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Research Paper

Climate Change and the Global Economy

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Content

About the New Zealand Centre for Global Studies

The New Zealand Centre for Global Studies founded in 2012 on Waiheke Island, Auckland is a think tank, or to be more precise a non-profit organization. At the top of the Centre's organizational structure is the board of trustees. The Centre works with universities and research institutes in an informal cooperation. At the core of research there are the global affairs and the role of New Zealand in a cross-disciplinary context, the research areas more specifically "(…) include sustainability, peace and security, human rights and international law & organizations" (New Zealand Centre for Global Studies n.d. a). The Centre stresses the difference between International Relations and Global Studies and is the first organization in New Zealand that works in the field of Global Studies. The goal is to change perspective and to focus on "(…) the planetary interest rather than the national interest" although one argument is that these two factors do not have to be exclusive but can be compatible (New Zealand Centre for Global Studies n.d. b).

The Centre also supports the Global Citizenship Education (GCED). In 2013 the first Global Citizenship Conference organized by the Centre took place. The core idea is the global interdependence as well as cultural diversity. The conference is supposed to give school students "(…) the knowledge, skills and values to participate as active citizens". Meanwhile the efforts of the Centre are supported by the New Zealand National Commission for UNESCO (New Zealand Centre for Global Studies n.d. c).

During my stay at the Centre the Student Global Citizenship Retreat 2016 took place on Waiheke Island. Eight students were invited to listen to presentations and work together on a report in the context of Global Citizenship (New Zealand Centre for Global Studies n.d. c). On the website of the Centre there are also research papers and more detailed information about the Centre available (New Zealand Centre for Global Studies n.d. a). The following research paper is the result of my work at the New Zealand Centre for Global Studies.

1 Introduction

In December 2015 the participating countries at the United Nations Framework Conventions on Climate Change adopted the agreement formulated at the convention, the Paris Agreement (United Nations Framework Conventions on Climate Change 2016). From the 22 of April of this year until the 21 of April 2017 the parties can sign the Agreement as it is determined by the Agreement under Article XX(1) (Paris Agreement 2015; United Nations Framework Conventions on Climate Change 2016). Specified under Article XXI(1) "[t]his Agreement shall enter into force on the thirtieth day after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 per cent of the total global greenhouse gas emissions (…)" have ratified or in other ways accepted, approved or accessed the Agreement (Paris Agreement 2015; United Nations Framework Conventions on Climate Change 2016).

But with the enforcement of the Agreement a new question arises. How is the Agreement going to be implemented? As it is stated in the Preamble of the Agreement each member state shall act according to its capabilities but what help can international organizations especially the United Nations (specialized) Agencies offer in the context of a global challenge (Paris Agreement 2015; International Institute for Sustainable Development n.d.; Saner 2016; The World Bank 2016) as it is stated under Article VII(8) of the Agreement: "United Nations specialized organizations and agencies are encouraged to support the efforts of Parties (…)" (Paris Agreement 2015). This is a question that not only experts try to answer but also the Agencies themselves (International Institute for Sustainable Development n.d.; Saner 2016; The World Bank 2016). Critique arises especially in the context of the performance of the World Trade Organization or the World Bank which raises the question about the capabilities and the efforts of the Agencies to help implementing new agreements in general or the Paris Agreement (Harbinson 2015: 28; Saner 2016; Gao 2012). This paper therefore explores the following central question:

Which roles will the UN (specialized) Agencies play in the implementation of the low carbon transformation as part of the Paris Agreement and are the Institutions fit for purpose?

The context of this research is the interaction of the economy and the climate issues in the implementation process of the Paris Agreement as this connection plays a crucial role not only for the implementation process but also in a more general view (Saner 2016; The Economist n.d.). Therefore, to be more precise about the UN (specialized) Agencies, there is to say that the focus lies on the World Trade Organization (WTO), the World Bank, the International Monetary Fund (IMF), the United Nations Industrial Development Organization (UNIDO), the United Nations Environment Programme (UNEP), the United Nations Conference on Trade and Development (UNCTAD) and the United Nation Development Programme (UNDP). This selection of agencies depends on the description of the area of expertise, the reactions to the Agreement and the literature available on the functions of the Agencies (i.e. United Nations n.d. b; United Nations Conference on Trade and Development n.d.; United Nations Development Programme n.d.; United Nations Environment Programme n.d.; United Nations Industrial Development Organization n.d.; International Institute for Sustainable Development n.d.; Farid et al. 2016: 36; United Nations Environment Programme 2016). The institutions and programmes are divided into the Bretton Woods System on the one side and the United Nations System on the other as the Bretton Woods institutions are independent (Singer 1995: 348). The sections covering the analysis of the Agencies are marked with Roman numerals from I to VII for a better overview. The focus in this research paper lies especially on the low carbon goal as stated under Article II(1c) and IV(1) of the Paris Agreement to achieve a smaller research frame (Paris Agreement 2015). To answer the research question there has been an extensive research necessary on past performance of the Agencies, their reaction to the Paris Agreement and the comments of other (independent) observers (i.e. Brennan 2015; Arnet-Zargarian 2016; The World Bank 2016).

This paper begins with a general approach on the combination or interaction of the ecology and the economy (The Economist n.d.). This theme of interaction is the common thread of the entire paper and together with the illustration and the implications of the Paris Agreement it creates the basis of the subsequent analysis. The third section includes the interaction between trade and finance and climate change in the global context of the Paris Agreement, followed by the roles played by the UN (specialized) Agencies and the assessment of the question of institutional reform and subsequently a conclusion in section four of this paper (Arnet-Zargarian 2016; Saner 2016).

The global issue of climate change was addressed in the Paris Agreement which is a necessary step considering the interaction between the ecology and the economy but at the same time requires new approaches in the connection of trade, finance and climate change (Cosbey 2016: 1-2; Paris Agreement 2015: 1; The Economist n.d.; Saner 2016). While the World Bank puts a lot of effort into the implementation process of the Paris Agreement (International Institute for Sustainable Development n.d.) with unclear future contributions (Gao 2012) the WTO seems unable to act recently in the aspects of addressing new problems (Saner 2016; Harbinson 2015: 28). In summary the other institutions seem to work on their strategies on implementing the Agreement based on previous actions (Comstock 2016; Burgess 2016; United Nations Industrial Development Organization 2015; United Nations Conference on Trade and Development n.d.) but not with a likewise possible impact like the WTO or the World Bank could have (see Knaup / Schwägerl 2009; Pollock / Jackowski 2014; Xie / Muresan 2013; Singer 1995; Saner 2016; The World Bank 2015). However inter alia there has to be a stronger and more flexible interaction between the Agencies maybe created by an outside institution to address this global issue (Kanninen 2013: 135, 141).

In this research area a certain amount of articles does already exist additionally to the literature and expert views used in this analysis. Bailey and Tomlinson describe the implications of the Paris Agreement and examine the effectiveness of the United Nations (UN), the combination of short and long-term goals, the important role of the G7 (Group of 7) and G20 (Group of 20), measuring methods, financial flows and the role of the civil society (Bailey / Tomlinson 2016: 1-9). There is also research on the review process of the individual state actions, the relevance of knowledge about climate change at the basis and the role of the organization Carisma (van Asselt / Bößner 2016: 1-3). Besides, there exists already research on the performance of the individual countries like China in the light of the implementation process of the Paris Agreement (Tambo / Duo-Quan / Zhou 2016: 155). And there is a comment in which the relevance of climate law is discussed (Institute for Advanced Sustainability Studies e.V. n.d.).

The following section forms the basis of the framework of the analysis in section three. It describes the basic understanding of the interaction between the economy and the ecology and in that context the implications of the Paris Agreement (Saner 2016; The Economist n.d.).

2 Global Challenges of the 21st Century

2.1 Climate Change as an Economic Issue: The potential role of Ecological Economics

"(…) [E]cological economics is neither ecology nor economics, but a fusion of both" (The Economist n.d.). In the field of ecological economics social and natural sciences as well as humanities are combined (Daly / Farley 2004: xxii). Ecological economics is supposed to go one step further than traditional approaches like the neoclassical view (Daly / Farley 2004: 5).

Ecological economists see a finite system where it is not possible to have infinite economic growth (Daly / Farley 2004: xxiv). “Where conventional economics espouses growth forever, ecological economics envisions a steady-state economy at optimal scale” (Daly / Farley 2004: 23). Ecological economists question the promoted effectiveness of markets like the efficient allocation and the distribution of resources which does not mean that they want erase markets (Daly / Farley 2004: 6). The goal is to show the ineffectiveness of markets in the allocation of Nature’s supply (Daly / Farley 2004: 6). Therefore one argument is that there has to be a redistribution of resources considering that the economy cannot grow forever (Daly / Farley 2004: 12-13).

Another goal is to stop growth that is defined as the natural resources used by the economy and expelled as waste (Daly / Farley 2004: 6). Sustainable Development is in this context defined as “(…) development without growth (…)”. This means that there is supposed to be a change but not an increase in natural goods and services needed and a way to find a level that does not exceed the capacity of the earth (Daly / Farley 2004: 6). Consequently ecological economics is focused on macroeconomic problems (Daly / Farley 2004: 12). The central idea is that the manmade economy is just one part of the whole world and its nature and (The Economist n.d.) “(…) the welfare from economic services increases while the welfare from ecological services diminishes” (Daly / Farley 2004: 17).

2.2 The Paris Agreement: Transformational Pathways to Global Carbon Neutrality

In this context the Paris Agreement comes into play, to be more specific the interaction of trade and finance and climate change issues (United Nations Environment Programme 2016; Saner 2016). The Paris Agreement is so far an unseen new approach in coping with climate change in a global context (Cosbey 2016: 1). About 200 countries agreed upon it including developing countries (Arnet-Zargarian 2016). In the Preamble of the Agreement the different needs and capabilities of the different countries are noticed (Paris Agreement 2015) and it is stated under Article II(2) that every country acts upon those capabilities (Paris Agreement 2015). The obligations of all countries (including developing countries) "(…) is the key reason for optimism about the agreement" (Stavins 2016: 15). The Agreement also covers communication between the parties that are involved, transparency of the work and the support between the countries as stated inter alia in the Articles VII, XIII-XVI, IX (Paris Agreement 2015; International Institute for Sustainable Development n.d.).

The Agreement includes both bottom-up and top-down elements. This means there are going to be national contribution and international coordination and oversight as stated inter alia under Articles III, VII, XIV-XVI of the Paris Agreement (Stavins 2016: 15; Paris Agreement 2015). Meetings are supposed to take place in a certain time-frame and an information flow shall follow the progress as stated under Articles XIV-XVI (Paris Agreement 2015). Under Article IV(4,5) it is also stated that the process however should be led by developed countries and their efforts to reduce emissions in the economy and they should also support developing countries (Paris Agreement 2015). In this context the possibilities of cooperation between the actors are stated under Article VI(1) (Paris Agreement 2015).

Sharing information, support of institutional arrangements, improvement of scientific knowledge, support of developing countries are other aspects of the Agreement stated under Article VII (Paris Agreement 2015). But criticism arises because of unclearly described emission targets and other unspecific formulations and the lack of enforcement mechanisms which leaves room for individual actions of each country but also leaves these questions unanswered (Arnet-Zargarian 2016).

Under the Paris Agreement formulated in December 2015 the goal stated under Article IV(1) is to stop the increase of global greenhouse gas emissions and to reduce the emissions "(…) as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases (…)" (Paris Agreement 2015). The process should not endanger food production and there are finance flows required for the "(…) pathway towards low greenhouse gas emissions and climate-resilient development" as stated under Article II(1b,c) (Paris Agreement 2015).

The following section contains the analysis of this paper beginning with the possible interaction of the economy, especially trade and finance and the implementation of the Paris Agreement, followed by the UN (specialized) Agencies and the possible consequences that might arise out of their performance at the implementation process of the Paris Agreement (Saner 2016; Arnet-Zargarian 2016).

3 Global Economy: Trade and Climate

3.1 Global Trade and Global Climate Policy: The Relationship

Countries interact through trade and finance flows thus establishing a close relationship with each other which is then called Globalization (Miller 2002: 126). The Paris Agreement shows new ways for trade flows between the countries considering the globally emerging green economy. New areas of investment and trade are going to arise including technological development inter alia in the field of energy (Cosbey 2016: 2). So the focus of implementing the Paris Agreement is not only on new technology (Saner 2016).

Policy tools for the countries to enforce the Paris Agreement might be border taxes like a carbon tax on imported goods although they have been unpopular so far (Cosbey 2016: 3). It is a problem with inter alia climate change actions that freeriding occurs as countries wait for other countries to act without contributing to the emission reduction themselves (Nordhaus 2015: 1339). One specific approach is the Climate Club proposed by Nordhaus. If a country is not part of that club it will have to pay "(…) uniform percentage tariffs (…)" when exporting to a country that is a member. Because of these additional costs countries want to become a member of that club. The membership requires emission reductions by the country. The idea is that a country will benefit more of joining than of not joining the club. The carbon reduction can be achieved by carbon pricing and there are different possibilities for the countries to implement that, for example carbon taxes (Nordhaus 2015: 1341). At the beginning of that process countries have to negotiate a treaty which has to determine a price for carbon (Nordhaus 2015: 1362-1363). Nordhaus stresses the point that a Climate Club "(…) should be embraced only if the benefits to slowing climate change are clear and the dangers to the trading system are worth the benefits" (Nordhaus 2015: 1367).

But an approach on an international level in case of tariffs on carbon-intensive goods contradicts the WTO Agreement. A way to justify this approach would be to argue that under Article XX(b) it is allowed to implement tariffs in order to protect their citizens as well as animals and plants from any damage to their health but only if there are restrictions within the country as well (Arnet-Zargarian 2016; World Trade

Organization 1994). But tariffs would only have any effect if economic powers such as the US would implement them. This could force then other countries to comply and it could help protecting domestic infant industries in the field of environmental protection and climate change (Arnet-Zargarian 2016).

A Carbon Pricing Leadership Coalition has already been established which consists of 20 governments on national and state level and 90 companies as participants. They support carbon pricing and launched their initiative at the Climate talks that lead to the Paris Agreement. This coalition also offers help to other countries that want to enforce carbon pricing (The World Bank 2016). The carbon tax, however, might cause additional costs by measuring as well as labelling the carbon in a good or service (Saner 2016).

There are, however, two other possibilities: The first one could be to guarantee subsidies to protect infant industries in emerging green markets. This might, however, result in preventing other countries from entering the market although the protected firms would possibly not be able to compete with others in the future (Cosbey 2016: 3). And the second possibility would be a Product Carbon Footprint (PCF) labelling (Cosbey 2016: 3) although there is no "(…) single agreed method for calculating a product's embedded carbon" (Cosbey 2016: 4).

In the past poor countries were not able to participate in this new development in the field of environmental protection (Miller 2002: 129). There is a large gap between poor and rich countries considering income on the international level which means that the "(…) economic scene is far from a level playing field" (Miller 2002: 133). In the case that poorer countries do not benefit from the new market possibilities they will not be able to implement environmental protection and climate change issues in their policies (Saner 2016; United Nations Environment Programme 2016). Miller, therefore, states that there needs to be strong leadership in the context of global governance and there needs to be law established about how to interact at the global market (Miller 2002: 138-139). Ricopero describes the situation as the following: While developing countries are interested in the problems that come along with environment and trade (Ricopero 2002: 29) they also fear the ongoing process in the field of environmental protection because of a possible new protectionism of other states and new standards that might arise (Ricopero 2002: 31-32). It is difficult to find a balance between the protection of the environment and "(…) avoiding the usage of environmental measures as a new trade protection measure (…)" (Shahin 2002: 49). And there are conflict areas like the TRIPS (Trade-related Aspects of Intellectual Property Rights) and Eco-Labelling not only because of theoretical implications but also with the practical implementation (Shahin 2002: 61, 65; Saner 2016). In this context the reevaluation of the WTO's rules is another aspect (Saner 2016; Cosbey 2016: 6).

It is necessary to combine trade and climate issues and therefore to support green goods (Cosbey 2016: 6) but so far trade regimes and environmental regimes are barely connected (Ricopero 2002: 35). But treaty regimes should not exclude each other but should be complementary and it is necessary to include developing countries in the implementation process of the Paris Agreement (Saner 2016). According to Ricopero there has already been a positive development as the focus lies rather on complementarities than on conflicts between environment and trade issues (Ricopero 2002: 37). The UNEP also points out that first of all trade plays an important role in the climate adaption of countries and sustainable consumption as well as production before it can help implementing the Paris Agreement (United Nations Environment Programme 2016).

3.2 Institutional Roles for the Pathways

3.2.1 The Bretton Woods System: WTO, World Bank, IMF

As already shown under the previous section the WTO is playing a crucial role when implementing the Paris Agreement as some policy tools of the countries depend on the WTO. In the following section of this paper the roles of the World Bank, the WTO and the World Bank in the context of trade, finance and climate issues are going to be explored. But to begin with there should be a short explanation of the origins of the former Bretton Woods Institutions (Arnet-Zargarian 2016; Bretton Woods Project 2005b).

The IMF and the World Bank were both part of the Bretton Woods System. They were established after World War II in order to try and rebuild the economy of the individual countries and strengthen the international economy. An International Trade Organization (ITO) was also supposed to be founded, which, however, was not realized until the establishing of the WTO. The idea behind the Bretton Woods System was to protect the world economy from depressions and trade battles. The IMF was supposed to create the same monetary policies in each country and the World Bank was supposed to lend money to inter alia poor countries in order to rebuild them (Bretton Woods Project 2005b). So the World Bank as well as the IMF were specialized Agencies from the beginning and still are. They were founded even before the UN was but they have, nevertheless, the same status as for example the ILO (International Labour Organization) at least in a legal understanding. Legally the Bretton Woods System is part of the UN but in reality the Bretton Woods institutions are independent (Singer 1995: 348). Within the Bretton Woods System the Western countries have an advantage over other countries. Therefore these institutions became instruments of the Western industrialized countries (Singer 1995: 349). The UN became more and more irrelevant to development aspects (Singer 1995: 350). As an answer to that development other Programmes at the UN were established (for example the UNDP or the UNEP) to concentrate some of the power back at the UN and therefore to all countries (Singer 1995: 351).

(I) The WTO is an international organization and does not belong to the UN (Harbinson 2015: 18). In its Agreement the WTO describes its goals to promote "(…) optimal use of world's resources in accordance with the objective of sustainable development, seeking both to protect and to preserve the environment (…)" considering different capabilities of developing countries. The reduction of tariffs is one core aspect (Agreement Establishing The World Trade Organization 1994: 9). Under Article IV(1) the power of the Ministerial Conference is described inter alia its potential to decide on all issues. Under Article IV(2) the General Council at which each member state has a representative is described. Decisions are to be made on consensus or majority voting and the Ministerial Conference can waive obligations of a member as stated under Article IX. Article V(1) is about the possible cooperation arrangements with other organizations (Agreement Establishing The World Trade Organization 1994).

There have been already positive aspects to the WTO. Trade agreements are legally-binding (Harbinson 2015: 35,45) and the decisions are usually made by consensus. Therefore, informal consensus-seeking is common (Harbinson 2015: 36). The legal aspects of decision-making are part of the dispute settlement and the Appellate Body, the experts (in law, trade and other areas) of the WTO (Harbinson 2015: 24, 38). Moreover the WTO has been "(…) quite successful in monitoring and implementing existing agreements" (Harbinson 2015: 40) and created an environment for the members where they can expect a "(…) fair and predictable treatment for their own products" (Harbinson 2015: 39). The WTO supports economic growth and is fighting any intention of protectionism of a member (Harbinson 2015: 28). This last point, however, causes some problems considering the implementation of the Paris Agreement as already mentioned (Arnet-Zargarian 2016). One possibility is to allow countries (especially developing countries) to protect their infant industry in certain areas like in carbon reduction which could be worked out by the UNCTAD (Saner 2016). The UNEP however describes the role of the WTO in the implementation process as the following: "The WTO can serve as a backstop to climate protectionism, providing guidance in defining the scope of trade measures adapted for environmental purposes" (United Nations Environment Programme 2016). Besides, another issue is that poor countries need access to new technologies in the area of environmental protection and climate change which collides with the "(…) intellectual property rights (…)" of the WTO. But perhaps there could be an exception of TRIPS so that poor countries get a compulsory license to use new technology. As a third option there are PTAs (Preferential Trade Agreements) that help developing countries to access developed countries markets in the area of green technology (Saner 2016).

Now, a more general look at the WTO and its problems as to show the capabilities to help implementing the Paris Agreement: Recently the member states have not been capable to find a common ground at the Doha Round. The reason might be that members lose faith in the capabilities of the WTO (Harbinson 2015: 28). Furthermore, there is no addressing of 21st century problems and it has become a much more complex process of decision-making as more members are actually participating and there is much more work to do by now for the dispute settlement procedures than expected (Harbinson 2015: 28). As the members are getting more and more risk-averse the decision-making process is slowing down. Any new agreement must be formulated in precise words which takes a very long time (Harbinson 2015: 42-43). Maybe a change from consensus to voting is necessary, or maybe there should be no legally-binding agreements. The situation might possibly be improved by generating more significant analysis and studies provided by the secretariat in order to support the members (Harbinson 2015: 43-44). The solution for the Doha Round might be that agreements are only on related issues and that negotiations should be between countries with similar attitudes towards a subject (Ravenhill 2015: 52-53), "(…) countries that together account for the vast majority of global trade in particular product areas" (Ravenhill 2015: 53). The problem that might occur out of this is, that if issues are solved by sectoral agreements, the countries might not invest more time and resources on global trade negotiations (Ravenhill 2015: 54).

Recently the WTO staged a discussion about the impacts of the Agreement on LDCs (Least Developed Countries). It is suggested by experts of the WTO that the LDCs should take the chance of new market opportunities in the low-carbon economy (United Nations Environment Programme 2016). The technology from other countries regarding environment and climate can help LDCs in their development. But at the same time the experts advise against rash actions “(…) particularly surrounding the transition of the energy sector, including the elimination of fossil fuel subsidies, underscoring the effects on both environment and trade” (United Nations Environment Programme 2016).

(II) Another relevant organization of the implementation process of the Paris Agreement and already active in this respect is the World Bank (The World Bank 2015). Under Article I of the World Bank Agreement it is stated that the World Bank has different purposes such as assistance through capital investment for development, promotion of foreign investment by private institutions. Under Article II(2,3a) the World Bank’s capital stock is set at a level of 10,000,000,000 US-Dollars and “[e]ach member shall subscribe shares of the capital stock of the Bank”. The Board of Governors is the top level of the organizational structure directly followed by the Executive Directors as stated under Article V(2). There is also an Advisory Council and cooperation with other organizations as stated under Articles V(8) (IBRD Articles of Agreement 1989).

In general there is criticism on the manner the World Bank is governed and on its policies. To the loans granted by the Bank there are conditions attached. Those conditions try to force governments to liberalize their economy regardless of national performance in this matter. Another argument is “(…) that the World Bank working in partnership with the private sector may undermine the rule of the state as the primary provider of essential goods and services, such as health care and education (…)” (Bretton Woods Project 2005a). The board seats at the World Bank are not equally distributed between its member states but still reflects the distribution of power after the second World War (Poortman 2015: 85). The Bank cannot lend to anyone else than the government of a country which means that the government has some influence on the money flow (Brennan 2015: 82). As Brennan states it, the World Bank tries to circumvent the prohibition of lending money to political parties by promoting social accountability but working with the government might be more successful (Brennan

2015: 82-83). Moreover, the Bank sets up donor trust funds, this implies that members of the bank have a strong influence on financing which lacks transparency (Brennan 2015: 83). The World Bank "(…) is financially self-sufficient" in general, although nowadays the Bank budget relies to some part on trust funds of donors (Poortman 2015: 83). The Bank is also losing its monopoly as there are for example private organizations that provide money and knowledge. Besides that, the Bank staff is more focused on internal processes (Poortman 2015: 84).

In response to the Paris Agreement the World Bank published a Climate Change Action Plan (International Institute for Sustainable Development n.d.). As stated by the Bank 130 of the countries that are a part of the Paris Agreement are also working together (some are already working on the implementation) with the Bank. With the Climate Change Action Plan the World Bank wants to support the countries with "(…) comprehensive packages of financing, technical assistance and knowledge to help countries adapt to climate change and transition to a low carbon economy". The World Bank also refers to the report of stock waves which stresses the point that climate change and poverty are connected with each other and that the further development should address both issues together. The World Bank states that it is already investing in "(…) renewable energy and energy efficiency, natural resources management, low carbon urban development, resilient agriculture, and sustainable water management". $3 billion were provided last year to the building of climate-smart cities and other technical and financial support. Moreover the Bank announces that it will increase its portfolio on climate finance from 21 percent in the year 2015 to 28 percent. The overall amount (including private sectors and others) will be $29 billion in the year 2020. Another focus of the World Bank is the potential of carbon markets in the context of reducing emissions (The World Bank 2015).

Nevertheless the World Bank also financed coal plants in the years especially from 2009 to 2012. The negative effects of such stations are the destruction of the environment and health problems. "(…) [T]he World Bank spent a record sum to finance fossil fuel power projects – despite its commitment to address climate change". Recently the Bank restricted its investment and only supports plants in the poorest countries. The consequence is that these countries with weak governments and nearly no environmental regulations suffer from companies that profit by the Bank's investment. Moreover, the people themselves in those countries do not earn enough money to buy the energy produced by the plants. Another effect of these investments is that those countries will continue to use coal and will not be able to adopt other sources of energy with new technologies. At the same time the Bank finances environmental programs and try to generate more funding by the international community. There has already been a transfer of billions of US-dollars to the Bank which causes protest from more than 250 organizations. They demand that this money should be transferred to the UN (Gao 2012).

(III) The third specialized Agency of the UN analyzed in this Paper is the IMF. The Executive Board at the IMF has a key role in the decision-making process (Hubloue / Vongthieres 2015: 96). The voting power of each member state depends on the share it has on the world economy (Hubloue / Vongthieres 2015: 96,104). Most of the time to make a decision a simple majority is required (Hubloue / Vongthieres 2015: 105). But most of the time there does not need to be a formal vote as the consensus-building is at the center of the decision-making process (Hubloue / Vongthieres 2015: 105). Support comes from the IMFC, a committee which offers consultations to the Board of Governors (Hubloue / Vongthieres 2015: 111). The goals of the IMF are to "(…) promote international monetary cooperation and facilitate international trade, and thereby promote high levels of employment and income" (Hubloue / Vongthieres 2015: 96). One function of the Board after the financial crisis of 2008 is to create instruments that might help countries to mitigate the effects of the crisis (Hubloue / Vongthieres 2015: 96). Moreover members at the IMF have certain obligations like cooperation with other members (Callaghan 2015: 120).

Nevertheless, there have been some problems at the IMF inter alia an institutional crisis of the IMF concerning the legitimacy, the voting power of some countries and the conditions which comes along a loan granted by the IMF limiting the influence of the IMF (Broome 2010: 37). Especially in the case of loans granted by the IMF a government loses to some parts its authority to decide on issues concerning its economy (Bretton Woods Project 2005a). Those are the reasons why emerging market economies avoided the IMF while the US used its influence through other channels like the Group of Seven (G7) (Broome 2010: 37). The debate whether too many of the representatives at the Executive Board come from advanced economies raises questions about the legitimacy of the IMF (Callaghan 2015: 121). Reform of the IMF was recently blocked by the US congress, as the voting power of the US is 16.5 percent (Callaghan 2015:

122). On other aspects the IMF is not independent in its actions for example, the IMF depends on bilateral arrangements with creditor states within the European Union. The capital of the IMF decreases, relative to the overall world resources (Broome / Seabrooke 2015: 130). Although the surveillance of the economic performance is vital there are no sanction mechanisms (Callaghan 2015: 120-121). Nevertheless “(…) the IMF’s ‘screening’ of a government’s policy settings helps to improve the credibility of the authorities’ commitment to ‘sound’ economic reforms among both international and domestic audiences (…)” (Broome 2008: 126) but to this there is also the view about the IMF by other relevant actors (Broome 2008: 126). “(…) [T]he IMF remains strongly committed to the promotion of open market-based economies” but starts to be more flexible as well as focused when it comes to crisis management (Broome 2010: 51). In other aspects Broome argues that more flexibility of the IMF in order to address different problems can damage its reputation (Broome 2008: 127). Still the IMF promotes the positive effects of their loan programs on borrowing states (Broome 2008: 145). At the same time it starts to include borrowing countries more in the development and implementation process which causes more institutional work in organizing the process which causes also criticism by creditors as the external enforcement elements become less relevant (Broome 2008: 147). The IMF, therefore, needs to find a way to convince public and private partners about their credibility (Broome 2008: 147).

But there are positive and effective aspects to the IMF as well. The high effectiveness of the IMF has different reasons. One reason is the effective monitoring of states behavior and whether they comply. Informal interactions are also vital as are the high quality analysis provided by the staff (Hubloue / Vongthieres 2015: 102-103). The semi-annual reports like the Global Financial Stability Report often lay the ground-work in meetings around the world (Hubloue / Vongthieres 2015: 104). The IMF is also more focused on long-term development (Hubloue / Vongthieres 2015: 104). Some influence on the IMF stems from the Group of 20 (G20). The 20 countries collectively form 90 percent of the global GDP (Gross Domestic Product) (Hubloue / Vongthieres 2015: 113). The role of the IMF in the implementation process of the Paris Agreement, as the staff members see it, could be technical assistance, for example in the field of energy-pricing (to generate income that can be used in climate issues) especially carbon-taxation (Farid et al. 2016: 36). Another possibility is climate finance and to be more specific, the carbon pricing of “(…) fuels used in international aviations and maritime transport (…)” (Farid et al. 2016: 36).

3.2.2 The United Nations System: UNIDO, UNCTAD, UNEP, UNDP

(IV) This section explores the performance of the UNIDO, the UNCTAD, the UNEP and the UNDP and their support of the implementation process of the Paris Agreement. The UNDP supports in general countries to fulfill the Sustainable Development Goals (United Nations n.d. b), in detail the UNDP states that one purpose is to help "(…) countries to develop policies, leadership skills, partnering abilities, institutional capabilities and build resilience in order to sustain development results" (United Nations Development Programme n.d.).

In the context of the Paris Agreement the UNDP supports a global meeting including countries from five regions with Costa Rica as the host. The goal is to achieve the contributions of each country in context of the Paris Agreement. There were already talks before the Paris Agreement in order to determine the capabilities of each country and what their ambitions are at the Climate Change Conference in Paris (United Nations Development Programme 2016). The UNDP supported the countries with technical as well as financial assistance. Besides, they helped connecting countries and supported the exchange of information between the governments. In the aftermath of the Paris talks on climate change the UNDP will support the countries in financial, technical and informational exchange aspects (Comstock 2016). Especially LDCs contribute to climate change as they depend on industries that are particularly climate-vulnerable like for example forestry. Therefore, the UNDP launched Boots on the Ground in 2010, a programme in order to support those countries with inter alia technical advice. Within this programme countries could also prepare themselves for the Paris talks in December 2015. The goal is to support the governments with long-term skills and create the capabilities to cope with climate change. This programme will also be a part of the UNDPs future support of the implementation process of the Paris Agreement (Burgess 2016).

(V) Another specialized Agency analyzed in this paper is the UNIDO. The UNIDO is promoting inter alia environmental sustainability (United Nations n.d. b). The goal of the UNIDO as stated in its Constitution under Article I is the "(…) acceleration of industrial development in the developing countries with a view to assessing in the establishment of a new international economic order". The functions of the UNIDO are described under Article II: assistance (especially to developing and least developed countries), providing analysis of concepts in order to develop them or create new ones, a forum to exchange ideas, training programs, cooperation with other organizations. The Conference of the UNIDO consists of each member states' representative as stated under Article VIII. Article XV(1) sets the budget constraints: "Regular budget expenditures shall be borne by the Members, as apportioned in accordance with scale of assessment establishes by the Conference by a two-third majority (…)" (Constitution of the United Nations Industrial Development Organization 1979). One pillar of the UNIDO is Safeguarding the Environment which is one part of the sustainable development efforts of the UNIDO. In 2013 the UNIDO declared "(…) to promote and accelerate inclusive and sustainable industrial development (ISID) in developing countries and economies in transition". There are different ways of support offered by the UNIDO: Technical cooperation, analysis and research and services regarding policy advice, help with normative and quality-related issues, knowledge and networking (United Nations Industrial Development Organization n.d.).

The UNIDO has problems especially to justify its existence which causes new problems as France and other states have stopped funding the UNIDO (France in 2013 following others). The focus of the UNIDO has been on environmental issues lately rather than on the economy or on employment. One reason for that might be that the UNIDO depends largely on capital flows coming from the Global Environment Facility and other institutions. But in this area the UNIDO has to compete for example with the World Bank, the UNEP and the UNDP. However, the environment projects are not the original area of expertise which causes criticism about low efficiency. There could be the possibility that the UNIDO could approach the BRICS states (Brazil, Russia, India, China, South Africa) and rather focus on their problems and in return get support from those states. The BRIC states would also profit from the experience especially with respect to environmental issues (Xie / Muresan 2013; Callaghan 2015: 122). Nevertheless the Director of the UNIDO states that they will work with non-state actors and member states to both implement the Paris Agreement and to support efficient environmental practices in the global economy. Moreover, the UNIDO promotes poverty reductions in connection with "(…) low carbon, resource efficient pathway based on key sustainability practices (…)" (United Nations Industrial Development Organization 2015).

(VI) The UNCTAD works mostly on international trade issues (United Nation n.d.). The UNCTAD, as stated on their website, makes it easier for developing countries to enter a globalized economy. It achieves this through "(…) analysis, consensus-building, and technical assistance" and also helps countries to achieve a sustainable development. They also support the Financing for Development in cooperation with other organizations like the WTO. The UNCTAD works not only with governments and the private sector but also with the civil society (United Nations Conference on Trade and Development n.d.).

The UNCTAD similar to the UNIDO has difficulties to justify its existence which again limits the scope of action and impact. The WTO and other organizations have focused on issues that used to be the UNCTAD's area of expertise. One problem of the UNCTAD is the consensus voting which creates a status quo. While the UNCTAD is concerned with its own problems, developing countries are on their own to solve their problems. However the UNCTAD is capable to "(…) provide accurate analysis of the global market and pragmatic policy recommendations" (Pollock / Jackowski 2014). One example for this is the latest World Investment Report of the UNCTAD. In this Report the UNCTAD highlights the necessity of financial flows which are crucial and together with strong partnerships on an international level this might help implementing the Paris Agreement (United Nations Conference on Trade and Development 2016: 85). The UNCTAD also analyzes other institutions and criticizes them as there are high quality analysis and research available at the UNCTAD (Pollock / Jackowski 2014).

(VII) The UNEP is promoting sustainable development (United Nations n.d) and works on new environmental instruments and assesses conditioning and trends on a national and global level. The UNEP describes itself as the "(…) leading global environmental authority that sets the global environmental agenda" (United Nations Environment Programme n.d.). The UNEP in general promotes that environmental protection on the one hand and prosperity on the other hand do not have to be mutually exclusive. Its job is to take care of natural resources which provides the basis for others to make money (Knaup / Schwägerl 2009).

The Problem is that UNEP has not the same power and resources like for example the WHO. It is only a UN Program and consequently there are voluntary donations but nothing else. The UNEP has its headquarter in Nairobi, 500 members of the staff and each year a budget of $200 million although Achim Steiner, the head of the Agency during the Copenhagen Summit, could generate new funds. Additionally criticism arises as the UNEP is deemed unfit to deal with the complex organizational issues (Knaup /

Schwägerl 2009). In response to the Paris Agreement the UNEP states that the focus of its work is on "(…) renewable energy, green finance, and sustainability in transport, construction and other sectors" to create a green economy that is not exclusive (International Institute for Sustainable Development n.d.). This is supposed to make sure that there is market access to not only sustainable but also certified products (United Nations Environment Programme 2016).

3.3 Global Institutional Reform: a proper fit for Ecology and the Economy

What is the consequence of the previous analysis? In the previous section there are already mentioned certain reforms that might be necessary for the Agencies to address the global issue of climate change for example in the case of the WTO (Saner 2016). But there are other problems and also propositions to improve the work of the Agencies which are discussed in the following section (Kanninen 2013: 106, 107; Kanninen / Kostakos 2011: 73).

First, there is no good coordination between the different planning groups of the UN and their departments or other institutions (Kanninen 2013: 106-107; Kanninen / Kostakos 2011: 73) except for example one meeting every year of the IMF and the World Bank to exchange views on current problems (Hubloue / Vongthieres 2015: 96). In the case of the Paris Agreement each Agency presented in this paper promotes its contribution, some of them are equal, but there is, with a few exceptions which do not concern the Paris Agreement specifically, no interaction mentioned by the Agencies (see Kanninen 2013: 106-107; Kanninen / Kostakos 2011: 73; International Institute for Sustainable Development n.d.; United Nations Conference on Trade and Development n.d.; United Nations Industrial Development Organization 2015; The World Bank 2015).

One approach in this context of system communication and coordination would be the Delivering as One projects at the United Nations. Those projects arose in the context of the goal to improve the development of the UN. "Delivering as One initiatives can be considered attempts to respond to these provisions on a pilot basis" (United Nations n.d. a: 1). The idea is to have one host government and then "(…) develop approaches that would enhance its coherence, efficiency and effectiveness at country level (…); and provide an opportunity to test different approaches to see what works best in various country situations" (United Nations n.d. a: 2).

Sometimes the UN consults with outside think tanks and other organizations (Kanninen 2013: 107). Maybe a unit outside the UN that connects different crisis might be a solution (Kanninen 2013: 112) but still with a close connection to the UN Secretary-General (Kanninen 2013: 134-135). In other words there is the possibility of a global network that combines other networks and works as a crisis center and an advisory group and could become part of the decision-making process (Kanninen 2013: 141). Or there could also be a World Environmental Organization (Shahin 2002: 73).

A combination of the different Institutions might also be a step forward in the coordination process. The WTO could play the rule-oriented part. Moreover, an increasing independency of the WTO of its member states as well as higher goals of the WTO might help to bring the WTO back on track (Klein / Kamenev 2009: 539). Or in general the UNCTAD and the UNEP "(…) could make an important contribution (…) through a joint programme of capacity-building on trade, environment, and development" (Ricopero 2002: 37).

After the Financial Crisis in 2008 new forums and, consequently, new ways to communicate were implemented such as the G20 which represent a new approach in coping with international issues (Gnath / Mildner / Schmucker 2012: 5). The problem with the G20 is the exclusiveness. But the decisions are transparent and the countries have an equal voting power. The WTO has failed at the Doha-Round while the IMF became more effective. In this context the G20 could lead the discussion and the WTO and the IMF could be responsible for rule implementation (Gnath / Mildner / Schmucker 2012: 6) as the G20 is without any organization structure and only a consensus-principle (Gnath / Mildner / Schmucker 2012: 9; see Bailey / Tomlinson 2016: 6).

In general, it is possible that in a global context a global leadership is necessary (Miller 2002: 139). In respect to sustainability, the coordination as well as cooperation between the countries is an important factor. It is also important that the civil society gets more engaged and that states have to respect the law (Ramphal 1999: 235; see Bailey / Tomlinson 2016: 9).

Besides the problem of coordination there are also the issues of the lack of democracy, the lack of capability to address new issues (in case of the WTO) and the question about the intensions of the World Bank (Bretton Woods Project 2005a; Cosbey 2016: 6;

Harbinson 2015: 28; Gao 2012). From all these considerations one can draw the conclusion that there have to be reforms at the institutions themselves and at a global level to connect the different Agencies (Kanninen 2013: 107, 112; Kanninen / Kostakos, 2011: 73; Harbinson 2015: 45; Callaghan 2015: 122).

4 Conclusion

First, taking a look at the broader context of this paper as mentioned at the beginning considering the connection of the economy and the ecology the parties to the Paris Agreement acknowledge the issue of climate change and try to reduce the damage to the climate and the environment by reducing the carbon emissions. This is going to be achieved inter alia with treading new path at the global economy (The Economist n.d.; Paris Agreement 2015: 1-3; Cosbey 2016: 2). As seen at the beginning of this analysis there are different possibilities to implement the Paris Agreement in the context of trade and finance. Especially the carbon taxation or pricing is one central aspect although the limitations by the WTO are crucial to solve before implementing such instruments. And it is important to combine climate change issues and trade and finance reflected in new treaty regimes especially considering the support of developing countries as it is also stated in the Paris Agreement (Arnet-Zargarian 2016; Saner 2016; Paris Agreement 2015: 3). The global issue of climate change was addressed in the Paris Agreement. This requires new approaches in the connection of trade, finance and climate change (Cosbey 2016: 1-2; Paris Agreement 2015: 1; The Economist n.d.; Saner 2016).

The second part of the conclusion covers the Institutions in the context of climate change and trade. Especially the World Bank puts a lot of effort into the implementation process of the Paris Agreement (International Institute for Sustainable Development n.d.). But considering past experience one must ask whether there is true contribution (Gao 2012). The WTO seems unable to act recently in the aspects of addressing new problems although this institution is central to the carbon-pricing which is going to be one core change promoted by the Agreement and the countries themselves (Saner 2016; Harbinson 2015: 28). To summarize the findings on the other institutions they seem to work on their strategies on implementing the Agreement based on previous actions (Comstock 2016; Burgess 2016; United Nations Industrial Development Organization 2015; United Nations Conference on Trade and Development n.d.) but compared to the possibilities of the WTO and the World Bank and perhaps the IMF they are unlikely to have a likewise immense impact on the implementation process regarding past experiences (Knaup / Schwägerl 2009; Pollock / Jackowski 2014; Xie / Muresan 2013; Singer 1995; The World Bank 2015; Saner 2016). One relevant factor in that context, as for example seen at the last try of the IMF to reform itself are the intensions of the dominant countries like the US (Callaghan 2015: 122-123).

Finally, there is the conclusion about the system dealing with climate change issues. There seems to be no communication between the Agencies of the UN in general and specifically in this case. This is seen by the fact that most of the Agencies presented in this paper work on the same issues and on equal strategies to the implementation process but they do not mention any interaction with other Agencies concerning the Paris Agreement (Kanninen 2013: 106-107; Kanninen / Kostakos, 2011: 73; see International Institute for Sustainable Development n.d.; The World Bank 2015; United Nations Industrial Development Organization 2015; United Nations Development Programme 2016). Considering this and the possible blockade by the WTO new reforms are required (Kanninen 2013: 106-107; Kanninen / Kostakos, 2011: 73; Saner 2016; Harbinson 2015: 28). There has to be a stronger and more flexible interaction between the Agencies maybe created by an outside institution and all those approaches might help the Agencies to become fit for the purpose of addressing the global climate change (Kanninen 2013: 135, 141; Saner 2016).

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