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Gian Carlo Delgado Ramos, Tania Mancheno and Juan Miguel Rodríguez Lopez:

**Special Issue:
New Latin American Perspectives on Sustainable
and Low Carbon Societies.**



Global Transformations Towards A Low Carbon Society

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The KlimaCampus brings together research institutions in the metropolitan region of Hamburg in which social scientists, media scientists and economists work with meteorologists, oceanographers and ecologists on a broad range of issues concerning climate change.

This working paper series serves to disseminate results of ongoing research projects in the social sciences focused on transformations in society, politics and economy, trying to meet the challenges posed by global climate change. The research is conducted in the Cluster of Excellence „Integrated Climate System Analysis and Prediction (CliSAP)“ (DFG, EXC 177, Universität Hamburg).

Gian Carlo Delgado Ramos is research professor at the Centro de Investigaciones Interdisciplinarias en Ciencias y Humanidades / Universidad Autónoma de México (UNAM) and member of the Mexican National Council of Science and Technology (CONACYT). He has been lead author of Chapter 12 (GIII) of the IPCC Fifth Assessment Report and his interests are in ecological economics and sustainability in cities. He can be contacted at giandelgado@unam.mx

Tania Mancheno is a PhD student at the University of Hamburg at the Chair for History of Political Thought and Ideas. Her research is based on postcolonial and decolonial thinking. She can be contacted at tania.mancheno@uni-hamburg.de

Juan Miguel Rodríguez Lopez is a postdoctoral research fellow at the KNU-Postdoc-Kolleg “Sustainable Future” and KlimaCampus Hamburg at the Universität Hamburg. His areas of research include financial market institutions, sustainability, and quantitative methods. He can be contacted at miguel.rodriquez@zmaw.de

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New Latin American Perspectives on Sustainable and Low Carbon Societies

Gian Carlo Delgado Ramos, Tania Mancheno, and Juan Miguel Rodríguez Lopez

Introduction

The last and Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) strongly recommends “substantial and sustained reductions” in the quantity of greenhouse gas emissions, if the global community does not want to risk an overstrain on the climate system (IPCC, 2013: 19). The discussion suggests that, better sooner than later, the quantity of carbon emissions should be reduced and that a new international mitigation framework is required (Cullenward and Wara, 2014; Newell et al., 2014). This mitigation literature sometimes includes the technical advice that a global coordinated response to the current situation should be understood in the context of the global uneven economic development.

The impacts of climate change could have serious implications for the quality of life of future generations. Warming temperatures, a higher frequency of extreme weather events, ocean acidification, and impacts on biodiversity are some of the forecasted manifestations of abnormal climatological changes that we might face. The discussion becomes increasingly complex because of its inter-temporal effects: Who is responsible for the greatest quantity of emissions causing climate change? When did climate change start? How should responsibility be measured and accounted for? How will this alter future life on the planet?

In this introductory paper after offering a short introduction on the contemporary studies concerning environmental and climate change, three dimensions of the mitigation debate will be highlighted. These dimensions account for the differences between the symptoms and impacts of climate change in the so called industrialized economies and developing countries, called here the Global North and Global South, respectively. The first section will address the environmental crisis literature, and the second section will examine food security studies. The third section will treat the ‘local’ aspect of climate change’s effects.

Next, the discrepancy between two different contemporary policies on carbon emissions will

be presented. First, we will briefly discuss the carbon markets as the Global North's primary reaction to climate change (Kossov et al., 2013). Then, we will introduce the perspective of the Global South by focusing on the Latin American example. In this section, the extractivist nature of these economies will be outlined. In section six, we will discuss the political and economic alternatives mainly formulated within the Latin American continent (see: Acosta, 2009a; 2009b; Delgado Ramos and Saxe-Fernández, 2004; 2011; 2013; Martínez Alier, 2002; Moncada Paredes, 2009).

The project of linking two different perspectives on carbon emissions treats some of the possible cooperative reactions to climate change at the transnational level. This goal was already adopted during the conference *Sustainability and Empowerment* organized in November 2012 by Tania Mancheno and Miguel Rodríguez López at the Cluster of Excellence CliSAP (DFG EXC 177). Gathering together more than 45 researchers from Latin America, Europe, and Asia, the conference offered the opportunity for discussion framed by an interdisciplinary and transdisciplinary exchange of ideas and perspectives. Over the course of four days, Critical Geographers, Economists, Social Scientists, Environmentalists, Historians, Mathematicians, and Architects discussed the different temporal and spatial dimensions, possibilities, constraints, and challenges of linking the categories of sustainable development, climate change, and civic empowerment.

The conference approached the concept of civic society from a transnational perspective. The conception of civic society included citizens, non-citizens, political parties, governments, indigenous peoples, and NGOs. Young researchers were invited to present their state of the art research on singular or compared case studies and prognoses or meta-analyses on the Latin American continent. Through the discussion of critical theoretical approaches, empirical cases, and grassroots proposals, the conference analyzed the challenges posed to and by civic society regarding sustainability and empowerment. International social movements, the role of international institutions, organizations, and markets of CO₂-certificates as well as global consumption patterns were analyzed as processes of empowerment and disempowerment for certain sectors of civic society.

In this context, this special issue publishes three original papers, which were selected and peer reviewed by a committee. In the first paper, Michelle Báez and William Sacher present the main ideas of “buen vivir” (or what has been formulated within the Andean-indigenous-communities as “well-being” or “good living”). The authors discuss the potentials and

contradictions of this concept for the case of Ecuador and Bolivia. The second paper written by Philip Bedall and Achim Brunnengräber discusses the world of NGOs as a relevant civic actor in international decisions on climate change. Martin David and Steven Engler close this special issue with a case analysis of the international cooperation with local workers and an evaluation of the potential outcomes from such cooperation.

1. Contextualizing the Problem: Global Environmental and Climate Change

In the last century, the human population has increased fourfold, while material and energy use has increased tenfold. Biomass use has increased 3.5 times, energy use 12 times, metal ores 19 times, and construction minerals, mainly cement, about 34 times (Krausmann et al., 2009). By 2000, the global level of resource extraction was 48.5 billion tons (over a third was biomass: 21% fossil fuels and 10% ores/industrial minerals) and per capita global material consumption was 8.1 tons per person/year (Haberl et al., 2011). Nowadays, some studies show that the humanity uses 500 thousand petajoules of primary energy and about 60 billion tons of raw materials yearly (Weisz and Steinberger, 2010: 185).

The more complex society becomes, the greater the entropy produced. This means that more energy and materials are required to sustain the population biologically and to sustain the intermediate biophysical structures that play a role in social production and reproduction (Fischer-Kowalski et al., 2004: 309). Such a cycle has been called “social metabolism,” a process in which human societies organize their growing exchanges of materials and energy with the environment (Haberl et al., 2011).

However, uneven use is significant: The highest consumers in the world, who account for only 10% of the world’s population, use 40% and 27% of the world’s energy and materials, respectively (Weisz and Steinberger, 2010: 185). Per capita variations are of more than one order of magnitude (Steinberg et al., 2010). As humanity’s consumption patterns increase, environmental degradation and social impacts become greater. In order to maintain these high levels of consumption, the production of materials, mostly based on the extraction of natural elements, must also increase. The metabolic patterns thus generate significant impacts on the Global South, where most of the materials and energy are extracted. For this reason, the uneven distribution of benefits, as well as of costs, becomes a primary issue in social struggles.

In the last decade, extractivism, land enactment, and land grabbing have increased in several countries in Latin America (for example Brazil, Ecuador, and Peru) and Africa (Uganda and Morocco). These activities have been followed by multiple social responses, which, while broaching the socio-ecological impacts, formulate alternative epistemologies for social relationships, including those with nature.

Even though the history of climate modeling has contributed important projections and indicators, it is still uncertain how these projections accord with the observations. For example, whereas the comparative research between projections and observations of the increasing temperatures shows a close match, sea level rise projections seem to be underestimated by models considered in the IPCC meta-analysis (Rahmstorf et al., 2012). Besides, remote sensing has offered better measures of the continuous rise of sea levels (Cazenave and Le Cozannet, 2013; Cazenave and Remy, 2011). These have shown that even if the contribution of the ice sheets is not as important as assumed previously, these do play an important role in climate change (Alley, 2005). Further, it has been shown that the rise in sea level has various consequences depending on the vulnerability of the coast. Since there is good documented empirical evidence that the global population will continue to concentrate within 5 km of the coastlines (Small and Nicholls, 2003), the increase in sea levels will pose even greater risks than those described thus far by the projections. A densely populated coast with a low elevation will be a logical vulnerability, and the lack of resources for adaptation will increase the socio-ecological damage (Nicholls and Cazenave, 2010). The discussion about the effects of climate change is, therefore, even more complex than the mere climatological implications.

Another example showing the discrepancy between observations and projections is the dire situation on coral reefs (Hughes, 2003) produced by the acidification of the oceans (Doney et al., 2009) and extreme weather conditions. The analyses of climate change's effects on biodiversity show an increasing destruction of coral reefs: by approximately 2030, 60% of them might be dead (Hughes, 2003). Yet, the full consequences of such an ecological change are still unknown as it is recognized that the risk of ecological transformation cannot be entirely measured (Hoegh-Guldberg and Bruno, 2010). The consequences for specific natural and social environments (see the example of "the sardine regime" (Chavez, 2003)) are incalculable. Even within the low prediction range of the IPCC meta-analysis, the acidification of the oceans shows that climate change has been affecting the oceans in a way

that produces irreversible changes (Hoegh-Guldberg et al., 2007; Hoegh-Guldberg, 2014).

2. Food Security and Climate Change

The unpredictability of climate change's effects could be extended to food systems. Food security becomes a central challenge due to the complexity and uncertainty of models, but also because of their inherent assumptions of how the future could look under novel climate and environmental conditions, in terms of both climate change and crop productivity. Evident impacts, taking place in repeated and more violent ways, show that the expected higher temperatures may affect agricultural productivity, as well as water availability. Medium and long-term effects could shift production seasons, disseminate pests and diseases, as well as modify the set of feasible crops thereby affecting production (Jaykus et al., 2008; Thornton and Lipper, 2014). The increase in sea levels could have important implications on human safety, as low-lying coastal agriculture could be inundated (Lobell and Marshall, 2010). As stated above, impacts on fisheries remain mostly uncertain. Still, an increased vulnerability of cultured fish (Cochrane et al., 2009) and a shift northward of many fish populations are expected (Ibid: 10). Temperature changes, the rise in sea level, along with ocean acidification, could affect productivity (particularly in most tropical and subtropical oceans, seas, and lakes) and also exacerbate eutrophication (nutrient loading), causing phytoplankton growth and increasing the frequency of harmful algal blooms, including toxic ones (Jaykus et al., 2008).

Since we do not know exactly how humans will deal in the short, medium, and long term with the local implications of climate change, one might expect both anticipatory and ex-post measures (Lobell and Marshall, 2010: 135). These include the following: changing cropland locations; shifts in planting dates; growing a range of crops or crop varieties with different sensitivities to climate; the application of agroecological techniques; the implementation of irrigation systems or other water gathering/harvesting systems; expanding the production area; and mixing the production of crops and livestock, including migration (Ibid: 139; Altieri and Nicholls, 2012). The social implications of climate change will ultimately affect food availability and human well-being. These will particularly have an impact on the persons with low or inexistent income. Small food producers and peasants will be the most exposed and affected experiencing greater hunger and misery.¹ In this context, it is worth noting that any other use of land besides food production — such as extractive activities — might generate greater pressure in the scenario described.

¹ About 925 million people were still undernourished in 2010 (578 million in Asia and 239 million in Sub-Saharan Africa) (Ghanem, 2010).

3. The Locality of Climate Change Implications

Despite the global character of climate change, it is at the local/regional level that individuals, states, and industry contribute to the release of greenhouse gases (GHG). It is also at the local level that the physical, biological, economic, and social implications of climate change materialize. Such implications, which can have nested effects and interactions, do not arise homogeneously. The developments of climate change differ depending on the local context in which they appear. For this reason, the role of governments in the adaptation to these changes is crucial — mainly at the local level, especially since these changes and impacts are already occurring.

Local climate action comprises diverse approaches, mandates, and responsibilities, which include planning, implementing, and monitoring strategies; the formulation of new policies; and sustaining innovation in technological processes (Pohlman, 2011). Local governments identify grassroots trends; measure and evaluate joint actions; regulate and influence the behavior of inhabitants, businesses, and industries, as well as their own activities. For instance, local governments can improve the way they provide municipal services; they can also induce changes and constraints on infrastructure, such as renovation, development, or even decommissioning, with the goal of efficiency, sustainability, and adaptability to climate change. Planning future infrastructure is not a minor issue since the threats posed by climate change will also be a consequence of emissions from devices that do not yet exist (Davis et al., 2010).

As politics at the local level regain meaning in the governance landscape of climate change, the more active and long-lasting participation and engagement of citizens and society become absolutely necessary. However, this local process requires cooperation with national, regional, and even international actors in order to achieve widespread results. Local responses are more appropriate if they are jointly (as co-priorities) designed. Moreover, synergies seem to be increasingly important as the timeframe for effective action is indeed shrinking. Such a broader, multi-scale, and multi-dimensional perspective for climate change action allows us to take into account other socio-ecological (co)benefits different from those directly associated with climate. It also provides the opportunity to learn from the knowledge available on actions that avoid rebound effects or other undesirable societal and environmental outcomes in the long run.

The mechanisms established by the global community hardly take into consideration the economic and natural disparities between countries of the Global North and countries of the Global South. Indeed such disparities are at the core of the international policy-making debate, ruptures, and thus a lack of binding commitments.

4. Carbon Markets: The Global North's Reaction to Climate Change

From a historical perspective, carbon markets appear to be an answer to the problem of greenhouse gas mitigation from the Global North's perspective. The economists Ronald Coase (1959; 1960) and John Dales (1968) proposed the idea of pricing carbon and trading emissions. Developed in the 1970s in the United States, the carbon markets policy has been integrated into the Kyoto Protocol (1997) as a global policy (Calel, 2013). The USA has pioneered the process of carbon markets, but after some years, the main actor has become the European Union (Stephan and Paterson, 2012).

In 2003, the European Union started the biggest carbon mitigation project, which was launched two years later (Directive 2003/87/EC). This carbon market strategy consisted of an Emission Trading Scheme (EU ETS). Further initiatives sought to include and connect developing countries in the market of carbon certificates, by implementing a system of compensatory mechanisms (e.g., Joint implementation (JI) or the Clean Development Mechanism (CDM)). Today, the carbon markets solution is the dominant European climate policy approach. The goals of such carbon markets policies are multidimensional, since they combine ecological, economic, and in the case of the CDM, even social needs with the initiative to tackle CO₂ emissions (Goeke, 2012). However, the recent economic slowdown in the region has revealed some (financial) limitations to this mechanism.

During the last few years, new emissions trading schemes have been in expansion. New emissions trading systems have been introduced into economies historically belonging to the Global North, such as New Zealand (Bullock, 2012) and Australia, but also in countries whose economies are highly dependent on the Global North's demand. For example, countries such as China, Mexico, and Brazil have been involved in emissions trading (Engels et al., 2014; Kossoy et al., 2013). Additionally, the carbon market integration scheme is being discussed in the negotiations on REDD+ (Reducing Emissions from Deforestation and Degradation) (Kongsager et al., 2013). This scenario shows that the expansion of the market of CO₂-certificates increases the incentives for emerging and developing economies

(potentially high emitter countries) to take part in emissions trading systems.

However, carbon markets have been experiencing several crises (Kossoy et al., 2013; Martin et al., 2014). First, the excessive quantity of emissions allowances has led to EU ETS falling prices (Ellerman et al., 2010). There have also been several instances of fraud (Paulsson, 2009). Most importantly, there are frequent references to human rights violations in the context of individual CDM projects, as in the case of Panama, where the indigenous populations were put under pressure for the development of CDM projects (Finley-Brook and Thomas, 2011).

In this context, in which the ability of CO₂ system of certificates in limiting climate change remains dependent on the uncertainty of the market, the question already raised during the conference *Sustainability and Empowerment* seems relevant: Is a carbon market the only mechanism for reaching a low carbon society? What are the alternatives to this market based strategy?

Social movements worldwide have expressed their disappointment at governments for their failures as decision makers for strategies against climate change. Environmentally-oriented political parties mobilize only small sections of society, and just a limited number of internationally binding institutional reforms have been implemented for the protection of natural resources and biodiversity. After RIO +20, the political process is still characterized by a lack of effective responses.

5. Current Latin American Policies on Carbon Emissions

Latin American countries have typically played a specific role within the international division of labor as recipients of foreign direct investment; as providers of natural resources and cheap labor; and as buyers of manufactured goods from developed countries (Acosta, 2009a; 2009b; Cardoso and Faletto, 1969; Delgado Ramos, 2011; Dos Santos, 1968; Marini, 1973).

Such an international division of labor has had serious socio-ecological and cultural implications, and it tends to increase and accelerate transformation processes of nature and, along with them, accumulation by dispossession (Harvey, 2003). Land grabbing has expanded globally: a process that allows control not only of the land, but also all natural resources contained within it. For this reason, some authors point out processes of blue grabbing (water) and green grabbing (forest/biodiversity conservation) as well (Borras et al., 2012).

Dispossession through land transactions may or may not include foreign actors, such as agroindustry, extractive industry (mainly mining and oil/gas industry), and conservation allocations (including REED+ projects) (Delgado Ramos, 2011).

The difference between developing and developed economies' roles in the global economy is clearly exposed in terms of the total value of exports and imports of goods and services. Developed economies make up the largest share (followed by emerging economies), as the manufactured-goods sector is essentially dependent on their national consumption's patterns (Delgado Ramos, 2014). Conversely, the value of exports and imports of raw materials, including oil and gas, are sectors mainly allocated to developing countries. Yet, the percentage of total value is comparatively much lower than that corresponding to manufactured goods; in other words, the exploitation of natural resources remains a cheap economic activity, even though most of them require long periods of time for their (natural) formation (Delgado Ramos, 2011; 2014; Martínez-Alier, 2002).

The extractivist nature of the “enclave economy” definitely places the Global South in the periphery of the system in spite of its great natural wealth. That is to say, an “enclave economy” is subordinated to metropolitan interests and capital flows. In the case of Latin America, Marini (1973) notices that the structural dependence of the region is produced by a sui generis regional capitalism, which is based on an international division of labor that assumes that the best comparative advantages for the region are centered on extractive activities, meaning exports of raw commodities with a minimal transformation process. Gudynas (2009) refuses that the capital accumulation based on extractivism opens the possibility of an industrialization process. that culminates in a similar path of economic growth as those of the countries of the Global North. Several decades and different experiences in the region and elsewhere in the Global South, however, prove that in general such an understanding is wrong as, on the contrary, the region has historically played the role of a strategic area, in which resources are available in the context of a socio-ecologically uneven trade (Delgado Ramos, 2011; Muradian and Martínez-Alier, 2001; Walter and Martínez-Alier, 2012).

In reason of the recent increase in consumption patterns worldwide, the commodities market has become more dynamic; it is perceived as more secure and more profitable. Consequently, the promotion of extractive activities keeps bleeding the Global South as such activities have since colonial times. A case in point is the Ecuadorian *Yasuní*-Initiative, which, was a project

that foresaw keeping one of the most important oil reserves underneath the soil in exchange for financial development aid from the countries of the Global North. It thus presented a peculiar change of perspective towards economic development. It acknowledged oil as a global good, while taking into account the fact that extractivism dynamics have socioecological implications, including direct and indirect GHG emissions and in several cases, the erosion of ecosystems' resilience and, therefore, of their carbon capture capacity. However, the *Yasuní*-Initiative was formally cancelled in 2013 by President Correa, who attributed the decision to failed cooperation with the Global North.²

In the region, extractivist and neo-extractivist economies (or those extractive economies that are sustained by “progressist” regional governments) have led to national-capitalist *Realpolitik*, which does not necessarily imply the eradication of poverty or an improvement in the situation of the great majority of the population. In the case of Ecuador, as Alberto Acosta states: “[...] mass extractivism tends to distort the structure and the allocation of its economic resources, regressively redistributes its national income and concentrates the country's wealth in just a few hands, while spread[ing] poverty” (Acosta, 2009a: 11). Further, according to Acosta, “the reality of a primary-exporter economy [...] is reflected in little interest in investing in the domestic market. [...] There is no development of productive conglomerates, not even for the domestic market. In most cases, it does not even expand the exportable offer, generates a better distribution of income, nor the necessary tax revenues” (Ibid: 27). This situation results in a limited integration of the export sector with the national production system. Therefore, there are no economic linkages that promote new productive lines.

In this context, it is striking that, after decades of de facto economic, political, ecological, and cultural subordination, the idea of extractivism as a platform for development is still largely echoed in the Latin American governmental sphere. Neo-extractivism, as Eduardo Gudynas suggests, “[...] cannot be understood as a neo-liberal strategy, but it can neither be interpreted as a promising alternative that automatically improves the quality of life and citizen autonomy” (2009: 209). Current political and economic progressivism may offer substantial

² The functions of extractivist economies in the global system are usually underpinned by the presence and interference of international organizations and financial institutions, agencies, and other bodies representing the interests of developed countries. The active presence of international capitals, foundations (including corporate), the joint self-interest of local capital (usually monopolies), or the state promote local political and economic elites (Delgado Ramos, 2011; Delgado Ramos and Romano, 2013; Toussaint and Millet, 2009; Ugarteche, 2010). This is one factor that explains why international cooperation and Ecuador's top elites failed to push forward the *Yasuní*-Initiative.

improvements in many cases, but there are still limitations, resistance, and contradictions.³

Yet, the consequences of extractivism go beyond the regional level. As Delgado Ramos (2011; 2013; 2014) and Delgado Ramos et al. (2013) have shown, in the positive prognoses of development in extractivist economies, the participation in the CO₂ emissions of extractivism on a global scale remains mostly underestimated.

6. No Way Out?

As the brief description of the two streams of policy literature show, there is an economic, inasmuch as an epistemological, discrepancy between the realities from which the Global North and the Global South face climate change. Whereas Europe, together with emerging economies, seek to mitigate climate change through market-based mechanisms, Latin America, along with other extractivist economies of the Global South, first seek economic development, before striving for participation in the CO₂ markets. The neo-extractivist dynamics in Latin America have weakened the potentialities of alternative governments and alternative coalitions (e.g., ALBA⁴ and UNASUR⁵); they have also made it more difficult to transform national productive matrices. This scenario thus becomes a vicious circle, in which economies become competitors in a green market only after they have achieved development through extractivism. This development increases the discrepancy between the Global North and the Global South regarding climate change: While the North seeks to adapt the production of CO₂ to market regulated strategies, countries in the Global South still seek to develop national economies through the expansion of extractivism with the accompanying increase in CO₂ emissions.

In this special issue, we are far from suggesting a fatalistic (impossible-to-change) picture of the alternatives available for the transformation from an extractive economy to an industrialized low carbon economy, which includes dimensions that transcend the merely technological and technical aspects of a national economy. A radical transformation in climate politics at a global level needs to decolonize the Global South economically (covering the sphere of circulation and the sphere of production), politically (meaning ideologically), as well as in social and cultural terms. In this sense, the debate around neo-extractivism (Acosta, 2009a; 2009b; Gudynas, 2009) is valuable as it points out the need to find alternatives to the

³ Governments of the so-called “New Latin American Left” assume that neo-extractivism is essential for fighting poverty and promoting development, and that it could even improve or industrialize the processes it comprises.

⁴ ALBA: Bolivarian Alliance for the Peoples of Our America

⁵ UNASUR: Union of South American Nations

traditional “metabolic cycle”. Arturo Escobar (2008) proposes the need to construct what he calls the “territories of difference,” as a path towards “post-development” alternatives for societies.

In order to talk about low carbon societies, it is therefore necessary to deal with the question of development. This implies not only a discussion of capitalist development, but also of “developmentalism.” This contemporary concept is associated with material progress and, as such, it is considered normatively positive. However, this material progress takes shape by means of economic growth that is presented as a platform for generating jobs and wealth, which through the market and — on occasions — by the state, should be socially distributed to a greater or lesser degree. Widely disseminated among the ruling classes, it is not surprising that the political objectives are automatically linked to the promotion of such a conception of growth and development.⁶

“Developmentalism” also serves as a criterion for the evaluation of a country’s well-being and the democratic quality of its government. As Eduardo Gudynas (2009) points out, extractivism still plays an important role in the 21st century requiring reinforcement and modernization, rather than an ecological rejection. It is still considered one of the most important motors for economic growth and the financial maintenance of the state itself. Further, within the paradigm of “developmentalism,” neo-extractivism is functional for subordinate international insertion; it continues the territorial fragmentation in terms of the preservation of enclave regions; and reproduces the rules and functioning of the productive processes tied to competitiveness, efficiency, maximization of profits, and the externalization of impacts (Gudynas, 2009).

In this scenario, another concept of development, which differs from the concept of growth and the conception of linear progress, becomes unavoidable. This implies getting rid of the capitalist notion of development and then constructing different visions of development, which abandon developmentalism and see life itself as the principal goal or “development’s objective.” This new notion of development must depart from a strong, genuine socio-environmental perspective, which takes into account the cultural contributions of non-capitalistic and pre-capitalistic ways of life. Based on a new socio-ecological rationality

⁶ The idea of continuous progress, based on technology and the exploitation of natural resources, as explained by Gudynas (2009), has been a classic expression of modernity, which has been revived by the New Latin American Left. As he states: “this new extractivism contributes to financing social programs, which are essential to the new governments’ definition of themselves as progressive, they achieve an unexpected political legitimacy” (Gudynas, 2009: 209).

paradigm, this concept of development would precisely lead to the improvement of peoples' material and immaterial conditions, while, at the same time, preserving biological and cultural diversity. As Tim Jackson (2009) explains: “[...] Is this still capitalism? Does it really matter? For those for whom it does matter, perhaps we could just [...] agree that it's capitalism [...] But not as we know it” (Ibid: 202). In the meantime, several local, regional, and global concrete actions are required as long as they really contribute to a more sustainable and diverse world, with justice in economic, political, and ecological terms.

7. Conclusions

Latin American social scientists have become aware of the fact that alternative, non-dominant sectors of civic society (e.g., Indigenous, Black, feminist, ecological and environmental movements) have developed a range of instruments and mechanisms, which, being more adapted to the actual circumstances of the environment, also imply a different governance of nature (Escobar, 1999). The authors of the novel bottom-up proposals have traditionally been excluded from political participation and national design (Martinez-Alier, 2002). In the last decades, some of their proposals for facing the effects of climate change have achieved a place in the institutionalized political arenas and agendas.

Latin American grassroots movements and critical academics have rearticulated some of the elements found in these alternative proposals for formulating a new conception of development. This special issue presents three articles, each treating a particular dimension in such a change of paradigm.

The first article by Báez and Sacher contextualizes the political discourses articulating an alternative way of governing nature in the examples of Ecuador and Bolivia. The indigenous movement in Ecuador was formed during the 1970s as a nationwide indigenous social movement for dignity. After centuries of economic and political marginalization, the *Confederación de nacionalidades indígenas del Ecuador* (CONAIE) managed to put forward a candidate for the presidency who not only acknowledged the existence of a plurinational state,⁷ but who was also willing to bring some of CONAIE's demands into the national Constitution. In 2007, Rafael Correa was elected president of Ecuador with the support of CONAIE. A similar, but perhaps even more radical, political development recently took place

⁷ The plurinational state foresees the co-existence of different nationalities within one single nation-state (Macas, 2009: 81). This concept has more recently found resonance in decolonial thinking, which is current in contemporary Latin American thought. Different from postcolonial studies, decolonial thinking localizes modernity not in the 18th century, but instead in Columbus' arrival in the Americas in the 15th century (Dussel et al., 2000; Mignolo, 2000).

in Bolivia. A former member of the *Cocaleros* movement, Evo Morales, rose as a political leader; in 2006, Morales became the first non-white president of the Bolivian Republic. In this case, the recognition of a pluricultural state also constituted one of the main demands of the movement, which could be then integrated into the traditional political institution of the Constitution. Michelle Báez and William Sacher show how the colonial legacy, together with the incapacity of national states to control the whole territory defined as national, are factors that have created the necessity to look for alternatives to capitalist economies and ways of life.

In the second article, Philip Bedall and Achim Brunnengräber discuss the NGO as a civic actor. Through a typology based on the NGO's capacity for intervention in and influence on international decisions on climate change, the article offers a modeling of the structural and hegemonic parameters co-opting the possibilities of transnational representation of interests. Although the authors do not give any examples of the NGOs used to distinguish between "participation NGOs" and "protest NGOs," their analysis of political inference in international treaties on climate change contributes to the broader discussion of the shifts within the international division of labor. The article shows that, since the 1990s, within international social organizations and institutions, there is a prevailing consensus that political negotiations on climate change are fruitless.⁸ Moreover, the authors show how this situation aggravates the precarious conditions for the negotiation processes on climate change put in place for acting against the environmental crisis. The final article in this issue approaches the question of the participation of civic society in climate change's mitigation and educational processes from the perspective of the peasants and indigenous population in Bolivia. Martin David and Steven Engler show the discrepancy between international institutions and alternative knowledge about the environment. They analyze the dynamics of decision-making and cooperation between external experts and local workers in the reaction and prevention of climate changes' effects on an NGO financed project in Postrervalle, Bolivia. They show how the bottom-up approach could be helpful to reach what a top-down approach does not.

Through the discussion of critical grassroots proposals, empirical cases, and theoretical approaches, this issue aims to analyze some of the primary challenges posed by civic society groups for the effective participation of peoples in designing sustainable development solutions for low carbon societies. The exchange of knowledge, experiences, and theories on the effects of climate change in the different regions of the world are therefore fruitful and

⁸ See also e.g., *Greenpeace* (2013).

desirable. This issue presents three examples treating some of the requirements, perspectives, and objections to creating sustainable and empowered societies that can face climate change at the complex transnational level.

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“Plurinationality” and “Good Living” in Ecuador and Bolivia. Deceptive hopes and continuities with neoliberal policies.

Michelle Báez⁹ and William Sacher¹⁰

Abstract

For almost a decade, the political projects promoted by Rafael Correa in Ecuador and Evo Morales in Bolivia have been the focus of hope from the left around the world. In this article, we study the scope and limits of the promising notion of the “plurinational” state and “good living”, present in the new Constitutions of both countries.

We do so by briefly analyzing the cases of large-scale mining in Ecuador and a highway project in Bolivia, in the amazonian indigenous territories of Cordillera del Cóndor and TIPNIS. These cases show that the extractivist development model promoted by both governments is a smooth continuity of the neoliberal period, while the state has now an enhanced role in promoting the necessary dispossessions associated to these infrastructures, as well as the implementation of social discipline policies. Moreover, “Plurinationality” and “Good living” as implemented by the governments do not adequately question capitalism and therefore end up being diluted, transformed and even instrumentalized in order to meet the demands of primarily transnational capital. These policies are likely to weaken and even irreversibly destruct distinct economy models which might represent inspiring cases for a global low-carbon and post-extractivist economy.

Keywords:

Plurinationality, Buen Vivir, extractivism, indigenous territories, TIPNIS, Cordillera del Cóndor, accumulation by dispossession, Ecuador, Bolivia.

Introduction

In the past two decades the Ecuadorian and Bolivian indigenous social movements have considerably reinforced their presence and participation in the political scene. In particular, they have managed to force the governments to take into account some of their historical demands. One of the most important achievements is probably the recent

⁹ Doctorate candidate in Social Science and Andean Studies, Flacso Ecuador.

¹⁰ PhD in Atmospheric and Oceanic Sciences. McGill University, Canada. Doctorate candidate in Development Economics, Flacso Ecuador.

implementation of “plurinationality” (*plurinacionalidad*), a theoretical and political project that set up a new state model based on the recognition of people diversity and autonomy, as a pillar of the new Constitutions¹¹ of both countries. Additionally, both new Constitutions include the now notorious concepts of *Buen Vivir/Vivir Bien* (*Sumak Kawsay/Suma Qamaña*). Inspired by indigenous cosmologies, these concepts promote - among other principles- a new relation to nature, one no longer based on exploitation and massive destruction, but on “harmony”. This harmonious relationship with nature is particularly promising in the current context of large-scale environmental degradations (Srinivasan *et al.*, 2007) and the global concerns raised by the observed climate changes. Solid alternatives to a carbon-based economy need a political agenda based on consistent guiding concepts. From this perspective, “plurinationality”, *Buen Vivir/Vivir Bien*, as well as the “rights of nature” (another concept present in the Ecuadorian Constitution) have gained worldwide attention in recent years from the Left and from ecologist movements, because they can presumably set an inspiring framework for the transition towards a post-extractivist and low-carbon economy in these countries.

Meanwhile, the (so-called) leftist governments of Rafael Correa and Evo Morales, supporters of the new Constitutions, have implemented mainstream “developmentalist” policies, based, in particular, on exporting raw materials. These policies and the governments' discourses that legitimize them enable the extractive and infrastructure megaprojects initiated during the neoliberal period to continue smoothly and -finally- enter in their construction phase. Although the state has doubtlessly recovered leadership and control over these types of projects (when compared to the neoliberal times), the anticipated (as well as already existing) socio-environmental impacts are concerning and serious.

Over the past years, Ecuador and Bolivia witnessed multiple social resistance movements.

Most notably, indigenous social movements have led nationwide marches, mobilizing thousands of protesters to demonstrate their opposition to government policies (Martí i Puig and Bastidas, 2012). In response, Evo Morales and Rafael Correa’s governments have discredited, repressed and criminalized these social movements and their leaders

¹¹ The new Ecuadorian and Bolivian Constitutions were respectively promulgated in 2008 and 2009.

(Defensor del Pueblo, Bolivia, 2011; Defensoría del Pueblo, Ecuador; 2011).

What brings “leftist” governments, who came to power with the support of these same social movements, and who actively promoted their rights and took their historical demands into account, to now repress them and imprison their representatives? Why are the same governments that criticized extractivism and dependence on the international market and promulgated the pioneer concepts of “rights of nature”, “plurinationality” and *Vivir Bien* and *Buen Vivir*, now aggressively promoting and defending transnationally-owned mining, oil and infrastructure megaprojects? How do these governments resolve these contradictions and legitimize their extractivist policies? What remains of the expectation of the political projects in process in Ecuador and Bolivia to set the path towards a transition to a low-carbon economy?

In order to address these questions, we first briefly recall the origin and principles of “plurinationality” and *Buen Vivir/Vivir Bien* in Bolivia and Ecuador, and their usefulness when thinking about a low-carbon society. We will then analyze the dispossession associated with large-scale extractive and infrastructure policies in Ecuador and Bolivia. We are particularly interested in two case studies: a large-scale copper mining project in the south-east of Ecuador, and a highway project in the Isiboro Sécuré Indigenous Territory and National Park in Bolivia. Finally we will analyze the governments' discursive and repressive strategies to obtain the social acceptance of these policies.

1. “Plurinacionality” and “Good-living” in the Andes: inspiring theoretical concepts for a low-carbon society project.

The “plurinationality” project can be viewed as the outcome of centuries of indigenous struggle in the Andean region against colonial and exogenously imposed state-nation models (Almeida, 2008; Cruz, 2010; Guerrero, 2012; Gotkowitz 2007). Plurinationality, as advocated by indigenous movements promotes the advent of a new state model, which would take into account the diversity of the political, social and economic organization forms of the various indigenous Andean nations (CONAIE, 2007), and allow for self-determination and sovereignty over their territories. For most indigenous peoples, their territory is considered a space where life is produced and reproduced (Walsh, 2009; Groppo and Cenerini, 2012). In this territory, human beings are part of the natural environment and constitute a “community” (*comunidad*), and it is the task of

everyone to maintain the fragile ecological, social and political balance between what modern tradition refers to “society” and “nature”.

A brief review of plurinationality in the Andes

In 1988, the CONAIE (*Confederación de Organizaciones Indígenas del Ecuador*), the most influential Ecuadorian indigenous organization, proposed a bill to the Ecuadorian National Congress, introducing the concept of a “plurinational” state. The proposed bill recognized the uniqueness of indigenous social organizations, and the rights of indigenous peoples with respect to their territory, as well as their education, medicine and justice practices (CONAIE, 1991). This “plurinationality” project was a radical one. It rejected the nation-state model accused of anthropocentrism, androcentrism, colonialism and of suppressing ethnic, social and political diversity (Acosta, 2009; De Souza Santos, 2009; Macas, 2007). CONAIE leaders insisted that the proposed project differed from the “multiculturalism” projects of northern societies such as Canada, New Zealand or Belgium, where cultural differences are tolerated and even encouraged, however, neither the authority of the central state -especially with respect to territorial rights-, nor the capitalist economic model are challenged.

Many Ecuadorian and Bolivian indigenous and *campesino* peoples maintain economies and a relation to nature that are not predominantly based on exchange-value (although usually being at least partially converted to the logics of so called capitalist modernity). Rather, activities like small-scale agriculture, hunting, fishing and gathering, or even informal mining, which represent the base of the productive and extractive activities, remain in many cases directly linked to the local communities' necessities. It is easy to convince oneself that many of these indigenous and *campesinos* represent living examples of low-carbon consumption societies. “Plurinationality” would presumably offer an adequate framework to give the people the power to promote and preserve low-carbon consumption and production societies, by, in particular, tending to reject megaprojects that irreversibly affect their way of living and social reproduction capacities.

During the neoliberal era, the indigenous movements of Ecuador and Bolivia only obtained from the neoliberal governments to include the concept of a “multicultural and pluriethnic” state in the national Constitutions. “Plurinationality” was officially taken

into consideration following the electoral victory of (so-called) socialist leaders like Evo Morales in 2005 and Rafael Correa in 2006 and the implementation of constituent assemblies. The new Constitutions adopted by referendum in Ecuador and Bolivia in 2008 and 2009 respectively present “plurinationality” as a founding concept of the new state model. Indigenous peoples are recognized as “nations” and elements of their cosmologies are integrated in the Constitutions while the different indigenous languages, systems of religion, education, health care and justice are recognized and legalized. In the Bolivian Constitution, rights of ancestral territories are recognized, and indigenous peoples are granted self-determination, self-governance and autonomy with regards to territorial organization and use. Regarding peoples territorial rights, Bolivian indigenous groups may propose the modification of departmental borders when creating a new TIOC¹². Such a modification is amended by negotiations between political authorities and subsequent consent of the general population through a referendum.

Nevertheless, important features of the original “plurinational” proposition were not fully included, in either country, especially Ecuador. For instance, in the CTI, which is a new Ecuadorian political framework for managing their territories, indigenous peoples are not allowed to modify provincial borders (León, 2010), despite the fact that their populations are often dispersed over various provinces. Besides, in both countries exploitation of “natural resources” requires consultation with indigenous peoples, not consent, and the contents of the subsoil remain property of the central state¹³.

The Buen Vivir/Vivir Bien as an officially-endorsed model of development

The new Constitutions of Bolivia and Ecuador also include as a founding concept the *Vivir Bien* (or *Suma Qamaña* in its Aymara version) in Bolivia, and *Buen Vivir* (or *Sumak*

¹² TIOC (Territorios Indígenas Originario Campesinos) and CTI (Circunscripciones Territoriales Indígenas) are the political figure used for indigenous territories in Ecuador and Bolivia, respectively.

¹³ The new Constitutions of Bolivia and Ecuador allow indigenous peoples the right to a prior “consultation”, the final decision of the exploitation of natural resources in their territories remaining in the hands of the government. (Presidencia de la República del Ecuador, 2012). Nevertheless, in Bolivia, in reaction to the opposition to the TIPNIS highway construction, the Morales’ government decreed a special legislation (called *Ley 222*) which mandates the government and the local peoples to accept the results of the consultation process as definitive, even though it may mean the end of the project (*Ley 222*. Gaceta Oficial del Estado Plurinacional de Bolivia, february 2012)

Kawsay in its Kichwa version) in Ecuador. These terms can (very) loosely be translated as “good living”. Despite the multiplicity of acceptations, the different versions of “good living” invariably prompt questioning of the mainstream concept of “development”, of the colonial nation-state model, and of the present, capitalist-driven relation between what may be -quite simplistically in this context- referred to as “society” and “nature”. Instead, *Vivir Bien/Buen Vivir* promotes a model where the exploitation of humans and nature is minimized, “harmony” with nature is advocated, intergenerational justice, knowledge, dialogue, democracy and public participation promoted; while the state and development models are endogenously defined and emancipated from foreign dominion. The versions advocated by some indigenous intellectuals can be seen as more radical: they place the “community” as the core principle of the *Buen Vivir/Vivir Bien*, and advocate reciprocity, complementarity, correspondency, and solidarity as fundamental concepts (Macas, 2011).

In Ecuador, the government officially adopted the *Buen Vivir* as a “new paradigm” and the main guideline for its development plan (named *Plan Nacional para el Buen Vivir*) and public policies in general. The 2009-2013 version of this plan explicitly presented indigenous practices as sources of inspiration. It also declared the “impossibility of continuing with the devastating extractivist path” Ecuador had been following up until that time (SENPLADES, 2009: 31). According to the governments’ conceptions of “good living”, it is possible to develop national policies that promote the reduction of hydrocarbon and mineral exploitation and facilitate the transition to a post-extractive society that minimizes environmental destruction.

The Governments’ visions of *Buen Vivir/Vivir Bien* are, nevertheless, rather antithetical. For instance, the Ecuadorian development strategy towards a post-extractivist society is to intensify extractivism “in order to get out of extractivism” (SENPLADES, 2009: 82).

2. Dispossessions and continuity with the neoliberal policies under the administrations of Correa and Morales

As many authors have pointed out, the concept of “accumulation by dispossession” (Harvey, 2003) is an adequate framework to analyze the activities of extractive industries in Latin America (e.g Webber, 2012 for Bolivia; Gordon and Webber, 2008 for relevant cases in Colombia and Chile; but also Antonelli, 2010; and Galafassy, 2010 in Argentina; Gutiérrez Gómez, 2012 in Colombia; Sosa and Zwarteven, 2009 in Peru; Tertreault, 2012; and Garibay

Orozco, 2010 in Mexico).

For Harvey, capitalism entered a crisis in the 70s linked to a marked fall in the profit rate and subsequent capital *over-accumulation* in many occidental countries (Harvey, 2003). This triggered an active search for (and creation of) new profitable investment opportunities around the globe, and the design of a political framework – neoliberalism – adapted to these purposes, a phenomenon especially evident in the global South. All of this gave rise to a wave of a so-called “accumulation by dispossession”. According to Harvey, this concept refers to ongoing forms of accumulation that imply the conquest of new assets by the same methods as those evidenced by Karl Marx in describing the process of “primitive accumulation”: annihilation of non-capitalist social organizations, looting and murder, painful spoliation of mass of people, forced divorce of the producer from its means of production, conversion of non-capitalist societies to the capitalist mode of production, etc. But Harvey goes beyond Marx's definitions. He includes processes which take place within capitalist societies, like the privatization of social security, health care, education or pension systems, the taking of public companies by corporate interests, as well as new “enclosures” of public assets (biopiracy, commodification of nature, cultural forms, etc.), and the privatization of knowledge. This results in wide range of state-sponsored and enforced processes one might classify as new “commons enclosures” (Harvey, 2003: 148). Usury, the national debt system and the use of the credit system as a whole are also classified as a means of accumulation by dispossession (Harvey, 2003: 153; Harvey, 2007).

For many people of Latin America, the neoliberal era has been a period of intense accumulation by dispossession. Policies implemented under the diktat of the Washington Consensus were central to the looting of publicly-own assets: privatizations of public goods, territories and commons, life and knowledge mainly benefited transnational interests.

Even though David Harvey coined this concept specifically in the context of neoliberal politics, we think that it may remain relevant when analyzing extractivism and capital accumulation dynamics in the context of the self-proclaimed “left” and “revolutionary” governments of Ecuador and Bolivia. In the following sections of this article we will analyze some ways in which these governments have continued and possibly deepened the process of accumulation by dispossession, despite their anti-neoliberal discourses. Evidence is analyzed in the context of two plurinational territories located in the Amazon rainforest, home of indigenous peoples, peasants, “colonos” and the sites of two mega development projects

considered “strategic” by the current administrations.

The mining model of Ecuador

In the 90s and into the beginning of the XXI century, successive neoliberal governments performed a series of reforms to the Ecuadorian mining code (Sacher and Acosta, 2012), in order to attract private foreign investment in this sector, following the example of many other countries of the global South (Campbell, 2004; Chaparro, 2002; Naito et al., 2001). Reducing environmental and labor regulations, cutting taxes, royalties and tariffs, simplifying and securing access to territories for mining activities; reducing state control over mining activities (from regulator to administrator), criminalizing informal and local mining activities, privatizing geological databases were among the key changes made to the mining laws and regulations, imposed by multilateral agencies.

The appointment of Rafael Correa as president in January 2007 raised a lot of expectations among participants of social movements opposed to large-scale mining activities. Correa's anti-imperialist discourse and claim for sovereignty recovery appealed to their political views (Denvir et al., 2008). At the beginning of his presidency, Rafael Correa seemed to engage willingly in a dialogue with them. For instance, the *Coordinadora por la Defensa de la Vida y la Soberanía* (CNDVS) -an umbrella social organization that coordinated mining resistance in the south of the country- played a key role in the promulgation of a “mining mandate”¹⁴ that officially paralyzed mining activities for 180 days, during the Constituent Assembly, in April 2008. This mandate scared many junior companies who subsequently fled the country.

Unfortunately, the mining mandate was never fully carried out. Instead, Rafael Correa quickly started amending legal reforms, with the objective to transform Ecuador into a large-scale metal producer. Coincidentally, a few days after the mining mandate announcement, Rafael Correa met mining company representatives as well as the Canadian ambassador, and confirmed his support for “socially and environmentally responsible mining” (Moore and Velásquez, 2012). A few months later, in January 2009, the mining code was the first new law to be approved by the renewed National Assembly. Although aimed at recovering state leadership the new mining code kept a series of key permissive features of its neoliberal predecessor, e.g. promoting easy access to territories and ignoring the process of prior consent

¹⁴ The exceptional measures introduced by the mining mandate (*Mandato Minero*, in Spanish), concerned particularly the closure of irregular mining concessions, the prohibition of mining activities in sensible areas (like water sources and protected areas), and taking action against monopolies and corruption.

of the affected communities. In particular, these dispositions are revoking the decision power of local people and communities with regards to the use of their territory and resources, and contradict the demands of the plurinational state project proposed by indigenous organizations.

Correa's new mining law generated strong resistance in indigenous, rural and urban ecologist movements. A couple of months after its promulgation, the CONAIE launched a lawsuit against the state, claiming the unconstitutionality of some of its articles. In March 2012, after years of many social conflicts around mining activities, various social movements gathered to organize a “march in respect of water, life, dignity and sovereignty”. This event openly opposed the country's large-scale mining projects. The government publicly accused participants of the demonstration of supporting coup attempts and “working for the right” (El Comercio, 2012b) while it strongly supports foreign investment-backed large-scale mining and has been very active in trying to suppress local small-scale and informal mining operations. These activities tend to be marginalized and have suffered from persistent legal and military attacks over the past years (El Universo, 2011; El Comercio, 2012a; El Comercio, 2010; El Telégrafo, 2013).

Megamining in the Cordillera del Cóndor

The *Cordillera del Cóndor* is a mountain chain at the foothills of the Andes, located in the South East of Ecuador. A region of mega biodiversity (Kingman, 2008; Mittermeier et al., 1999; Mittermeier and Thomson, 1997; Myers et al., 2000), it harbors many endemic species and is home of a series of rivers that belong to the Amazon catchment (Niell, 2000). The Shuar, an ancestral nation that live off of hunting and gathering, fishing and semi-nomadic agriculture have populated this area for centuries. The Spaniards never managed to conquer these territories and the Shuar have resisted the imposition of the colonial state (Kingman, 2008). In the 20th century, many Shuar people started leaving their traditional livelihoods behind and entered the timber industry (Rojas, 2009). Heated social conflicts broke out over the use of territory and productive activities after waves of immigrants from the northern Ecuadorian and southern Colombian coast, Saraguros indigenous communities and *mestizos* began populating the area, changing the demography and the relationship people had with the land (Paz, 2012; Warnaars, 2010).

Over the past decade, the *Cordillera* has been the playground of a dozen of junior

companies (mainly Canadians), that own exploration rights over thousands of hectares (Sacher and Acosta, 2012). The presence of these foreign interests and their activities has raised strong opposition from many communities. Social conflicts around large-scale mining activity multiplied during the neoliberal period of the beginning of the last decade and perpetuated – and in some cases intensified- after Rafael Correa took power. Today, the *Cordillera del Cóndor* harbors 3 of the 5 main large-scale mining projects of the country. One of them is the Mirador copper project, owned by the Chinese state-owned consortium CRCC-Tongguan since July 2010¹⁵, and locally represented by its Ecuadorian subsidiary, ECSA. In March, 5th 2012, the same month that the national march “in defence of water, life, dignity and sovereignty” was organized, Rafael Correa signed the contract for the exploitation of Mirador with CRCC-Tongguan-ECSA, making it the country's first open-pit large-scale copper mine.

Before and after the signing of the contract, various dispossession processes have been implemented by the state and by the foreign companies in the area of the Mirador project: the Canadian and Chinese companies occupied the territories under the concession legal figure and the “servitude” clauses of the new mining law; they forcefully expropriated people located on purchased territories (Hurtado, 2012); they negotiated the expropriation and destruction of a whole village, San Marcos (CEDHU, 2014); they prosecuted Shuar people for “invasion” (although they were on their own lands), and the government promoted the militarization of the area to criminalize informal miners (Vivas, 2011; OCMAL, 2013).

Large-scale mining appears to be an illustrative example of the continuity between Rafael Correa's development model and the neoliberal one of his predecessors. Evidence of this kind also exists in the oil sector whose future production is backed by recent Chinese loans (Machado, 2012; Ruiz and Iturralde, 2013). Likewise, the government is currently investing in energy and transportation infrastructures including highways, airports, ports, and hydroelectric dams (InvestEcuador, 2013) which are essential to future large-scale mining operations. This type of infrastructure also makes the country increasingly attractive to foreign investors in the extractive sectors.

The extractive development model in Bolivia under Evo Morales

¹⁵ These projects were previously owned by the late Corriente Resources, a Toronto-based junior company.

After encouraging measures taken during the early times of his administration (e.g. the oil nationalization decreed in 2006), Evo Morales, like Rafael Correa, seems to have mainly assured the continuity of the neoliberal era in terms of natural resources and extractivist policies. Indeed, a detailed analysis of the Bolivian political economy shows that Morales' policies points towards a “reconstructed neoliberalism”, “based on the export of primary raw materials, such as hydrocarbons and mining minerals” (Webber, 2011: 234).

Even though the *Plan Nacional de Desarrollo Bolivia digna, soberana, productiva y democrática para Vivir Bien*” defines the “transformation of the productive matrix” as a priority objective, Morales has also shown a clear will to expand the extractive frontier. In 2007, for instance, he granted concessions to joint ventures between transnational companies like Petrobras and Total, and the state-owned YPFB (*Yacimientos Petrolíferos Fiscales Bolivianos*) and thereby violated the environmental law *Plan Estratégico de Gestión* (Plataforma Estratégica, 2012). Building large-scale infrastructure is also part of Morales' policies. Similarly to what is happening in Ecuador, the government has launched a series of dams and highways projects, financed by foreign loans. For example, the National Bank for Economic and Social Development BNDES (*Banco Nacional de Desenvolvimento Economico e Social*), a State-owned Brazilian Bank, has provided the funds for the TIPNIS highway, a project we will now analyze more in details.

A Highway in the TIPNIS national park

Our second case study is the highway project which plans to join Villa Tunari and San Ignacio de Moxos across the heart of the TIPNIS (*Territorio indígena parque nacional Isiboro Sécure*), an indigenous territory and national park located in the Amazonian part of the country on the central oriental foothills of the Andes. A diversity of indigenous nations inhabits today the park. Some of them like the Aymaras and Quechuas, have colonized part of the TIPNIS, and are in favour of the project; while others, like most of the Moxeños and Tsimanes, are opposed to it. The latter nations organized various protests over the past years, demanding the organization of a prior consultation in conformity with the Bolivian Constitution and the country's commitment to respect international indigenous rights regulations.

Although the appeal of “indigenous territory” prevented the Isiboro Secure area from being divided, sold or transferred to other hands than those of the Moxeños, Tsimanes and Yuracarés, these territories have been constantly assaulted by wood sellers, cattle breeders and coca leaf growers.

The Moxeños, Tsimanes and Yuracarés have settled in the area for centuries. They practice rotative agriculture, hunting and fishing. The Moxeño and the Tsiman peoples believe that their way of life will be seriously threatened by the construction of the highway (Paz, 2012). Meanwhile, Yuracarés are now divided between those who firmly support the government’s project and those who reject it and regret the quechua-aymara progressive occupation of their territory and the loss of their ancestral way of life. Most of the Yuracarés who live in the zone of TIPNIS called Polígono 7 have forcefully become coca leaf growers too, transforming their collective territory in private property land.

Unlike the Moxeños, Tsimanes and Yuracarés; the Quechua and Aymara settlers arrived only a few decades ago. This migration started in 1952 with the Amazon territories colonization policies. From this moment onwards, various waves of migrants accelerated the settlement in the TIPNIS territories, especially with the neoliberal politics in the 80s that pushed many people dispossessed from their lands who worked in the mines to migrate from the highlands to the TIPNIS (Paz, 2012). A majority of these recently settled quechua and aymara people have welcomed the highway project. They identify themselves ethnically as *interculturales* (as a way of rejecting the negative connotation of the term “colonizer”) and *cocaleros* (i.e. coca leaves cultivators). They are organized in coca leaf growers unions, one of whose most notorious leader is precisely the actual president Evo Morales. The highway would facilitate the transportation of their products to national and international markets and provide access to new lands inside the park.

Furthermore, two oil exploration and exploitation concessions are located in the heart of the park and in the vicinity of the future course of the road¹⁶. Therefore, the construction of the road would facilitate access to these sites and promote future oil exploitation and exploration in the park (Paz, 2012). It would initiate a large-scale process of altering the

¹⁶ Two concessions have been granted by Morales’ government under a joint venture agreement the first one between YPF, Petrobras Bolivia S. A. and Total E & P Bolivia (Law No. 3672, April 2007) and the second one between YPF and Petroandina S.A.M (Law No. 3911, April and July 2008).

land and material condition of living of the indigenous nations opposed to the highway. A report released by the Campaign in Defence of TIPNIS qualifies the project as “unworkable and highly harmful” (UMSA, 2010). Indeed, the experience of oil exploitation in the Ecuadorian Amazon shows that extractive projects have serious destructive consequences for the ecosystems and indigenous nations that maintain a distinct relation to nature from the modern-capitalist one (Berlinger, 2009; Guaranda, 2011).

3. Social adhesion and social discipline: legitimacy narratives and criminalization of the protest

Public authorities in Ecuador and Bolivia have utilized what might be called a narrative (Antonelli and Svampa, 2009) in order to obtain broad social acceptance of megaprojects. This *narrative* is fed with official discourses and statements, declarations and publications, government programs, etc., and is diffused by a network of institutions and mass media propaganda.

Echoing corporate discourse, the governments of Ecuador and Bolivia actively promote concepts such as “social responsibility” and “clean technology” in order to mask the risks of the serious and irreversible socio-environmental impacts associated with megaprojects in the TIPNIS, Cordillera del Cóndor, and elsewhere in the two Andean countries. Also, the governments systematically portray these projects as unavoidable steps towards “progress”, “development”, “good living” and necessary for the eradication of “poverty”. Moreover, public discourse and announcements by presidents and other government representatives marginalize opponents by disqualifying their arguments. Rafael Correa regularly calls anti-mining activists “childish”¹⁷ and “charlatans”¹⁸, and accuses them of lacking “logic reason”¹⁹. Ecuadorian and Bolivian governments have put the state apparatus at the disposals of transnational interests. Similar to neoliberal times, Ecuadorian and Bolivian governments pretend that the presence of transnational interests is indispensable for the “development” of the countries. The official implementation of the *Buen Vivir/Vivir Bien* policy can be

¹⁷ Rafael Correa's first discourse as presidential candidate, February, 4th, 2009, quoted in Ospina, 2009.

¹⁸ *Enlace Ciudadano* number 249, December, 10th, 2011.

¹⁹ *Enlace Ciudadano* number 245, November, 12th, 2011.

considered a key component of this discursive strategy (for more details, see Báez and Sacher, 2014).

But social approval of the megaprojects may not be obtained simply with a well-constructed narrative. Dispossessed people negatively affected by these projects, participants in organized social and political movements, intellectuals, journalists, etc., may not be so easily convinced. The Ecuadorian and Bolivian governments continually utilize the justice system to criminalize these critical actors. In Ecuador there are dozens of cases of lawsuits against members of civil society who have opposed these projects. They have been charged by both the government and private companies with “terrorism”, “sedition”, “sabotage”, “acting against the state's security” and the like. Some of the judicial cases have already led to serious indictments, including years of prison in certain cases²⁰. These judicial processes are likely to intimidate eventual critical actors and lead them to self-censorship, leading to the impediment of public debate.

In Bolivia, police brutally repressed the indigenous march against the construction of the TIPNIS highway (CODPI, 2014; Defensor del Pueblo, 2011). During the confrontations, protestors were beaten and sprayed with gas, while children were violently separated from their mothers by the police (Oilwatch Suramérica, 2011; Defensor del Pueblo, 2011). Despite the police brutality, the Morales government launched lawsuits against 26 participants of the march, including leaders, activists and indigenous women under the allegation of attempted murder and causing serious and minor injuries (Contreras, 2012). Meanwhile, the CPEM-B (Central de Pueblos Étnicos Moxeños del Beni) released a notice denouncing “intimidation, political persecution and prosecution of indigenous leaders, of deputies and activists who supported the march” (BOLPRESS, 2012). Finally, indigenous representatives were accused of blocking the consultation process (Los Tiempos, 2012).

²⁰ It would be too long to establish an exhaustive list of the cases in the framework of this article. Nevertheless, we may cite some of the most important ones: the military repression against Dayuma community protesting against oil activity in Amazon; the accusations of terrorism against national indigenous leaders when protesting against their banning from an ALBA meeting in Ecuador (where, ironically, the implementation of the Plurinational State was discussed); the leaders from Quimsacocha imprisoned for one week for having protested against a Canadian-owned large-scale mining project in their area; teachers’ union leader Mery Zamora sentenced to 8 years in prison for inciting students to protest against the government during the police rebellion of September, 30th, 2012 (INREDH, 2011; *Defensoría del Pueblo*, 2011; Acosta, 2009; PADH, 2012; CEDHU et al. 2011).

Conclusions

In the past years, Ecuador and Bolivia have been the focus of much attention and hope from social movements and political parties around the world, especially on the left side of the political spectrum. The new Constitutions of these Andean countries include a set of innovative concepts such as *plurinationality* and *Buen Vivir/Vivir Bien*, as well as the “rights of nature”. These concepts may offer a promising framework to think about the construction of post-extractive and low-carbon economies.

Despite these revolutionary concepts that they openly supported, Evo Morales and Rafael Correa's administrations have advocated aggressive extractivist policies (particularly in the oil, gas and large scale mining sectors) in regions of mega-biodiversity and cultural richness such as the Amazon. These policies are a matter of great concern because they imply substantial and often irreversible socio-environmental impacts, social inequalities, and a dependency on international markets. All these effects appear to be antagonistic to the basic principles of *Buen Vivir/Vivir Bien*.

In order to manage natural resources in line with the requirements of megaprojects and transnational capital, a highly centralized and private control of the territory is necessary. Such conditions are antagonistic with the version of the plurinational state advocated by indigenous movements, because they offer no possibility for autonomy and self-determination on their own lands. Furthermore, there is no room for an indigenous concept of territory as a space where life is produced and reproduced.

The Plurinational State as described in the Constitutions of Ecuador and Bolivia recognizes and legitimizes the social, cultural and political existence of different nations and peoples. However, there is a rift between those aforementioned cultural rights and the territorial rights to “natural resources”. The Ecuadorian and Bolivian Constitutions give the state the last word on territory use when the presence of non-renewable natural resources is identified.

The governments have legitimized their extractivist policies by using a narrative based on the mainstream conception of “progress” and “development”. The objective of *Buen Vivir/Vivir Bien* has been used to justify the continuation of foreign-investment-backed megaprojects initiated during the neoliberal decades. The intense exploitation of natural resources is officially presented as a *sine qua non* to achieve these “civilizing” objectives.

Moreover, critical actors opposed to the megaprojects have been publicly discredited by the two presidents, while the legal system has been used to repress and censure them. From that perspective, the extractivism narrative and the justice instrumentalisation establish the interpretative limits of the *plurinational* and *Buen Vivir/Vivir Bien* narratives in the social and political realms. Within these limits, plurinationality and “good living” only legitimate the relations between capital, market and state.

The case studies of the Cordillera del Condor and the TIPNIS national park are representative of the limits of the implementation of the plurinationality and *Buen Vivir/Vivir Bien* as institutionalized public policy instruments in the context of development megaprojects. In both Andean countries, they facilitate the continuity of these projects, most of them initiated during neoliberal times, as well as new expansions of large-scale oil and mining frontiers within protected national parks and regions of high biological and cultural diversity, and unavoidably generate new cases of “accumulation by dispossession”.

For many left social movements in Bolivia and Ecuador, the advent of progressive governments generated hope for a breakdown of this mode of accumulation. Nevertheless, it seems that neither Rafael Correa nor Evo Morales are ready to endorse this breakdown, despite their discourses. Instead, they forcibly acquire indigenous and old colonial territories as necessary components of global capital accumulation.

The Ecuadorian and Bolivian political bodies appear to promote active participation in the production and consumption of hydrocarbons in order to insert their economies in the global capitalist system. However, the megaprojects linked to this global system are likely to lead to the destruction of the social and physical environments of many indigenous peoples whose practices, based on use-values as opposed to exchange-values, represent a distinct and potentially inspiring case for low-carbon and post-extractivist economy models.

It is undeniably worthwhile to establish a conceptual framework at the state level when trying to define and implement alternative economies and development models that are no longer based on the exploitation of fossil fuels as this practice leads to environmental destruction. Nevertheless, in our opinion, the cases of Bolivia and Ecuador show how such political projects must question growth and capital accumulation as imperatives of the capitalist system. In these countries -as revolutionary and well-intentioned as they initially appeared to be- the *plurinationality* and *Buen Vivir/Vivir Bien* political and

theoretical projects did not adequately question capitalism and therefore ended up being diluted, transformed and even instrumentalized in order to meet the demands of primarily transnational capital.

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“Participation NGOs” and “Protest NGOs” in International Climate Politics

Differing strategies in civil society and the establishment of hegemony

Philip Bedall* and Achim Brunnengräber**

Abstract

The international climate negotiations are in a deadlock. Who could give fresh impetus to it? The present article focuses on the terrain of civil society, or as Antonio Gramsci puts it, on the “extended state”. It asks if NGOs and social movements – as one important part of civil society – can urge the mitigation of climate change. The contribution proposes that, on the terrain of civil society, a *hegemonic consensus* (Gramsci) has emerged governing the way the mitigation of climate change is carried out. This consensus, known as the »neo-liberalization of the climate«, promotes a politics of climate change based on market instruments. The contribution distinguishes between two ideal types of NGOs: “participation NGOs” and “protest NGOs”. This ideal-typical specification serves the analytical purpose to highlight different strategies of NGOs in international climate politics and thus to explain how the hegemonic consensus is established. “Participation NGOs” pursue a political style of *combative cooperation* with governments. More recently, a new generation of “protest NGOs” has emerged, with large input from social movements. While the first reproduced the hegemonic consensus, the latter articulate and pace strongly their protest. Furthermore, they take the whole carbon cycle including the energy-input into consideration, while the “participation NGOs” are concentrated on the output of the (fossilistic) energy system, i.e. the emissions. So far, the analysis shows that the new protest generation does not have the power to pressurize the international climate politics – ergo it is not (yet) a counter-hegemonic force.

Keywords

Civil society, NGOs, climate politics, UNFCCC, hegemony, climate neoliberalism

* Philip Bedall (Dr. rer. pol.) is a scholar and activist. His research is concerned with theories of discourse and hegemony, climate and energy politics and civil society. In the last years he has been involved in numerous mobilizations for global (climate) justice. He can be contacted at: philip.bedall@yahoo.de

** Achim Brunnengräber (Dr. phil. habil.) is Associate Professor at the Department of Political and Social Sciences of the Freie Universität Berlin. His main areas of research are international political economy and global governance as well as environmental, climate, and energy policy. He can be contacted at: achim.brunnengraeber@fu-berlin.de

Rarely have the limits of multilateral international politics shown itself as clearly as at the United Nations Conferences on Climate Change (COPs) in Copenhagen (2009), Cancun (2010), Durban (2011), Doha (2012) and Warsaw (2013). The UN climate negotiations, which are mainly oriented on consensus, remain insubstantial for the time being. Even the extension of the Kyoto agreement until 2020 agreed in Doha in 2011 cannot hide this fact. The situation is a paradox. A shift to levels below 2 °C warming requires immediate significant global mitigation and high levels of technological, social and political innovations (Peters et al., 2013). But, as a report of the World Bank states 'the sum total of current policies – in place and pledged – will very likely lead to warming far in excess of these levels. Indeed, present emission trends put the world plausibly on a path toward 4°C warming within the century' (World Bank, 2012: xiii).

The increasing need for effective mitigation of climate change is accompanied by seemingly irresolvable conflicts of interest on the global political terrain. These conflicts not only have their roots in the adversities of climate politics within the UN itself, but in three "external effects": in the power shifts in the international system as the newly industrialized countries become stronger, in the financial markets and the global economic crisis, which makes cost-cutting measures necessary, as well as in interests of nation-states in a competitive energy politics, which is no longer compatible with ambitious climate negotiations. In sum, the three effects indicate a re-nationalization of climate politics (Altvater and Brunnengräber, 2011).

Beyond that the overall aims of the market-based mechanisms, which have been established by international negotiations up to now, are proving to be increasingly problematic. They only take into consideration the emissions, i.e. the *output*-side of the (fossilistic) energy system. 'Carbon trading [...] changed the goal of climate action from keeping remaining fossil fuels in the ground to meeting targets for the emission of CO₂-equivalent molecules' (Lohmann, 2012: 299). The negotiators in the international climate politics are grappling precisely with this thematic narrowing. When the entire carbon cycle is considered, from the extraction of fossil fuels to the harmful emissions, the area of conflict of climate politics is extended. From this wider perspective, a transformation of the organization of the energy systems and the way of life and the mode of production becomes necessary. This perspective necessitates changes that go far beyond a technological modernization or economic measures such as emissions trading. The debates on a 'Great Transformation' (WBGU, 2011), a Green Economy (NEF,

2008; UNEP, 2011), or a post-growth society and Prosperity without Growth (Jackson, 2009; Paech, 2012) refer to these requirements. But who are the actors to initiate such a transformation towards a new social system, if the United Nations' negotiations seem too narrow thematically to achieve it and beyond that confronted with a process of re-nationalization avoiding any substantial adjustment? If 'international climate policy post-Copenhagen is in crisis' (WBGU, 2010: 3) what role are NGOs and social movements playing in the national and international arena? And who exactly is the civil society and what concept does civil society stand for? We want to trace these questions in more detail in this article.

Following Antonio Gramsci we take up an understanding of civil society as the terrain where fights for hegemony take place (section 1). The social regulation of climate change based on market mechanisms in international climate politics can be referred to as a hegemonic consensus of the »neo-liberalization of the climate«. Our paper will focus on non-governmental organizations (NGOs) and social movements as one important part of civil society. Based on a review of the history of those groups, we will first sketch out how certain non-governmental organizations (NGOs) and their networks have been part of the reproduction of the neoliberal consensus in the past (section 2). We will call these NGOs "participation NGOs". Since the genesis of the institutions of international climate politics they have been closely entangled with the climate regime. They have formed a moderate, combative-cooperating attitude, which has prevailed in the field of civil society actors for a long time. The political approach of these NGOs is reaching its limits (section 3). The participation NGOs are increasingly confronted with contradictions that result from their own ambitions to shape politics and the limited actual influence. Although there are positions within these NGOs, which criticize or reject cooperative forms of action in the institutional environment of the UN climate talks, it is structurally conservative internal dynamics that cause them to stick to the chosen path of negotiations. More recently, however, a new protest generation is emerging on the conflictual terrain of climate politics (section 4), which, compared to the moderate actors, show a modification of how protest is articulated. We call this new generation "protest NGOs", which have a large input from social movements. In the final part of the article, we will discuss the counter-hegemonic tendencies of these new actors and their potential in transformative societal changes within the terrain of civil society (section 5).

1. Civil Society as a Terrain of Struggles for Hegemony

Alliances of countries such as the G20, the BRIC countries (Brazil, Russia, India and China), or the EU in cooperation with Asian countries (Weizsäcker, 2011) or action on different levels (WBGU 2010) are supposed to bring new momentum in international climate politics. Such alliances are considered to be more manageable as it is assumed that vested interests exert a smaller influence (see WBGU 2010). This would be a benefit as opposed to the negotiations under the United Nations, which, supported by the principle of consensus, have to reconcile 193 countries. But why have such coalitions of the willing not yet come about? In the reality of international climate politics, it is the supposed (former) pioneers like Germany, France or Great Britain who, in times of global fiscal and economic crisis, scarce resources and high energy prices do not have any interest in such a confraternity of nation states. After four failures of the UN climate negotiations (Copenhagen, Cancun, Doha and Warsaw), no country has made significant pledges to cut greenhouse-gas emissions. And no new legal obligations will be implemented before 2020.

If the governments cannot cooperate to bring new life into the climate politics, who can (for a general debate see the Routledge Handbook of the Climate Change Movements, edited by Dietz and Garrelts, 2014)? If one recollects the meaning of democracy – the *rule of the people* (demos) – the actors of civil society will come into view as a trigger for a great transformation. But can these actors take on such a responsible role?

Civil society can be taken as part of a political complex of domination and regulation, which Antonio Gramsci calls the *extended state*. It is therefore not only the institutions of the state which maintain relationships of domination, but also the discursive reproduction and alteration of these institutions on the terrain of civil society – a terrain among which one has to count several social forces like the NGOs, social movements, science, media and business. In civil society as a field of competing problem interpretations, demands and approaches of action, as a result of social struggles a precarious balance of compromises adjusts itself – for example regarding what is considered appropriate or legitimate in climate politics. Following Gramsci one can speak of the emergence of a *hegemonic consensus*, which is essential for the shape of politics and the way of dealing with collective problems. With this consensus the

interests of a particular group are conceived to be the interests of all, i.e. they seem to be universal. Social forces can support the hegemonic consensus more or less actively or passively.

Such a Gramscian understanding of state and civil society (see Buci-Glucksmann, 1981; Votsos, 2001) needs to be separated from an intermediary understanding of civil society, which is highly popular at the moment. The latter conceives civil society as a kind of mediating institution vis-à-vis the state. The state power is conceptualized as a 'political top' or an 'entity' (Demirovic, 2001: 150, our translation): a state power where political control is organized top-down, hierarchical. This conceptualization stands in the tradition of liberal state theory established by Thomas Hobbes and John Locke (Demirovic, 2007: 21f.): The sovereign state is understood as a neutral authority, which watches on the ensuring of a social contract of individuals to organize their interests and reduce conflicts. Constitutive for the state, which is separated from society, is its power. It is the state's monopoly on legitimate force, which reduces conflicts and guarantees social cohesion. Gramsci, on the contrary, believes it is concessions and coercion that unify the diverse social forces of civil society and their contradictory interests, resulting in the establishment of hegemony. Seeing that, for a transition of production and lifestyles away from a fossil fuel dependent path to a sustainable path of development, struggles and discourses on the terrain of civil society between governments, social movements, NGOs, science etc are fundamental. For climate politics this means breaking the hegemonic consensus on the current social regulation of climate change. In the existing climate regime, market mechanisms such as Emissions Trading, Clean Development Mechanism and Joint Implementation determine the way to deal with climate change (see Lohmann, 2006; Newell and Paterson, 2010). Accordingly, international climate politics does not question economic growth or free market competition. Within this hegemonic condition, which we call the *neo-liberalization of the climate* (see Bedall, 2013, 2014), climate change is dealt with in a *strategically selective* way (Brunnengräber, 2013). The reproduction of the brown economy remains undisturbed. In climate politics, only the externalities of the fossil fuel path of development, i.e. greenhouse gas emissions, are negotiated, while it is energy politics, which regulates access to and usage of fossil fuels. The separation of climate and energy politics avoids a conflict between growth based on the consumption of fossil resources on the one side and a turn away from those resources on the other side. However, the

avoidance of this conflict can only be temporary.

The prevailing selective treatment of climate change is associated with a specific problem interpretation. In UN negotiations, climate change was long seen as a *global environmental problem*, which can only be dealt with in international politics (Lutes, 1998). The social context of the problem and intersection between local and global dynamics is pushed to the background. The social, political and economic dimensions of the climate crises, which allow it to be concretized locally, regionally or nationally as well as historically, are overlooked by this interpretation (Agrawal and Narain, 1991; BUKO, 2009). Market mechanisms are not able to deal with such a societal complexity.

Energy politics, in contrast, remains largely in the national sphere of competence (Dröge, 2010; Görg, 2010). Even within the European Union processes of collectivization take place only on a rudimentary level, as typified by the Lisbon Treaty. Despite the international interdependencies in energy politics regarding the extraction, transportation and utilization of fossil fuels (coal, gas and oil), energy politics remain largely in national hands. Because cheap energy sources are crucial for national competitiveness, shortages are not addressed as a global problem, but rather a national problem of competition for energy sources. In the discussion about the energy transition, which focuses more on the issue of higher prices for energy and less on the issue of the protection of nature, at least the social aspects of energy politics are emphasized more intensely.

Contesting the neo-liberalization of the climate in civil society therefore means breaking the dual hegemonic consensus on the interpretation as a global environmental problem and the nationalization of energy politics. This requires redefining climate change as a socially mediated problem rather than an environmental problem (Brunnengräber, 2006). Its treatment is not narrowed down to market mechanisms, on the contrary, the separation of climate politics from energy politics is understood as a strategic moment of selectivity. Such *counter-hegemonic* struggles, Bullard and Müller (2012) argue, must aim to establish a 'globality' of its own in order to use the current weakness of international diplomacy in a productive way.

2. The Imperative of Cooperation

Are there any first signs on the conflictual terrain of climate politics pointing towards a contestation of the hegemonic consensus? As early as at the drafting of the United Nations Framework Convention on Climate Change (UNFCCC) two decades ago, environmental and developmental NGOs and their networks were involved drafting cooperative agreements. Since that time, many of these NGOs have become associated symbiotically with the climate regime (Brunnengräber, 2011, 2014). It is their willingness to participate in the official process, which determines the limits of their political demands and protests. Participation in international institutions is hardly questioned by these actors. The state has acclaimed this kind of participation in principle, particularly because the participation of civil society increases the democratic legitimacy of the decisions made. The broad walk out of civil society groups in Warsaw 2013 was the first of his kind, but was not a radical positioning against ongoing negotiations. “Volveremos”, we’ll be back, was printed on the back of their T-shirts.

“Participation NGOs” tend to behave in a *combative-cooperating* way a political approach, which could be described as ‘skeptically approving and critically observing’ (Walk and Brunnengräber, 2000: 276, our translation). They pass criticism on the rounds of negotiation, broach the issue of conflicting interests of actors or promote alternative approaches. However, fundamental criticism of the substantial orientation of the process is expressed very rarely. The initially broad rejection of market mechanisms among NGOs and their networks gave way to lively discussions about their specific design. Thus, the combative-cooperating NGOs largely reproduce the hegemonic consensus of international climate politics – a consensus that generalizes the strategically selective treatment of climate change in society. It is constitutive of this consensus to articulate dysfunctionalities of the market mechanisms – its limited effectiveness regarding the reduction of greenhouse gas emissions – as “teething problems” that will be overcome in the future. Without such a creation of coherence between the current reality of market mechanisms in climate politics and the claim that those mechanisms adopt a regulating function, a majority of the civil society would not bear out the consensus about the mechanisms. Eventually, it is just this hope for a regulation of the market through mechanisms like emissions trading that prompts many civil society groups to reproduce the reality of international climate politics – a radical free-market politics, whose contribution to the reduction of greenhouse gases is

controversial (see e.g. Lohmann, 2006) and which often associates with negative socio-environmental effects (see Böhm and Dabhi, 2009; IEN, 2009).

In the course of international climate negotiations, the symbiosis of many NGOs and the climate regime has repeatedly become apparent. As Larry Lohmann states, governments and NGOs form a 'patron-client system' (see Lohmann, 2012). In this system NGOs on the one hand gain financial support and political connections. They become respectable and dignified actors. On the other hand the patrons' (that is EU and US governments and companies) climate policies are supported technically as well as morally by NGOs. With this support in hand, NGOs turn away from their former political goals and provide loyalty to neoliberal hegemony. Gramsci called this process of universalizing an introduced policy (in this case neoliberalism) by obtaining consent from social forces that in principle might be able to create an opposition a passive revolution, or more precisely a 'transformismo' (Gramsci, 1971: 58). The *neoliberalization of the climate* needs to be conceived as such a passive revolution. Establishing the neoliberal hegemony in climate politics is based on the inclusion of formerly dissenting voices.

"Participation NGOs" – especially within the Climate Action Network (CAN) – work closely with government bodies. They act as consultants or organize projects collectively. This does not mean that the results of the climate change conferences will not be criticized. However, consequences as to a nonattendance in further negotiations will not be derived. On a terrain that is dominated substantially by governments and economic interests, combative-cooperating NGOs act as a stabilizing moment and therefore as important 'legitimizing resource' (*Legitimationsressource*, Brunnengräber et al., 2001).

3. Limits of Combative Cooperation

The contradictions of active participation of NGOs in the design of international politics become more and more evident. *Firstly*, in climate politics the "Participation NGOs" and their networks adhere to the negotiation of details and mantra-like repeated demands. This is evident, for example, in the demands to reach the target of 2-degree Celsius through the increase in financial resources for adaptation measures or a reform of market-based instruments. By complying with these demands, they do not manage to embed the issue of climate change in the wider debates about social change and the

post-growth society (see, for example, Jackson, 2009; Paech, 2012). *Secondly*, when the conflict of interests among the official negotiators increases and the room for maneuvering decreases, it becomes apparent that the legitimation, which the NGOs' participation and acceptance provides from year to year for the decisions of the international negotiations, is neither necessarily nor always required. Of course this has also to do with the lack of public awareness about climate change. Even the most insubstantial results in the climate negotiations barely affect public opinion, apart from the temporary media outcry after the closing of the conference.

Thus "participation NGOs" are political players on an increasingly contradictory terrain that characterizes climate politics. Even if the UN climate process is not crowned with any success and new approaches of politics are not in sight, for those NGOs there is no alternative to the institutionalized paths. But with it they have not been the driving force for social change. On the contrary "participation NGOs" are an integral part of the reproduction of hegemony within the "extended state".

So far, the field of "participation NGOs" is shaped by structurally conservative internal dynamics, which prevent a reorientation of the majority of organizations – especially the NGOs in Climate Action Network (CAN) – towards completely new approaches of politics. But with the climate talks from Copenhagen to Warsaw this consensus has become precarious.

4. New Themes and Spaces of Protest

It is particularly social movements, NGOs and their networks outside the conference halls, which indicate changes in the field of civil society. The Climate Justice Now! Network (CJN!) formed a counterforce to CAN. CJN! has accompanied and tried to influence the climate negotiations since the Bali negotiations in 2007 (see Byrd, 2012; Gibson, 2012). Driving forces of the new established network are groups like Focus on the Global South, the peasants' network La Via Campesina or Global Justice Ecology Project. At first it seemed that CAN had lost its supremacy in international climate politics (Brunnengräber, 2014). Even in the preliminary stages of the Copenhagen climate talks (COP15) the secretariat of the UNFCCC acknowledged CJN! as another so-called "focal point" of environmental NGOs (CJN!, 2010). 40 percent of the

environmental NGOs that were accredited by the UN for the Copenhagen negotiations were part of CJNI. As a consequence CAN had to arrange with CJNI about the available rooms as well as the time-slots for press conferences (Reitan, 2011: 60).

CJNI is trying to scandalize the shortcomings of international politics and trying to develop a new agenda. They are attempting to bring visibility to blind spots such as questions of global justice or of alternatives to market orientation. These blind spots have characterized the commitment of civil society in climate politics for a long time (see Bedall and Görg, 2014: 54f). The causes of climate change are understood to be an unjust economic system and the unsustainable patterns of consumption engaged in by an elite global minority (Pettit, 2004:104). Inherent in the agenda of CJNI is a critique of the prevailing market-based orientation of international climate politics. With its political strategy, CJNI is trying to transcend the inside-outside difference within civil society by working together in alliances with grassroots-based activists outside the negotiation centers. In this spirit they state: 'We will take our struggle forward not just in the talks, but on the ground and in the streets – Climate Justice Now!' (CJNI, 2007).

In addition to the changes surrounding the international negotiations, the areas and themes of climate protest are shifting significantly. On the one hand, the wave of globalization, which has lasted for two decades, is complemented with processes of *re-regionalization* and *re-localization*. On the other hand, the *forms of protests* show a radicalized and polarized debate about the shortcomings of international politics. Thus, in many countries (primarily in the Global North), Climate Camps have been organized since 2006. Those camps serve as sites of political debate and as starting points for actions of civil disobedience against key emitters of greenhouse gas (Feigenbaum et al., 2013; Frenzel, 2009). Furthermore, following the climate conference at Copenhagen, throughout the world grassroots meetings have emerged, which called attention to a *just transition* of society. Both phenomena – the camps as well as the assemblies – address climate change as a social-ecological crisis and as part of the struggles about energy. They raise issues of power relations, of emancipation, of justice, or of lifestyles. A current manifestation of the re-localization of social-ecological protest is the anti-fracking movement as well as the Idle-No-More movement. Emerging in several countries (see, for example, Food & Water Watch, 2013; Gegen Gasbohren, 2012) the anti-fracking movement is directed against the extraction of unconventional gas resources. Idle-No-More however, is pooling protests of indigenous people of North

America against the destruction of land and water (Idle No More, 2012). Beyond that, a multiplicity of growing localized protest is also appearing in Africa against oil extraction and in North America against tar sands (see Bassey, 2012).

Consequently, climate politics once again appears more clearly as a transnational and contested terrain of conflict, i.e. a terrain where diverse actors struggle for the enforcement of quite contradicting interests. The terrain of conflict itself is extended again. It overcomes the narrowing of climate politics down to market-based mechanisms, i.e. a treatment of climate change that the international politics has concentrated on for a long time (see Bond, 2012; Featherstone, 2013).

While “participation NGOs” are virtually trapped in the official protocol of the climate negotiations the “protest NGOs” express fundamental criticism of the political programs and this cooperation. Some even call for abandoning the UNFCCC process entirely. In doing so, they try to break the hegemonic consensus that characterizes the international climate politics – a consensus, which is actively supported and therefore legitimized by combative-cooperating NGOs. To understand climate change as a global environmental problem and to prefer only certain i.e. market-based solutions is widely rejected. But the rejection of the current design of international climate politics also prevents the media from taking notice of the movement actors during the climate negotiations. There “participation NGOs” still have the power of interpretation.

One reason is that the movement actors and NGOs outside the conference halls promote projects, which, contrary to the deadlocked international negotiations, focus on totally different spatial levels. The camps at coal power plants or in areas where sequestration and storage of CO₂ (so-called CCS) is planned, at mining areas or airports are examples of such a site-specific contextualization of climate activism, a contextualization that is more accurately tailored to national or regional conditions. Often, protest events or campaigns are also simultaneously organized at several places around the globe (see 350.org, 2009, 2012; CJA, 2010), a form of the aforementioned “globality” which differs significantly from top-down approaches of international politics.

5. Counter-hegemonic Tendencies?

For mitigation of climate change, which is designed as a comprehensive social project of change, the strategy of decentralization – realized with the Climate Camps or the

manifold protests against fracking – may be beneficial in principle. Ideally such protest events offer an increased inclusiveness. The barriers to political participation of individual activists or citizens can be reduced. At the same time, the dominance of some NGOs and the exclusion of others, which for the most part have characterized the field of civil society in international climate politics so far, can be overcome: The organizations represented at the international negotiations in principle do not constitute a representative selection of the groups working on the issue of climate change. In the context of negotiations NGOs from the Global South are outnumbered by those of the Global North (Conca, 1995: 444; Sagar and Banuri, 1999). And in the field of conference NGOs, especially in CAN, there is no cooperation among equals. In this space, Western European and North American NGOs like Greenpeace, WWF, or Environmental Defense Fund are dominating (Missbach, 1999: 274). In international politics they often raise their voice as advocates of the people concerned who cannot participate in the negotiations themselves.

The resulting problem of paternalism seems to be solved when those concerned themselves raise their voice (Keck and Sikkink, 1998). With the new forms of protest, a *new internationalism* could develop that would emphasize the autonomy of the actors as political subjects. Thus internationalism does not amount to a one-sided solidarity with oppressed people. Actors and their (specific local) struggles would relate to each other in solidarity (Featherstone, 2012: 52ff.). Examples are the manifold activities of the peasants united in the network La Via Campesina (LVC, 2012) or the multiplicity of climate camps (Climate Convergence, 2012). Based on a variety of conflicts at the local level, alliances and ‘translocal solidarities’ are emerging (Routledge, 2011).

The new movements and NGOs recall their role as democratic *sovereign* – a kind of government of the people and for the people (see also the Occupy movement (Byrne, 2012)). With them a free and open formation of the political will, transparency of decision-making, democratic forms of organization, the dismantling of patriarchal domination and gender equality are made tangible. The camps, campaigns and assemblies come close to the standards of a democratic order that the global governance arrangements have moved far away from (see Bäckstrand, 2011). The new actors state a democratic vacuum that prevails in international politics and they indicate the necessity for the institutions of climate politics to open themselves in many ways. Democratization also brings with it the chance that the ideas will become more diverse

and the action repertoire will expand.

NGOs and social movements not only assume the role of a repair service or of suppliers of democracy. Rather, they are in all their inconsistency political subjects, which in times of crisis – not least born out of necessity – can offer resistance. When movement actors take up new themes and open up new areas for protest, they articulate counter-hegemonic criticism. However, this does not put pressure on the United Nations' climate negotiations to legitimize or change itself. Currently, such pressure is more likely to come from the nation states, as they increasingly refuse the global imperative of cooperation. However, one cannot expect a perceptible momentum towards a major transformation from the states given the present circumstances. Initiatives by NGOs and social movements within civil society have remained marginal or are actively marginalized. They have only achieved rudimentary success in scandalizing climate change as a result of capitalist conditions of production and consumption. Accordingly CJI! figured less prominently at the last UNFCCC conferences. And, in spite of the changes in terms of themes and areas of protest in recent years, the political efficacy of civil society forces like NGOs and social movements has rarely been enhanced.

Nevertheless, there is also an ongoing swing between participation and protest: "Participation NGOs" turn away from cooperation with governments or the other way around: "protest NGOs" became a part of the UN conferences. Big players of the NGO community, for example, attached great importance to local or national climate and energy campaigns, although they still remain participators of the international climate negotiations. With its campaign "Save the arctic" Greenpeace broaches the issue of resource extraction – an issue, which is highly relevant for climate politics. Also WWF enhanced its local activities with its energy campaign "Seize your power". NGOs of the development sector, like Misereor or Oxfam, strengthened their attention towards the issue of coal power on national levels.

Eventually, the question of how to gain political relevance to change the prevailing selective treatment of climate change radically, and to democratize climate politics remains of central importance to the climate movement. NGOs and social movements need to ask themselves what contribution to a social transformation their strategies and approaches of politics could afford and what alternatives exist. A longer-term mobilization from below, which is connected to a broad set of issues, could help the climate movement to reach the political relevance it lacks so far. This bottom-up

mobilization is imperative if climate politics is equal to politics on energy, transport and agriculture. This could also serve as a mechanism by which the old and new generation of NGOs and movements can offer a breath of fresh air to the debate on climate change.

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“It's the communication, stupid!”

Or how interventionist approaches in adaptation to climate change fail and how they could work

Martin David²¹ and Steven Engler²²

Abstract

This paper advances the current debate on communicating adaptation methods to climate change in rural areas. The farmer's agricultural situation in Postrervalle, Bolivia represents this debate. We conceptualize adaptive behavior of actors in the face of climate change as a learning-by-doing process and understand it as a collective mechanism for reducing vulnerability to climate change. This requires modes of communication that allow actors to develop their own understanding of environmental change, independent of scientific debates. Studying the processes of Farmer Field Schools on a local scale for a longer period of time will enhance corresponding theories and leads to a rethinking of interventions aimed to enhance adaptive behavior of diverse actors in the context of climate change processes.

Keywords

Communication, Bolivia, Farmer Field Schools, Vulnerability, Climate Change, Learning-by-doing

21 Martin.David@kwi-nrw.de, Institute for Advanced Study in the Humanities,
University of Duisburg-Essen

22 Steven.Engler@kwi-nrw.de, Institute for Advanced Study in the Humanities,
University of Duisburg-Essen

1. Introduction

Several strands of sustainability research have critiqued “top-down models of knowledge transfer” as pertaining to sustainable development-practices (Pohl et al., 2010: 267). Some even refer to such models of knowledge transfer as branches of “neo-colonial science” (Dahdouh-Guebas et al., 2003: 341). This presents a clear democratic challenge. Therefore, science-driven governance of adaptation to climate change should be brought into equilibrium with other forms of knowledge and social practices in target regions to make it a fruitful resource for local capacity building. The field of environmental psychology provides substantial evidence, which challenges the notion of science as simply filling a “knowledge gap” for adaptation to climate change. Gaining scientific knowledge about changes in the earth's climate systems and its socio-economic implications does not necessarily create incentives to take adaptive action (Baron, 2006: 11). The results of two decades of global climate protection efforts remain rather unsatisfying. We acknowledge this knowledge gap and recognize the difficulties of effectively communicating the concepts of ‘adaptation’ and ‘climate change’ to all levels of society. One reason for this may be the limited phenomenological perception of climate change, leaving it a somewhat ‘abstract’ concept. Therefore, we stress that interventions for adaptation to climate change should be thought of as boundary objects.²³ This means that, although the scientific concept of adaptation to climate change is commonly understood, the common *use* and *application* of scientific knowledge in governance processes designed to adapt societies to effects of climate change is ambivalent.

We support our argument with a long-term case study, which treats the introduction of organic farming practices as strategies for climate change adaptation. This intervention took place in the Bolivian lowlands, in the municipality of Postrervalle. Based on this empirical example we show how different modes of communication and cooperation influence behavioural responses of individuals to changing environments.

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“[Boundary objects are objects] that both inhabit several communities of practice and satisfy the informational requirement of each of them. Boundary objects are thus both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They have a weak structure in common use and become strongly structured in individual site use” (Bowker and Star, 1999: 297).

2. Basic concepts and approaches

In the further progress of our paper, certain concepts and approaches play a major role. First, the connection between climate and agriculture will be dealt with. In agricultural societies today, farmers established specific systems of cultivation over the ages. This leads to locally diverse and complex patterns of vulnerability of food production to climate fluctuations. Febvre (1924) underlines this by stating that “the action of climate on the natural environment in which man lives must be known before we can understand the action of climate on man.” The relationship between “climate and agriculture is particularly delicate in mountainous regions, e.g. in the Alps, the Himalayas, or the Andes, and in latitudes bordering climate zones where agriculture becomes risky” (Engler et al., 2013: 1169). Weather conditions are still significant for the success or failure of crops during growing season. This also includes weather and climate perceptions, because they influence the adaptability of individuals and societies to climatic variability and their resilience (Walker et al., 2004).

Second, the concepts of vulnerability and resilience are introduced here. We suggest that all situations of food insecurity, malnutrition or even famine are explainable by looking at certain vulnerabilities and resiliencies of affected populations. According to the Intergovernmental Panel on Climate Change (IPCC, 2012), vulnerability is “the propensity or predisposition to be adversely affected”. Such predisposition constitutes an internal characteristic of the affected element. In the field of disaster risk, this includes the characteristics of a person or group and their situation that influences their capacity to anticipate, cope with, resist, and recover from the adverse effects of physical events” (IPCC, 2012; cf. Wisner et al., 2004). In contrast, resilience “focuses on the ability of the system to maintain its basic functions and return to the original state after a perturbation” (Füssel, 2007). In other words, vulnerability describes the susceptibility of a unit to climate change, while resilience describes a unit’s coping-, adaptive- and transformative capacity (Welthungerhilfe, 2013).

3. Case study Postrervalle, Bolivia

The Department of Santa Cruz is responsible for about 30 per cent of Bolivia’s GDP, with the largest share of revenue, about 45 per cent, generated from agricultural activities, (PDDES, 2008: 11), underlining the departmental and national importance of the sector. Therefore, in 2008 the departmental government of Santa Cruz, Bolivia, officially established its “Departamental Politics of Adaptation and Mitigation to Climate Change.”

The “Department for Sustainable Development” of the “Division for Environmental Management” was also empowered to cooperate with private organisations to take measures for adaptation to climate change (PPDMACC, 2008: 2). To foster food security in the face of climate change, the “Departmental Agricultural Service” and a “Non-governmental Organisation” (NGO) developed a soil conservation pilot project, internationally funded for two years. In 2009, the municipality Postrervalle was chosen as the intervention region by the “Departmental Agricultural Service”. 89 per cent of the municipal area of Postrervalle are highlands with an average declivity of 15 per cent and are therefore naturally prone to erosion. Major crops grown in the region are corn, wheat, beans, avena, rice, vegetables like potato, tomato, fruit like banana, apple and peaches and also yucca and sugar cane (PD-MMV, 2003: 90). The land-use plan of the departmental government from 1994 and 2009 estimated that 5 per cent of the soils are usable for all-season agriculture and 6 per cent are usable as grazing land. Generally, the soils are considered to be unfavourable for agriculture due to their natural composition and wide spread erosion-phenomena. Therefore, the remaining 89 per cent of soil is considered to be protected areas (PLUS, 2009:16).

Farmer field schools as a program for adaptation to climate change

The municipal Postrervalle was chosen as a region to conduct a pioneer-project for organic agriculture to fight adverse effects of climate change *via* cultural change of agricultural practice. Farmer Field Schools (FFS) were seen as an appropriate method. The FFS is intended to support sustainable agriculture by enhancing farmers’ participatory and self-induced reflexive learning with regards to new sustainable farming practices. The learning process is guided by various observations in the field over the course of an entire crop cycle (Sherwood and Bentley, 2009: 68). Therefore, FFS are understood as platforms for learning by doing (Braun and Duveskog, 2008: 5). It is assumed that farmers engage in collective action and acquire knowledge, accompanied by regular meetings and discussions. Experimental explorations of crop- and ecosystems are intended to facilitate problem solving by farmers (Braun and Hocdé, 2000: 34). Normally about 15 to 30 farmers of a target-region engage in common practice (Braun and Duveskog, 2008: 4). In fact, the area under cultivation is thought to be the “teacher”, and farmers collectively reflect on their field practices. Sessions are regularly held 6 to 12 times during a year, at least during a subsequent crop cycle. A skilled facilitator mostly guides farmers. Programme leaders, such as donors or governments, normally

supply the facilitators with educational material.

In the case of Postrervalle, the intervention consisted of several workshops created to broaden the knowledge of farmers about sustainable agricultural systems and look at ecological consequences of conventional farming practices. The workshops lasted up to 4 days and were conducted by the staff of the NGO. A local contact person was employed to both organize the intervention cycles and to constantly motivate farmers to observe their sustainable farming process. Since most farmers were sceptical, an incentive was started to encourage farmers to engage in the FFS and farmers were contracted on the basis of free potato seeds.

Results

From the beginning of 2010 until the end of 2011, four inquiries took place to gather panel data about the implementation process.

After the fourth workshop-unit, thirty farmers filled out the first survey asking for reflections and opinions about the FFS. After shortfalls of the potato seed delivery due to irregularities with the producer, farmers were not able to seed potatoes during their growing period. Some farmers resigned from the program and by the beginning of 2011 only 30 of the initial 50 farmers continued to participate in the FFS. The NGO was accused of not fulfilling its contract. Consequently, the results of the survey indicated insecurity and tension. Generally, motivation was low to complete the survey. This delivery-failure caused the NGO to lose the trust of farmers and complicated further interventions. Fifty farmers started the program in November 2009, of which only 25 farmers were left it by October 2010.

In October 2010, after the sixth unit qualitative semi-structured interviews were held with twenty farmers who participated in the FFS. Those interviews were analysed until February 2011. The aim of the interviews was twofold: First, they asked at what point in time farmers began to relate concepts like climate change, vulnerability and adaptation to their real-life experience (actors and action-orientedness, Scharpf, 2006: 97); only ten farmers implemented sustainable agricultural practice by that time. Six farmers explained they would do so because they found these methods to cope with climate change. The other four farmers argued with the contract they had to fulfil. Second, the knowledge of farmers on concepts such as climate change was tested (The perception and understanding of the context of action and its situation, Mayntz and Scharpf, 1995: 59), to figure out if FFS is an appropriate approach to transfer climate-related awareness

(Garretta et al., 2011: 15). It is believed that such understanding derives much from the presence of the physical perception (Helle, 2001: 75). Of twenty farmers, 19 indicated familiarity with the term climate change. Furthermore, 18 farmers were able to identify climate change impacts, which affected them. Food security was not seen as a problem by the interviewee nor was it related to climate change. Also, they were asked if they felt vulnerable to climate change and only 9 individuals positively indicated they were. Only 8 of 20 farmers were able to articulate that the aim of the project was about reducing their own vulnerability to climate change by enhancing food security via the implementation of sustainable agricultural practice. The “Departmental Agricultural Service” commonly conducted the FFS with the NGO. Problems were reported to evolve between the contracted representative of the NGO and the representative of the “Departmental Agricultural Service” and also with the municipal government regarding different working styles and practices. Therefore, the farmers were asked by what organisation they would be preferably assisted (The Institutional context, Scharpf, 2006: 78). 17 farmers preferred the NGO, while only three farmers, who had not modified their cultivation methods to sustainable practices, indicated a preference towards the “Departmental Agricultural Service”. Seven “adapting farmers” and five “non-adapting farmers” responded that they felt well represented by the municipal government.

A third inquiry mainly focussed on anecdotic experiences of farmers with sustainable agriculture. The sustainably growing maize and potato showed greater productivity and higher incomes due to reduced expenses for pesticides and fertilisers. Also, farmers reported that crops showed better resistance in the face of extreme rain events. It is too early to further analyse this point, as few extreme events of this kind have occurred so far.

In the beginning of 2011, a movie was planned by the NGO’s department of communication. A staff member occasionally came up with the idea of trying a more participatory approach to community planning to integrate farmers in the intervention. About twenty farmers held a workshop about making a movie and then conceptualised a screenplay. After that they began with the production of a movie in July 2011. Farmers told their story about the adverse effects of climate change in Postrervalle and showed possible adaptations to climate change through sustainable agricultural practices. It was reported that as a result sustainable agriculture heavily gained respect in the community and many non-FFS-farmers adapted sustainable practices like non-till farming and IPM. This also included farmers from nearby communities, since they – and

also staff from the executive level of the program – were invited to a film-premiere-party in Postrervalle.

The fourth enquiry dealt with the local and regional spreading of the program. After half a year, Postrervalle had around 25 farmers engaging in sustainable agricultural practices. Many farmers talked about the movie, since it was shown officially in town and enjoyed broad acceptance of the rest of the population. Adaptation of sustainable agricultural practice is believed to spread now even to non-FFS-participants. It was repeatedly reported by FFS-participants that suddenly many non-FFS-participants began to ask FFS-participants about achievements with sustainable practices. Non-FFS-participants would then refer to FFS-participants as the movie-makers.

4. Discussion

Farmers reported they felt challenged and confused when being confronted with systemic climate- and agricultural knowledge. Consequently, results of the second enquiry indicated a low transaction of theoretical concepts like climate change. This enquiry further showed that farmers who adopted organic farming practices were not able to tell why they did it and additionally could not explain why they cultivated in the conventional way before. Also, farmers' conventional cropping methods could not be explained sufficiently. This might be due to farmers' cultural differences in transferring practical traditions and knowledge. This underlines the importance of "practical knowing" (Coghlan, 2011: 357) in FFS-units in Postrervalle. We interpret this as an outcome of the internalisation of tacit knowledge in routines (Nonaka and Takeuchi, 1995, 64-70). Such routines are inter-generationally reproduced through field practice and not explicitly verbally transferred. In sum, we stress that an ex-ante transfer of knowledge about sustainable agricultural practice does not enhance adaptation to climate change.

Also, communicational shortcomings regarding the understanding of the project's strategic concepts were identified at the executive level of the programme. This can be explained with a heterogeneous access and distribution of scientific knowledge among executive actors. The NGO had many research departments; only two of those were involved in the intervention. One department focused on the execution of extensionist approaches like FFS. The second department designed a regional climate model for Bolivia and watershed as well as run-off models utilising the satellite surface-information of soils. The departments' assignment was to advance regional modeling

and create an early-warning system to reduce the harm of extreme climate related events like forest fire, floods and severe droughts. Nevertheless, communication between the two departments was rare and focused mainly on the presentation of results. The second enquiry revealed only little understanding from department members on the theoretical accounts of other departments. This was especially true for understanding concepts such as 'climate change impacts', 'vulnerability' and 'adaptation to climate change', since science-disciplinary backgrounds and field-experience of staff differed remarkably. The executing department consisted of well-experienced extensionists who maintained in cooperation with governmental and donor bodies and farmers. Three of them studied agricultural extension (two of them abroad), one employee studied macro economy. Difficulties arose during presentations of the programme to governmental actors because the communication between both scientific departments about the modeling and its results was limited. But the modeling-department had nearly no field-experience and as a matter of fact was not aware of practical needs of their modeling. Also, cooperation between the modeling department and governmental actors was low. Further, the understanding of how to use the concept of vulnerability differed dramatically especially among members of the executive department:: All members described vulnerability from a different perspective and drew different implications for the pilot program. The same holds true for the conception of 'climate change' and 'impacts'.

During the implementation of the pilot programme, the departmental government reorganized its departments. Since members of the former departmental government were suspended or directed to other assignments, the cooperation between the departmental government and the NGO had to start all over again discussing strategic proceedings. Thus, concepts and approaches were under continuous debate and caused confusion among colleagues. Above all, political and bureaucratic backgrounds as well as little advanced academic education of the departmental government staff did not allow for profound scientific discussions. Consequently, this conceptual mix translated into the implementation of the pilot programme and led to misperceptions amongst farmers.

All of the FFS-units lacked a deeper description of causal links of climate change impacts, food security and vulnerability. This became obvious as some farmers partially knew the constitutive components of concepts like 'climate-system', 'vulnerability' and 'climate change impact', but failed to causally link effects of these concepts. Also, a number of farmers were educated in environmental pollution, focusing especially on Co2-emissions

and waste management. Considering farmers' general immobility and low consumption of goods, rather low emissions result compared to residents in the urban framework. Such moral appeals seemed conceptually out "of the place". Here we strongly agree with Weber (2006: 116), who highlights the *"concretisation of future events and moving them closer in time and space [...] to hold promise as interventions that will raise visceral concern [to] attract the attention on generate the concern ex-ante that [actors] would seem to warrant ex-post."* It seems unreasonable to causally link farmers' in-extensive waste production, generally low environmental pollution and low emissions with climate change impacts and the need for adaptation to climate change for two reasons. First, emission-less waste disposal does not fit into the discussion of climate change as a causal consequence of emitting greenhouse gases. Second, as farmers contribute only little percentages of the total emissions, moral aspects of emitting in the face of climate change seem anchorless. From a behaviouristic point of view, knowledge about environmental pollution and emission was not translated into real-life contexts and remained unfunded regarding farmers' actual experiences. Consequently, moral leverage, aiming to bring farmers to an understanding of causing climate change, failed.

The execution of the FFS-units in Postrevalle also suffered from didactic deficiencies. Siregar and Crane (2011: 65) point out that FFS run the danger of being conceptualised only as a top-down approach that transfers scientific knowledge and ignore farmers' "empiric and normative realities". During the second enquiry interviews with members of the executive department of the NGO showed that farmers were understood as persons with low educational backgrounds. This perception justified the emphasis on theoretical approaches, which were seen as being central for understanding adaptation to climate change and ultimately the implementation of sustainable agricultural practice. Also, partial elements of the composition of the program were strategically kept out of the discussion to "not overload" farmers with "complicated stuff". On the other hand, little research was done in advance about farmers' perspectives on environmental stress.

The capability of nearly all farmers to describe impacts deriving from climate change showed that they were aware of environmental stressors effecting their cattle breeding or plant cultivation. Some farmers religiously related this to "the anger of god for humankind" but were fully aware of the consequences of climate change-related impacts on agriculture and measures to adapt. Regrettably, instead of weaving the knowledge of

farmers and their conceptions of the world into the FFS as didactic techniques, the NGO stuck to its own approach. During the intervention period, only one workshop included farmers, while the NGO, the departmental and municipal government and the international donor participated in at least four workshops along the intervention period. This illustrates that much of the discursive power during the entire intervention period was held by the NGO and not commonly shared, as insistently stipulated by FFS-scholars in the past.

Summing the above stated problems of the cooperation of the NGO with farmers from Postrervalle up, we see evidence for the conceptualisation of 'adaptation to climate change' as a boundary object. Whereas the NGO remained for a great deal on its top-down transfer of scientific findings and systemic knowledge about climate change with little causal linkage to organic agricultural practices it wanted to promote, farmers had difficulties to translate scientific climate-knowledge into all-day dangers and consequently felt not motivated to engage in offered sustainable solutions. Hence, farmers did not translate the NGO's knowledge into actionable knowledge. We argue that the 'climate change-agenda', adopted by the NGO, represents an organisational window of opportunity, occupying this international discourse. This enabled the organisation to raise funds in the field of adaptation to climate change in Bolivia. Interviewed NGO-staff had difficulties explaining reasons for the NGO's engagement in the domain of adaptation to climate change. Hence, the understanding of the overall goal of 'adaptation to climate change' differed greatly among individual and collective actors participating in the pilot programme in Postrervalle. This led to inconsistent communication of organisational goals and purposes regarding food security and adaptation to climate change.

But still: How can a common application of knowledge for adaptation to climate change be stipulated?

A fully new perspective was given with the production of a movie in 2011, which was part of a fund-raising strategy of the NGO, since the international donor stopped financing the pilot project in the middle of 2011. Three staff members of the NGO's communication department came up with the idea to let farmers initiate a message in their own words "to make it more authentic." After the production, the movie would be shown to many potential donors. A three-day workshop was held, integrating nine FFS-participants in the movie project. They had to fully organize themselves. The

documentation of this workshop shows how engaged farmers were and that they obviously enjoyed the idea of being able to “communicate to the world what’s going on in Postrervalle”. After one week, sufficient material was produced and brought to Santa Cruz for editing as demanded by the NGO. A month later the movies’ release was celebrated in Postrervalle and farmers of neighbouring communities, members of the departmental and municipal government and also members of the NGO were invited. Subsequently, many non-FFS-farmers asked questions about the programme with increased interest, referring to the movie production. We understand this process as a shift in discursive patterns and interpret the movie as a cultural product with enormous potential applicable on both, farmers’ identities and their engagement.

The fourth enquiry showed that the NGO and also the “Departmental Agricultural Service” began reflecting on their experiences and started other interventions in neighbouring communities at the beginning of 2012. One of the most important consequences the NGO has learned is that fruitful cooperation among farmers and executing organisations is based on mutual understanding and a mutual ability to reciprocally accept trade-offs regarding certain intervention styles and goals. Additionally, during the fourth enquiry, it became clear that even though farmers would adapt sustainable practices, they did not necessarily understand scientific conceptualisations like climate change and vulnerability. Instead, organic farming practices became understood as means of increasing long-term income. Consequently, the boundary object ‘adaptation to climate change’ became a workable concept of actionable knowledge. Though, the FFS approach helped farmers to actively change their cropping behaviours, which lead to diverse benefits.

5. Conclusion

Our conclusion is that organisations still have to learn how to interact with civil society to successfully learn how to translate scientific knowledge into actionable approaches. This is especially the case in settings composed of members with different knowledge traditions. In this paper we argued for the following three points:

1. Similar to Levitt and March (2012: 617), we conclude that organisations have to make direct experience in trial-and-error and learning by doing modes of knowledge production. This enables organisations to act in domains, where *ex-ante* actionable knowledge is not available.

2. Also, organisations have to creatively find means for communication. In our case this happened by accident, transforming the NGO's strategy of a top-down knowledge transfer to a powerful narrative from the farmers themselves.
3. We also stress that the counterpart of cooperation has to be respected more comprehensively and processes of the counterpart's reflection have to be introduced into common strategies.

Clearly, more systematic research is necessary to generate better understandings about such processes of cooperation.

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