs), which handle specific global issues (climate, biodiversity, etc.) in their individual Secretariats. This makes co-ordination and co-operation of international environmental policy difficult.

Both, the integration of all sustainability dimensions in existing organisations and a new design of international institutions for sustainability would be a complex task. In addition, there is a clear ranking by national policy makers of the goals addressed by international institutions: institutions with economic goals (Bretton Woods, business and banking systems) are regarded as more important than MEAs or, for example, commitments on devel-

opment aid or labour standards. Furthermore, current international organisations lack democratic mechanisms and are dominated by the most powerful economies, esp. the US (e.g. Moltke 2002, Gupta 2002, Deutscher Bundestag 2002a). Hufbauer (2003, 258) identifies six major global powers – EU, China, United States, Japan, Russia and India - who in his view will dominate international governance for the next 30 years at least.

From an evolutionary economics point of view there are at least four dimensions to identify several new Governance options (Wohlgemuth, DIW workshop proceedings 2003).

4.2.1 Centralisation, Decentralisation, or Polycentralisation?

4.2.1.1 Centralised Arrangements

A centralised arrangement for governance comprises vertical co-ordination with uniform definition of policies. A major advantage of centralisation are economies of scale in organisation. Moreover, it can help prevent free-riding in presence of (universal) common pool resources. Moreover, scientific (common) knowledge can be effectively collected and diffused. The drawbacks of such an institutional approach are, however, considerable. They include reduced adaptability and flexibility, increased vulnerability in complex, changing environments, and reduced accountability to citizens. This would lead to increased opportunities for big, multinational interest groups to seek rents without exposure to public attention. As a rule there would be a lowest denominator consensus or log-rolling outcomes, both of which would lower the effectiveness of an organisation.

4.2.1.2 Decentralised Arrangements

Decentralised arrangements could induce the spontaneous diffusion of best practice. The advantages are that nation state governments are the most visible, legitimised, and competent actor. They can effectively use local knowledge of time and place, and they can (aspire to) become lead markets for environmental innovations with voluntary diffusion through policy imitation (and learning) (“California effect”, see Vogel 1995; or “competitive advantage”, Porter 1990). National governments would look for best practise, observing other governments in a kind of benchmark competition. Moreover, decentralisation reflects economic, social, and political capacities, preferences and opportunity costs of environmental policies better than centralised bargaining systems.

4.2.1.3 Polycentric, Nested (Multi-tier) Arrangements

According to Ostrom (1990, 2001), polycentric, nested arrangements are small, medium- and large scale self-organised resource governance systems with considerable authority to make and enforce rules for a specific area. These units are parallel adaptive systems nested within ever-larger units that are themselves parallel adaptive systems. The major advantages are the autonomy to experiment with diverse rules, access to local knowledge, rapid feedback from policy changes, and learning from performance of other parallel units. A major strength is the low vulnerability to external shocks, more learning, less consequential risk of failure. Redundancy can be an advantage instead of a drawback.

4.2.1.4 A Polycentric Club Structure for Environmental Governance?

Wohlgemuth (DIW workshop proceedings 2003) further argues that clubs of smaller, more committed and ambitious states with voluntary membership can be more effective than universal membership and agreement on lowest denominators. The prestige of adhering to exclusive clubs of environmentally more ambitious nations could function as a political “label” and yield the possibility of shaming non-member states. This, however, could also lead to environmental protectionism, which would imply that world trade rules must be respected.

International Organisations, such as the OECD or UNEP could function as policy arenas for pioneers and as multipliers for diffusion of policy innovations, who document and publish national best practises (e.g. OECD Environmental Performance Reviews provoking political reactions; World Bank Report “Innovations in Environmental Policy”).

4.2.2 Civil Society and NGOs

National governments are currently the most important actors at the international level since international law and international rules are applied along the venues of national institutions. However, there is also an increasing number of non-governmental actors. The rise of non-governmental interest groups (coined as Civil Society⁶) has led, both nationally and internationally, to the question how non-state stakeholders could be integrated in

⁶ See Florini (2003, p. 95f.) on the usage of the term "Civil Society". In Europe it includes the for-profit sector while in America this sector is excluded. Civil Society includes NGOs, but also other associations, which are not legally recognised.

international policy processes (von Moltke 2002). To name just one example, NGOs have had a crucial role in the debate over regulation of international investment (the failure of the Multilateral Investment Agreement (MAI) is a prominent example). NGOs have become an important actor at the international level, representing particular interest groups across national borders and putting pressure on governments and international negotiators to include environmental and social aspects in their negotiations.

Wohlgemuth (DIW workshop proceedings 2003) defines NGOs in a wider sense as comprising (a) environmental interest groups, (b) business firms (TNCs), (c) scientific community. NGOs are useful for shaming corporations that harm the environment, devising eco-labels, documenting best (or worst) practise, initiating and supporting innovative technologies. A crucial issue is, however, which NGO is a representative for which interests (issues, countries)? Self-selected elites often favour regulatory input as “success” rather than taking the environmental relevance or effectiveness and the policies’ opportunity costs into account.

Business companies regard ecological good will and reputation as of growing importance. However, their main incentive will remain profitability and consumer demands. Companies may set own standards and codes of conduct, though this cannot be separated from their interest to keep up with competitors.

4.3 Identification of Institutional Concepts and Tools

In a wide definition, institutions comprise not only national or international organisations. Institutions can also be defined as norms and practices which build the basis for individual preferences and private as well as public organisations. Examples are legal concepts (e.g. property right, international customary law) and frameworks, national and international markets or traditional cultural rules. One important issue in the global governance debate is the process of intensifying international business relations. Flexibility and mobility of private firms left national governments with fewer options to enforce their national economic and social rules, e.g. for foreign direct investors, and the lack of global rules for international investment hampers also global environmental and social standards.

The list of proposed new institutional concepts and tools for a global regime for sustainable development is growing. It includes: new approaches to rule-making, incentive structures, participation, control and enforcement mechanisms, and tools like codes of conducts, public-private partnerships, international standards, assessment and rating agencies or indices (e.g. Loehman/Tusak 1998, Moltke 2002, Swanson 1999, 2002). A key issue is whether and how these new ideas could help to reach an international governance framework.

It seems most important for the discussion of global governance concepts to analyse and explain the underlying structures and incentive problems of international policy making. From a mainstream economic perspective, the incentive problems of international policy making and international institutions are at the core of explaining institutional failures (including market failure and policy failure). Negotiating and implementing international regimes face free-riding problems, ambiguous property rights, time inconsistency and contract enforcement problems (e.g. Swanson 2001, Whalley/Zissimos 2002). These problems determine whether countries and other stakeholders, first, are willing to engage in negotiations, and second, are willing to comply with the commitments made. The analysis of transaction costs helps identifying the incentive aspects of alternative institutions (see e.g. Hurwicz 1998 for an overview on game theoretic and other microeconomic approaches). Hurwicz argues that there is room for creativity regarding the design of mechanisms to deal with the drawbacks of currently known policies.

Political economy (PE) analyses deliver a number of explanations why markets do not allocate resources efficiently and why policy makers do not follow first-best economic policy options. Explanations are derived for the behaviour of voters, politicians, bureaucrats and interest groups. The neo-classical approach assumes that agents optimise private instead of social benefits. Point of departure is the homo economicus, who maximises his utility and acts in a rational manner (Fritsch et al. 1999). So far, the PE approach has mainly been used to address national policy-making. New approaches (beyond homo oeconomicus and beyond the national level) seem promising. The dominant neo-classical PE approach, for instance, does not include social, psychological, cultural and other aspects of human behaviour (e.g. learning) as determinants of institutional arrangements and their functioning. Ostrom (1998) has included such features in the analysis of environmental problems. She suggests an Institutional Analysis and Development approach, which includes rules, physical and material conditions, community attributes and incentives for individuals. Her main findings are, that

neither market nor state institutions alone are sufficient to cope with the diversity of environmental problems. Successful institutional design has to take into account the interaction of rules with physical and biological attributes (Ostrom 1998, p. 84).

The research in New Institutional Economics (e.g. Hardin 1968, Ostrom 1990, 1993, 2001) comprises issues like property rights, incentives, transaction-costs, path-dependency, informal institutions (like culture). There is also the branch of Public Choice (e.g. Yandle 2001 for an overview), which analyses market and political failures, rent-seeking, capture-theory, expressive voting, symbolic policy, and politics in non-transparent supra-national networks uncontrolled by voters. Another promising economic approach to explore international institutional processes is evolutionary economics (c.f. Wohlgemuth 2002 for an overview). This approach helps to explain innovation and diffusion of new (environmental) technologies, policies, and ideas or preferences. Also important are political learning theories (e.g. Richard Rose 1993), and path-dependency and critical masses in policy adoption. Nevertheless, the standard neoclassical economic theories continue to play an important role in motivating the implementation of new international institutions (an example being emission trading schemes).

Söderbaum (1998, 2000) and Siebenhüner (2000) have suggested a Political Economic Person (PEP)⁷. This person is regarded as a potentially responsible ‘actor’ in a social psychological sense. The PEP is not limited to the role of a consumer or other market-related roles. Rather, roles such as citizen, professional, parent are potentially relevant as part of economic analysis. Connecting the different roles, relationships and motives of a person, one may refer to her or his ‘identity’. Relationships may be brought together in ‘networks’ and an ‘ideological orientation’ is regarded as the main guiding principle. They can be split into a ‘non-market’ or ‘market’ character. The idea that everything should be interpreted in market terms is questioned. In organization theory, administrative and other kinds of relationships are considered relevant. And in the case of relationships between market actors, the supply and demand model of neoclassical theory is only one among several alternatives. There is often an important social component, for instance in business-to-business relationships. Each company is dependent on the other and often it is useful to think in terms of competing networks of companies (Ford 1990). The relationship between two compa-

nies does often include more than one commodity. Common technological development projects may be involved etc. Each social relationship between market actors furthermore has a history and trust is a factor in understanding changes in market relationships (Table 2).

Research issues are :

- What are institutional preconditions for sustainable policies with long-term perspectives at domestic (and international) level: e.g. political economy of policy reform, barriers to entry in politics?
- The economics of reputation and the theory of clubs: political reputation of being “in” vs. opportunistic free-rider incentives.
- Polycentric, nested governance arrangements and learning processes.
- What are connections between environmental policies, technological innovation and diffusion processes?
- Following Olson 1965, what are selective incentives to provide the public good “better environment”?

⁷ Ideas of this kind have been discussed also by other ecological economists, for instance Jakubowski (1999), (2000), Faber et al. (2000).

Table 2: The ‘Market’ as a phenomenon; two schemes of interpretation.

| | Neoclassical | Institutional |
|--------------------------------------|--|--|
| View of the individual | Economic Man | Political Economic Person |
| View of the organization | Profit-maximizing firm | Political Economic Organization |
| Interaction between buyer and seller | Supply and demand | Multifaceted relationship between responsible actors |
| Goods and services | Homogeneity, one commodity at a time | Also heterogeneity, multiple transactions, multi-functionality |
| Motives for transaction | Profits or utility related to quantity and price (optimisation) | Ideological considerations; ‘monetary price and beyond’ (matching) |
| Relation to other actors | Emphasis on personal gain and benefits for the firm (Belief in the ‘invisible hand’) | Inclusive (‘I & We Paradigm, ‘Person in Community’) |
| Features of Relationship | Independence: contract between parties with conflicting interests | Also cooperation. Considerations of trust and fairness |
| Time aspect | History not important | History important. Path dependence |

Source: Modified version of Söderbaum 2001, p.193.

4.4 Learning to Manage Global Challenges

Learning, as mentioned in section 3.2.2, plays a major role in the successful institutionalisation of sustainability strategies. Therefore, the analysis of learning processes is relevant for a number of issues. These include all institutional arrangements, like International Organisations, private corporations, citizen groups, scientific assessments, governments, global and local networks.

A number of challenges have been identified with respect to the role played by social learning, innovation processes and institutions (Siebenhüner 2000). These challenges include the compliance deficits of regulatory policies, the lack of acceptance for direct inter-

vention into individual decisions, the necessity of open processes for Sustainability, long time horizons and manifold uncertainties (e.g. in climate change), and the need for stakeholder involvement. The elements of social learning for Sustainable Development include: Sustainability knowledge, inter- and transdisciplinarity, long-term perspectives, moral development, societal conflict resolution and discursive capabilities, capacity to solve environmental and social problems through institution building and learning mechanisms. Promising theoretical approaches are learning theories, (political) Evolutionary Economics, organisational learning (management studies), institutional change (Institutionalism), and behavioural theories.

Following these elements there are a number of research questions:

- What is specific about learning towards sustainable development?
- How could learning be conceptualised?
- How do collective actors learn vis-à-vis individuals?
- What triggers their learning?
- What hampers social and individual learning in various contexts?

5 Summary of Research Recommendations

We have surveyed research on distributional conflicts between developed and developing countries in the trade and environment nexus, and selected issues of global governance. From the various suggestions for future research identified, the following recommendations can be made.

It is an open issue to which degree international movement of goods, factors and services could be regarded as sustainable. Critical approaches highlight the evidence of unbalanced and unsustainable material flows. However, a **concise methodological background of valuation and theoretical concepts**, which goes beyond the traditional and new trade theory is needed. In particular it has to be asked

- what theoretical background could explain observed relationship between environmental degradation and economic development (Environmental Kuznets Curve)? How can the concept of environmental terms of trade be backed by a concise analytical

framework? How can environmental terms of trade be generated by national governments and local producers? How could they become subject to international agreement and institutionalisation?

Learning processes have been identified as an important aspect of global institution formation and functioning in a broad sense. Especially the interaction between different levels of policy-making needs further analyses, but also the rise of new institutional arrangements among private actors as well as between private and public actors. Suggested issues are:

- What concepts of learning are relevant or need to be developed? How could dynamic learning processes be fostered between the international and local level, between public and private actors? What is specific about learning towards sustainability? What differences in learning can be identified between collective and individual actors and with respect to different governance arrangements?

Different **economic disciplines**, including game theory, political economy and evolutionary economics, which are not connected to a single school of thought, are helpful and should be considered to find answers to global institutional issues related to sustainability. More specifically, they would help to elaborate on:

- What are the institutional preconditions for sustainable policies with long-term implications at all governance levels? What connections exist between environmental policy measures, technological innovation and diffusion? How could incentives to contribute to global public goods increase? How should participation or membership in global institutions be designed?

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