Between activism and science: grassroots concepts for sustainability coined by Environmental Justice Organizations

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Abstract

Since the early 1980s in their own battles and strategy meetings, the EJOs (environmental justice organizations) and their networks have introduced several concepts of political ecology which have been taken up also by academics and policy makers. In this paper, we explain the contexts in which such notions have arisen, providing definitions of a wide array of concepts and slogans related to environmental inequities and sustainability, and exploring the connections and relations between them. These concepts include: environmental justice, ecological debt, popular epidemiology, environmental racism, climate justice, environmentalism of the poor, water justice, biopiracy, food sovereignty, "green deserts", "peasant agriculture cools downs the Earth", land grabbing, Ogonization and Yasunization, resource caps, corporate accountability, ecocide, and indigenous territorial rights, among others. We examine how activists have coined these notions building demands around them, and how academic research has in turn further applied them and supplied other related concepts, working in a mutually reinforcing way with EJOs. We argue that these processes and dynamics build an activist-led and co-produced social sustainability science, furthering both academic scholarship and activism on environmental justice.

Keywords

Political Ecology, Environmental Justice Organizations, Environmentalism of the Poor, Ecological Debt, Activist Knowledge

Resumen

Desde el inicio de la década de 1980, las OJAs (organizaciones de justicia ambiental) y las redes que ellas forman introdujeron diversos conceptos de ecología política en sus campañas y reuniones para determinar estrategias, que han sido adoptados también por académicos y por tomadores de decisiones. En este artículo explicamos los contextos que dieron lugar a esas nociones, compilamos muchos conceptos y lemas que se refieren a inequidades ambientales y a la sustentabilidad, examinando sus interrelaciones. Dichos conceptos incluyen, entre otros, los siguientes: justicia ambiental, deuda ecológica, epidemiología ambiental, racismo ambiental, justicia climática, ecologismo de los pobres, justicia hídrica, biopiratería, soberanía alimentaria, "desiertos verdes", el lema "la agricultura campesina enfría la Tierra", acaparamiento de tierras, Ogonización y Yasunización, topes al uso de recursos, pasivos ambientales y responsabilidad ambiental empresarial, ecocidio y derechos territoriales indígenas. Estudiamos cómo los activistas de las OJAs acuñaron tales conceptos configurando exigencias políticas a partir de ellos, y cómo los investigadores académicos también los han aplicado y, a su vez, han aportado otros, en un proceso de fortalecimiento mutuo. Estos procesos y dinámicas dirigidos por activistas co-producen y construyen una ciencia social de la sustentabilidad, que apoya tanto el trabajo científico como el activismo, favoreciendo así nuevos logros por la justicia ambiental.

Palabras clave

Ecología Política, Organizaciones de Justicia Ambiental, Ecologismo de los Pobres, Deuda Ecológica, conocimiento activista

Résumé

Depuis le début des années 80, à travers leurs propres luttes et réunions stratégiques, les EJOS (Organisations de Justice Environnementale) et leurs réseaux ont introduit différents concepts d'écologie politique qui ont été repris par le monde académique et par les décideurs politiques. Dans cet article, nous expliquons les contextes qui ont promu l'émergence de ces concepts, et offrons des définitions pour un large ensemble de concepts et de slogans lies aux inégalités environnementales et à la protection durable de l'environnement, et nous explorons les connections entre eux. Ces concepts incluent: La justice environnementale, la dette écologique, l'épidémiologie populaire, le racisme environnemental, la justice climatique, l'environnementalisme des pauvres, la justice hydrique, la bio-piraterie, la souveraineté alimentaire, « les déserts verts », « l'agriculture paysanne rafraichit la terre», la prise des terres (land grabbing), l'Ogonisation et la Yasunisation, les plafonds de ressources, la responsabilité des entreprises, l'écocide, les droits indigènes territoriaux, entre autres. Nous examinons comment les activistes ont inventé ces termes, construit des demandes autour d'eux, et comment la recherche académique les a appliqués, et ensuite comment elle a offert de nouveaux concepts, travaillant de manière symbiotique avec les EJOS. Nous argumentons que ces processus et dynamiques construisent une science du développement durable conduite et co-produite par les activistes, ce qui renforce ainsi la littérature académique et l'activisme sur la justice environnementale.

Mots-clés: Ecologie politique, Organisations de Justice Environnementale, Environnementalisme des pauvres, Dette écologique, connaissance activiste

Introduction

We review a set of concepts of political ecology with origins from outside academia. They have been produced by civil society organizations and often by one specific form of NGO, the EJOs (environmental justice organizations) which are leading the global environmental justice movement. EJOs are organizations that constitute networks; sometimes they are formed by members of a community organized ad hoc in a platform or coordinating committee for a specific cause, sometimes they are permanent groups with lives stretching twenty or more years. On their own or sometimes with the help of sympathetic academics the EJOs have introduced or adopted powerful concepts and principles to analyze and to cope with environmental conflicts. They have produced a "political ecology from the bottom up". There is usually a period of five to ten years between the time when a new concept is introduced by civil society at the cutting edge of the global environmental justice movement and the time when the same concept becomes an object of mainstream research in the social sustainability sciences. Through a review of the definitions and the dates of origin of such concepts, we show that they are thematically connected, being applied at different geographical scales. Here, civil society organizations and academics indirectly strengthen each other's "mission" through an iterative process of examining and analyzing events, claims, strategies, and conflicts.[1]

Environmental Justice

The first concept in our list of activist contributions to the social sustainability sciences is Environmental Justice (EJ) born (in its sociological usage) in the United States, in struggles against waste dumping in North Carolina in 1982. Activist-authors such as Robert Bullard (1990) but also civil rights activists with no academic affiliation and members of Christian churches saw themselves as militants of *environmental justice*. By 1991, a large assembly in Washington DC proclaimed the principles of Environmental Justice. This history is well known. Since the 1980s, hundreds of reports have shown that "people of color" and low-income populations have suffered from greater environmental harm from waste sites, incinerators, refineries, transportation infrastructures than white and well-off communities (Bryant and Mohai, 1992; Bullard, 1990; Pellow, 2000; Varga *et al.*. 2002; Downey and Hawkins, 2008; Lerner, 2005; Sze, 2007; Mitchell and Dorling, 2003). Workers from poor and "minority" backgrounds are more likely to be exposed to toxic pesticides and hazardous waste (Harrison, 2011; Pellow, 2002; Pellow and Park, 2002; Smith *et al*., 2006). Some years ago a new term spread out from the EJ movement, that of *sacrifice zones.* It has been used in Latin America and no doubt it is appropriate for some regions of Africa and Asia. In the US Samuel Lerner (2010) told the stories of twelve communities that rose up to fight industries and military bases that were causing disproportionately high levels of chemical pollution. He called these low-income neighborhoods "sacrifice zones."

HERE PHOTO 1 Environmental justice

The fight against the disproportionate incidence of pollution in predominantly Black, Hispanic or Indigenous communities was seen by activists both as a fight for environmental justice and as a fight against *environmental racism* (a concept coined in 1982 by activist Rev. Benjamin Chavis, a trained chemist).[2] This concept travelled well beyond the United States. Environmental racism means in the EJOs' idiom the bad treatment inflicted on people in the form of pollution or resource extraction on grounds of membership in particular ethnic groups, social class or caste. Thus, one can say that in the

[1] This article draws on reports, books and meetings from two "Science-in-Society" collaborative research projects funded by FP7 programs of the European Commission, coordinated by the ICTA, Universitat Autonoma de Barcelona: CEECEC (2008-10), Civil Society Engagement with Ecological Economics (Healy et al, 2012) and EJOLT (2011-15), Environmental Justice Organizations, Liabilities and Trade (www.ejolt.org). We are also grateful to project CSO2010-21979 on Social Metabolism and Environmental Conflicts.

[2] http://drbenjaminchavis.com/pages/landing/?blockID=73318 (accessed 4 Jan. 2014).

Niger Delta, Shell and other oil companies exhibit "environmental racism". They have shifted the social and environmental costs of oil extraction onto indigenous, poor local communities.

For many groups fighting environmental racism, social class comes second in comparison with the racial discrimination while for other EJOs economic dimensions are first. In India, caste (e.g. ill treatment of Dalits) is an important consideration, while tribal affiliation often counts as in many other countries in the struggles against resource extraction. While in the US "people of color" and poor people are "minorities", in the world at large they are a majority, and therefore this offers a great potential for a worldwide EJ movement.

The struggles against environmental injustice are growing, and the name itself of EJ is used more frequently outside the US. Thus, in Mozambique there is a very active group with the name of Justiça Ambiental (a member of Friends of the Earth International). In Brazil there is a Network of Environmental Justice since 2001 formed by EJOs, unions, indigenous groups and university researchers.[3]

Over the years, the US Environmental Justice movement helped reframe traditional definitions to better fit the realities of the populations EJOs are defending. For instance, in the 1991 First National People of Color Environmental Leadership Summit, EJ groups redefined the environment as a safe place to live, work, learn, a definition that has been used by public health and planning experts as they examine the relation between health and place, e.g. in studying the incidence of asthma (Maantay, 2007). Urban ecology scholars have used this definition as they examine new forms of EJ claims in cities, such as healthy communities or place-remaking and community reconstruction within degraded marginalized neighborhoods (Anguelovski, 2014; Corburn, 2009; Agyeman *et al*., 2003).

Here photo 2 Ecological debt

Popular epidemiology

Evidence of disproportionate incidence of morbidity or mortality can sometimes not be obtained from official statistics because of the lack of health professionals, hospitals or reliable information systems in the areas concerned, making the problem invisible. Hence the rise of so-called "popular epidemiology", a concept of relevance in many struggles inside or outside the United States. Think for instance of efforts by the plaintiffs in the Chevron-Texaco case in Ecuador to gather information in the 2000s related to the 1970s and 1980s incidence of cancer in the Sucumbíos region of the Amazon. They resorted to the memories of the local populations, drawing on studies that proved that such memories concentrated around areas with oil wells, transfer stations, and pools for disposal of extraction water (Martin Beristain *et al*., 2009). *Popular epidemiology* (Brown, 1992, 1997) implies that "lay" knowledge of illnesses from pollution is more valid than (the sometimes non-existent) official knowledge. Popular epidemiology is at least an early warning system, a complement to and partly a substitute for "normal" scientific epidemiological studies.

The concept of "popular epidemiology" fits into the "post-normal science" approach which has been influential in ecological economics (Funtowicz and Ravetz, 1993). The apparent neutrality and objectivity of normal science is criticized because in many situations it makes hard facts explicit whilst concealing both the values and the uncertainties in question, often neglecting local-situated knowledge and hiding hegemonic interests. A similar critique is made by EJ activists, pointing out the need of integrating perspectives, values, and legitimate lay knowledge (Porto 2012a). Post-normal science appeals to or at least accepts in such situations an "extended peer review" with participation of activist or other lay experts. Academics talk also about "street science" through which the daily experiences of residents with contamination and dumping support academic research and traditional professional techniques, and can in turn be used in legal claims and demands (Corburn, 2005).

When detailed and autonomous scientific studies are undertaken analyzing the findings from popular epidemiology, they usually confirm them. However, such studies are often not available, they are

[3] A Map of Environmental Injustices in Brazil with 400 cases has been built by Dr Marcelo Firpo Porto of ENSP (Fiocruz) and collaborators (Porto et al, 2013), http://www.conflitoambiental.icict.fiocruz.br/

not supported by industries or risk makers. Thus, popular epidemiology is not only an early warning system, a complement to and partly a substitute for normal scientific epidemiological studies. It helps to transform affected and vulnerable populations into protagonists, breaking the mechanisms that make their problems invisible (Porto and Finamore, 2012).

Here 3 Popular epidemiology

The environmentalism of the poor

EJOs have used the term *environmentalism of the poor* since the late 1980s in their activist interventions in the many struggles by poor and/or indigenous peoples to defend their livelihoods against resource extraction. The term was used in Peru by agrarian activist and then senator Hugo Blanco in 1991 [4] in an article listing several of such struggles. In Thailand, one main grassroots rural and environmental organization is called (in English translation) the "Assembly of the Poor". Founded in 1995 it grew out of the unrest against the impact of the Pak Mun dam. This is an environmentalism which is in contrast to two other types: the Conservation movement and the Eco-Efficiency (or Ecological Modernization) movement (Martinez-Alier, 2002, 2013).

However, some EJOs find the word "poor" derogatory to impoverished indigenous communities which lived outside the generalized market system and are now dispossessed of their means of livelihood. They prefer to speak of an environmentalism of the people, an *ecologismo popular* (Martinez-Alier, 1992). A *popular environmentalism* would also fit better than *environmentalism of the poor* with movements in rich countries against nuclear energy (since the 1970s) and also for agroecology, permaculture and today's other localist practices of *la décroissance*.

Academics (Guha and Martinez-Alier, 1997, Martinez-Alier 2002, Nixon, 2011) started to use the term Environmentalism of the Poor in 1988-89 (drawing on research in India and Latin America); it was put forward in similar words by Anil Agarwal, the founder of the Centre for Science and Environment (CSE) in Delhi and editor in the mid-1980s of the first "citizens' report" on The State of India's Environment. [5] His co-author and successor, Sunita Narain, often uses the term *environmentalism of the poor* [6] to refer to the many struggles in India against dams, mining projects, nuclear power stations, and also to proactive collective projects for water harvesting and forest conservation. Poor people fight against what the Marxist geographer David Harvey calls "accumulation by dispossession", a concept that more and more activists employ but which was not born in an EJO strategy meeting but in a university seminar. Thus, Sunita Narain repeatedly insists that "*virtually all infrastructure and industrial projects — from mining to thermal and hydel and nuclear power to cement or steel — are under attack today from local communities who fear loss of livelihoods. These communities today are at the forefront of India's environmental movement. They are its warriors. But for them environment is not a matter of luxury — fixing the problems of growth, but of survival — fixing growth itself. They know that when the land is mined and trees are cut, their water source dries up or they lose grazing and agricultural fields. They know they are poor. But they are saying, loudly and as clearly as they can, what we call development will only make them poorer. This is what I have called the environmentalism of the poor…The question is where do we go from here? I would argue, we need to keep listening to these voices, not dismiss or stifle them in the name of anti-growth dissent or even Naxalism … In most cases you will find the concern raised by people is pushed aside as projects are rammed through in the name of industrial development.*

[4] http://hugoblancogaldos.blogspot.com.es/2008/12/el-ecologismo-de-los-pobres.html

[5] The Environmentalism of the Poor, an obituary of Anil Agarwal, 2002, by Ramachandra Guha, http://cseindia.org/userfiles/Anil_Agarwal_EPW_obit.pdf

[6] http://blogs.unimelb.edu.au/environment/2008/09/05/learning-from-the-environmentalism-of-the-poor-to-build-our-common-future/ http://archive.truthout.org/environmentalism-poor-what-democracy-teaching-us67535 https://asunews.asu.edu/20130319_environmentalist_narain

This must stop…. We must understand that our future lies in being part of the environmentalism of the poor, as this movement will force us all to seek new answers to old problems".[7]

Sunita Narain's mention of Naxalism in some regions of India raises the question of whether environmental justice struggles and the environmentalism of the poor are movements essentially non-violent in their methods of resistance against the violence exercised against them. Non-violence was indeed the origin of the EJ movement in the US (building on Civil Rights struggles), it also characterized Chico Mendes' tactics of *empate* in Acre while movements in rural India are very much influenced by Gandhians. We wish this could always be the case. Nevertheless, as Godwin Ojo (2013) writes on the Niger Delta: *for analytical brevity, environmentalism in Nigeria can be categorised under two broad headings, namely non-violent and violent environmental justice struggles. Non-violent refers to the period from the 1970s when environmental issues were becoming visible to 1999 when responses by the fledging social movements were beginning to be noticed. The violent era refers to the period of armed resistance (mainly by MEND), which started in 1999 to 2009. Suffice to say from the outset that both strategies though distinct, may have actually influenced the "leave oil in the soil" campaign.*

In the Niger Delta there has been brutal violence from the state and the oil companies. In many other countries (Mexico, Brazil, Colombia, Philippines, Peru, Indonesia) the loss of human life becomes routine in ecological distribution conflicts. Company security guards, paramilitary groups, the State police and army kill or terrify protesters. One cannot be surprised that some actors resort to violent repertoires of protest. This is not at all, however, a general pattern, rather on the contrary. Moreover, it is often counterproductive.

One additional point needs to be made. First, environmental justice in the sense used here is mainly about intragenerational distribution, without forgetting intergenerational distribution, and including non-distributional dimensions of justice such as recognition and also prevention of participatory exclusions (Schlosbeg, 1999, 2007).

Materialist ecofeminism

Despite the social difficulties in making themselves heard, women are often in the lead in the environmentalism of the poor. Nevertheless, the EJ movements are still trying to come to terms with Feminism, which is an older and increasingly successful movement. There are nevertheless obvious links, summarized for instance by Sandra Veuthey[8]. As she writes, women do not hesitate to challenge political power, local tyrants and armed violence for protecting the natural resources they and their family depend on. Therefore they protect their culture, way of life, sacred places, and livelihood means. There are two ways of interpreting such crucial role in conflicts over oil extraction, mining and logging activities, shrimp farming and tree plantations, and also in urban EJ struggles.

There is a current of "essentialist" ecofeminism where women and men are regarded as distinct as a result of their biological natures. Women are deemed to be biologically closer to nature than men. This has been challenged by activists and scholars arguing for a materialist ecofeminism. This materialist current is studied by feminist environmentalism (Agarwal, 1992), feminist political ecology (Rocheleau *et al*., 1996), socialist or materialist ecofeminism (Mellor, 1997; Merchant, 1992), ecofeminist political economy (Mellor, 2006) and feminist ecological economics (Waring, 1988, Perkins and Kuiper, 2005; Perkins, 2007; O'Hara, 2009).

Despite "participatory exclusions" (Agarwal, 2001), women instigate environmental struggles, sometimes they lead and organize them, sometimes they interact with men in the conflicts, sometimes they confront men through the conflicts, and sometimes men have leading roles in struggles while women constitute the backbone of the movement. Women's role in environmental conflicts has the potential to help achieve environmental justice as well as to simultaneously challenge local masculine domination.

[7] Sunita Narain, in *Business Standard*, 10 Jan. 2011. "Hydel" means hydroelectric in India.

[8] http://www.wrm.org.uy/bulletinfr/152/vue.html

When women take active part in EJ struggles they often redefine their social position within their own culture, while at the same time challenging the global economy (Veuthey and Gerber, 2010, 2012).

Within Feminism, one could do an analysis of the origin of concepts between activism and the academy similar to that in the present article for political ecology and environmental justice. Concepts such as the double standard of sexual behavior, the double burden of work, gender as a social construction, patriarchy, reproductive rights, the importance of caring work and of social reproduction (compared to market production), and indeed the word "eco-feminism" itself (D'Eaubonne, 1974) can be traced sometimes to iconic writings most often produced outside universities. Some were probably born in the streets. For instance, D'Eaubonne's link between lack of women's freedom to exercise reproductive rights and overpopulation, drew on the social movement of radical, feminist Neo-Malthusianism of 1900 that had developed its own non-academic keywords, like *la grève des ventres.*[9]

Working-class environmentalism?

A common view is that workers are ready to sacrifice the environment and even their own health for secure jobs and higher wages. Therefore, there would be much social distance between working class and EJ movements. However, regularly there have been complaints by workers and their unions since early stages of industrialism against bad environmental conditions at work in factories, mines and plantations causing ill health. Although waged workers might lack the emotional attachment to workplaces that indigenous peoples have to their territories or urban dwellers might have to their *barrios*, they are also concerned about their immediate environment if nothing else as members of families. Compared to tribal and peasant populations, workers get money and not livelihoods-in-kind from their workplace. However, labor unions do not only ask for wage increases and reductions of working time, they add improvements in the conditions of work. This also applies the workers in the service sector including domestic work.

Recently high profile court cases because of damage to health from asbestos (both in factories and neighborhoods), from uranium mining, and from the nematicide DBCP in banana plantations have been in the news.[10] Are there possibilities for alliances between EJ movements and working class movements? - asks environmental historian Stefania Barca (2012). She explains that workers often work in hazardous environments, live in the most polluted neighborhoods, and have few possibilities to move to some green uncontaminated area or buy or grow healthy food. Environmental policies should build sustainability from work and around it: this means reorganizing production on the basis of meaningful work, and not simply introducing technical solutions such as incineration of waste or nuclear energy which only allow the continuation of accumulation of profits while introducing new threats to workers and their communities and poor people around the world.

Barca explicitly frames 'working-class environmentalism' as a category within the environmentalism of the poor, comparing struggles in several countries in which labor unions fought for a better environment. Much could be learnt also from contemporary working class struggles in India, China, Bangladesh and many other industrializing countries in this respect. Barca connects the health and safety grievances from unions in their workplaces to similar grievances aired on a society level. She argues that the EJ movement has focused too much on the urban and rural poor and the unprivileged ethnic communities, wrongly excluding working class protagonists. From an environmentalist point of view, André Gorz was mistaken in 1980 in his premature *adieux au prolétariat*. But possible alliances between working class and environmental movements depend on common strategies about the economic-ecological transition including issues on employment and social security.

The Ecological Debt, Climate Justice, Water Justice

[9] http://isecoeco.org/pdf/Neo-malthusianism.pdf

[10] On the DBCP case, Swedish director Fredick Gertten made one film, "Bananas! On Trial for Malice" (2009). He was brought to court by the Dole Food Company. He replied with another film, "Big Boys gone Bananas!" (2011). There is a good book on the DBCP case by Vicent Boix, *El parque de las hamacas*, Icaria, Barcelona 2007.

The social metabolism, i.e. the flows of energy and materials coming into the economy, continues to grow. There has been no dematerialization of the world economy. Contrary to what Chinese bureaucrats, European Commissioners and opportunists of various types assert, the industrial economy based on fossil fuels cannot be a "circular" economy. It is an entropic economy that shifts costs to poor people, future generation and other species. EJOs understand and take part in debates on social metabolism and the energy and material intensities of the economy, but such concepts have not been invented by them. However, they popularize them, using them for lobbying and campaigning, while adapting them (partly in collaboration with "green" research institutions) to their needs. Some academics turn into intellectual activists themselves, as Mathis Wackernagel has done by spreading and refining the "ecological footprint" concept initially introduced by Vancouver urban ecology professor Bill Rees in 1992.

EJOs complain against fossil fuel extraction and metal mining, and also against the extraction of building materials or "aggregates", introducing derogatory terms (like *sand mafias* in India for the groups which extract sand and gravel from river beds and beaches). EJOs understand that even an economy that would not grow, if based on the fossil fuels, would need to go daily to the new "commodity frontiers" to extract new supplies because energy is not recycled. Jason Moore (2000) introduced and defined the notion of commodity frontiers. He derived the term from the concept of "commodity chain", and applied it initially to sugar cane production and precious metals in colonial America in a world systems context derived from the work of Immanuel Wallerstein and André Gunder Frank. There are many recent examples of resource extraction at new commodity frontiers, and not only in the South. For instance, attempts at gas fracking in France, Bulgaria, Romania or Poland have been resisted by local populations.[11]

While energy cannot be recycled at all, materials can be recycled only to some extent. In the last decade global material flows grew by 3.5% per year and only 6 to 9% of extracted materials were recycled (Haas *et al.*, forthcoming). One reason for the low recycling ratio is that a great amount of materials are precisely used for energy. Also waste from biomass fed to humans or animals is usually not recycled. Meanwhile, building materials stay in the economy for a long time and are usually not recycled at the end of their lifetimes. Our economy is entropic, it is not circular. Therefore even a non-growing economy would require fresh materials from the commodity frontiers. This is independent of whether economic policies are neo-liberal, national-populist or Keynesian-social-democratic. Hence the powerful support by Latin American EJOs to new doctrines of *post-extractivism* (Arana, 2013) because extraction of minerals, fossil fuels or biomass at the commodity frontiers is causing terrible socio-environmental damage.

Here photo 4Climate debt (a,b)

Climate change arises from the excessive production of carbon dioxide and other gases, a form of waste. A term from the EJOs that has been successful in the fights against both ecologically unequal trade and climate change is the *Ecological Debt*. In an excellent survey, Warlenius *et al.* (2013) explain: "At least two reports on ecological debt were published in 1992: *Deuda ecológica* (Robleto & Marcelo 1992) and *Miljöskulden* (Jernelöv 1992). The authors of these reports, from Chile and Sweden respectively, were most likely unaware of each other and their reports are quite different in approach and content. The former was an intervention into the global environmental negotiations going on in Rio at the time from a critical NGO, while the latter was a report written for the Swedish Environmental Advisory Council and

[11] Maxime Combes from ATTAC, France, and other "fracktivists" have published blog entries in the EJOLT project in 2012-13, as follows:

http://www.ejolt.org/2012/09/global-frackdown-on-fracking-companies/

http://www.ejolt.org/2013/06/fracking-activists-occupy-chevron-in-poland/

http://www.ejolt.org/2012/02/shale-gas-fracking-in-bulgaria-freezes-under-public-pressure/

http://www.ejolt.org/2013/10/fracking-under-fire-from-canada-to-romania/

intended for a national audience". The first was on the intragenerational, the second was on the intergenerational ecological debt.

There was an alternative treaty signed in Rio de Janeiro in 1992 on the ecological debt from North to South. A Colombian lawyer, J.M Borrero, published a book on the Ecological Debt (Borrero, 1994). Acción Ecológica of Ecuador took the term and the struggle up in 1997, with several publications which included a definition and many examples. According to Acción Ecológica, the ecological debt arises from the plunder of resources (ecologically unequal trade) and also from the occupation by rich countries of disproportionate "environmental space" (a term coined by academics – Weterings and Opschoor – but popularized by civil society) to dump excessive amounts of carbon dioxide in the oceans and the atmosphere which belong to all humans equally (Martinez-Alier 2002). Some governments from countries of the South have also deployed the concept of "ecological debt" (or one part of it, the "climate debt") in international negotiations on climate change. In the COP in Copenhagen in 2009, over 30 heads of government or ministers talked about the ecological debt provoking the irritation of US Ambassador Todd Stern. A few months later, economist Jagdish Bhagwati (2010) argued, against Todd Stern, that a principle of "strict liability" should indeed be operative in climate change in proportion to accumulated past emissions by country.

The origin of the concept of Ecological Debt and many of the theoretical developments around this concept are rooted in Latin American EJOs, the international Friends of the Earth and Jubilee South and other Christian movements (Simms *et al*., 1999). Academics joined in later by conducting calculations and publishing articles and books on the Ecological Debt (Simms, 2005. 2009, Paredis *et al*., 2004, 2008, Srinivasan et al, 2008). While these and other academics (Rice, 2009) gave support to the concept of Ecological Debt, energy economist Olivier Godard (2012) blames its defenders for the abject failure of international climate change policy from Copenhagen in 2009 to Doha 2012[12] instead of acknowledging that an international agreement needs to face squarely the distributional obstacles (Martinez-Alier, 1993) and that this has not been done.

Some activists have looked at "ecological debts" inside a single state, caused by internal colonialism and extractivism. Thus, calculations have been made of the ecological debt to the state of Odisha in India (in Peralta, c. 2007). Other activists decided to use "ecological debt" (rather than the term "environmental liability") for the unpaid socio-environmental damages from particular firms [13]. K W Kapp had indeed written (Kapp, 1950) that capitalism is in essence an economy of unpaid social costs.

Unsurprisingly, it was also EJOs that introduced and developed the concept of *Climate Justice*. Patrick Bond, a former student of David Harvey and active as a member of the Durban Group for Climate Justice, explains that the term emerged during the early 2000s, and rapidly spread around the world. By 2007 even Angela Merkel was naming it as basis for a future global climate policy, and for the German very ambitious target regarding greenhouse gas emissions (minus 90-95% by 2050). According to Bond, the US environmental justice movement had generated a core lineage in 1980s-90s of anti-racist environmentalism which conclusively linked social justice to geographically located ecological problems and transcended 'Not in My Backyard' arguments in favor of a system-transforming narrative. Then came in the 1990s global-scale demands to recognize the "ecological debt" owed by the North to the South, made by groups such as Acción Ecológica, as well as wider-ranging considerations of climate, leading up to alternative proposals at the Kyoto Protocol negotiations of 1997 such as a moratorium on new oil exploration in sensitive areas. (Bond, 2014).

Also very influential was the CSE (India) booklet of 1991, *Global warming: a case of environmental colonialism* authored by Anil Agarwal and Sunita Narain pointing out that there were "subsistence carbon dioxide emissions" vs. "luxury carbon dioxide emissions" (an idea taken up by Shue, 1994). Then in the late 1990s came the Jubilee campaign against Northern financial bullying of the South, comparing the large ecological debt from North to South to the financial debt from South to North and

[12] http://globalgovernanceprogramme.eui.eu/ecological-debt-and-historical-responsibility-revisited-the-case-of-climate-change/

[13] http://www.ejolt.org/2013/01/is-umicore-really-the-most-sustainable-company-in-the-world/ Also Meynen's and Sebastien's chapter in Healy et al, 2012.

introducing within the World Council of Churches the concept of climate debt (Peralta, c. 2007). Another fact was, according to Bond, the 2000s global justice movement which came to the fore with the December 1999 Seattle WTO protest and challenged corporations and multilateral institutions with greater force than in prior years.

Turning specifically to *Climate Justice*, a 2000 event in The Hague sponsored by the New York group CorpWatch was the first known conference based on this term. CorpWatch had published a document in November 1999 authored by Kenny Bruno, Joshua Karliner and China Brotsky where one can read: "Climate Justice means, first of all, removing the causes of global warming and allowing the Earth to continue to nourish our lives and those of all living beings. This entails radically reducing emissions of carbon dioxide and other greenhouse gases. Climate Justice means opposing destruction wreaked by the Greenhouse Gangsters at every step of the production and distribution process -- from a moratorium on new oil exploration, to stopping the poisoning of communities by refinery emissions -- from drastic domestic reductions in auto emissions, to the promotion of efficient and effective public transportation".[14]

Four years later, the Durban Group for Climate Justice was launched, and remains an important strategic listserve for those opposed to carbon trading and other false solutions to the climate crisis such as CDM projects (cf. Larry Lohman's critique of carbon trading [15]). The sometimes inchoate advocacy movement known as Climate Justice Now! began in 2007, and played a role in grassroots advocacy as well as at global-scale UN climate summits. The highest-profile of these, with 100,000 protesters demanding a strong agreement from negotiators, was in Copenhagen in 2009. Europeans had formed a Climate Justice Alliance (CJA) whose 'Reclaiming Power' protest was repressed by the Copenhagen police. A network on climate justice had been formed at COP 15 in Bali, 2007 (Roberts & Parks, 2007, 2009). The Third World Network from Penang (2009, 2010) gave strong support to the notion of the ecological debt before Copenhagen.

Shortly after the failure of the Copenhagen summit, the Bolivian government led by Evo Morales and his then UN Ambassador Pablo Solon hosted a 2010 conference in Cochabamba, attended by 35,000 activists, including 10,000 from outside the country. Pablo Solon later lost his role as Ambassador to the UN and went back to civil society activism after 2011. The Cochabamba conference of 2010 adopted several demands that, as Patrick Bond explains, were anathema to mainstream UN climate politics: 50 per cent reduction of greenhouse gas emissions by 2017; stabilizing temperature rises to 1ºC and limiting greenhouse gas concentrations to 300 parts per million CO_2; acknowledging the climate debt owed by developed countries; full respect for human rights and the inherent rights of indigenous people; universal declaration of rights of Mother Earth to ensure harmony with nature; establishment of an International Court of Climate Justice; rejection of carbon markets and commodification of community indigenous forests through the REDD program; promotion of measures that would change the consumption patterns of developed countries; end of intellectual property rights for technologies useful for mitigating climate change; and payment of 6 per cent of rich countries' GDP to addressing climate change.

Another initiative from civil society has been led by activist author Bill McKibben of the United States who in 1988 published a popular book on climate change (*The End of Nature)* and in 2007 started *the 350ppm movement*, supported by top climate scientists such as James Hansen. They criticize extraction of fossil fuels, have been arrested in 2013 in demonstrations at the White House against the Keystone XL pipeline, and have gained a large international following. They criticize the European Union politically expedient acceptance of 450 ppm of CO2 concentration in the atmosphere as a threshold.

Here photo 5 Peasant agriculture cools down the earth

Biopiracy

[14] http://www.corpwatch.org/article.php?id=1048

[15] http://www.dhf.uu.se/publications/development-dialogue/carbon-trading-a-critical-conversation-on-climate-change-privatisation-and-power/ See also the EJOLT report n. 2 for a critique of CDM cases in Africa, 2012.

The Ecological Debt arises from two main causes, ecologically unequal trade and the disproportionate use of environmental space. While "ecologically unequal trade" is an academic concept that Hornborg (1998) helped to coin (with Bunker, 1985, Altvater,1993; see Hornborg *et al*., 2007), one item of such unequal trade had earlier been discovered and named by civil society. *Biopiracy* was the name given by Canadian activist Pat Mooney of RAFI in 1993, and popularized by Vandana Shiva drawing on her activist role in cases in India (Mooney, 2000, Shiva, 1997), denoting the appropriation of genetic resources (in medicinal or agricultural plants) without any recognition of the original knowledge and property rights of indigenous peoples. The word "biopiracy" has been used in many complaints by EJOs in the last twenty years. Academics writing in scientific journals and doctoral theses have also used the term "biopiracy"(not always quoting the original source). Even state authorities in countries like Brasil have started to use this term (Martinez-Alier, 2012). Examples of this type of robbery are indeed numerous throughout history and today (Robinson, 2010). They include the appropriation of human genetic resources of indigenous peoples without previous and informed consent. Sometimes the resources in question or some of their properties have been patented.

Water Justice

Meanwhile, the rising concept of *Water Justice* or *Hydric Justice* is associated to university professor Rutgerd Boelens (Wageningen University) but he has been working so closely with activists for many years that he himself would no doubt like Water Justice or Hydric Justice to be seen as an EJO concept (Boelens *et al*., 2011, Isch *et al*., 2012). The favourite slogans of this group of activist researchers are "water runs towards power" and "water runs towards money" - unless stopped by civil society movements.

The Water Justice concept can refer to multiple aspects, from the Human Right to Water and Sanitation as recognized by the UN General Assembly in July 2011 to management models. In the 2000s, one of the most important events for EJOs was the 2003 World Water Forum in Kyoto[16]; where strong opposition arose against the pro-privatization World Water Council's claim that there was a "consensus" on a corporate-controlled future for water. Water was not seen as purely an issue for conservationists and environmentalists but as an all encompassing vital topic. The strong commitment of the Council of Canadians was a key contribution to build an alliance among EJOs on water issues in 2003 in Kyoto with its own "Vision Statement", starting to build a movement under the slogan *Water is Life*. From there on, an Alternative World Water Forum (FAME, from the French acronym) has taken place in parallel to the official water forum and in the same cities (Mexico 2006, Istanbul 2009 and Marseilles 2012), bringing together EJOs, advocacy groups, scholars, journalists, local activists and committees. It has been a watchdog on policies pushed forward by the World Bank, the EU and transnational corporations, as well as governments. There is now a *Water Movement* at a global scale. It cooperates with some local governments and also with workers' unions in the public services in order to defend a public management model and to profit from the technical skills and knowledge of the workers. The network Reclaiming Public Water, established through the Transnational Institute, supports and backs efforts to bring water management back under public control.[17]

But Water Justice is not only about urban water management. Many pushed for the recognition of the Human Right to Water (HRW) at UN level in 2011. The work of Pablo Solon and Maude Barlow (among others) was crucial for this battle. Food and Water Watch, Red Vida at the pan-American level, Focus on the Global South, Jubilee South, the African Water Movement are working towards actions and tools for the concrete application of the HRW. An important actor is again the Council of Canadians' Blue Planet Project, a network working with grassroots struggles to protect democratic, community control of water and sanitation. There is also an activist-academic network for Latin America, called Waterlat.

[16] http://www.waterforum.jp/en/home/pages/index.php

[17] The website www.waterjustice.org, born at the World Social Forum in Mumbai in 2004, provides a collective source of information while www.remunicipalisation.org offers a tracker tool for increasing visibility of such experiences.

HERE PHOTO 6 Water Justice

At the European level, the Italian referendum "*2 Sí per l'Acqua Bene Comune*" in 2011 was a turning point. Defining water not merely as a good or service, the proponents of the referendum pushed forward a new concept where water is considered as a *commons*, which cannot be treated as a mere service subject to monetary valuation. The debate has become very animated in Europe with the remunicipalization of water supply services in Paris with Eau de Paris and Naples with Aqua Bene Comune. On 10th and 11th December 2011, the *European Water Movement* was launched in Naples. In its Manifesto, not only privatization-related issues are dealt with. It states that the movement aims to "reinforce the recognition of water as a commons and as a fundamental universal right, but also to take into account the health of ecosystems" searching strategies with the wider ecological movement[18].

Water Justice and Commons have become therefore intertwined concepts, which cannot be separated. Such connections have been taught by social movements in India with the slogan *Jal-Jungle-Zamin*.[19] Management plans cannot artificially split them into different departments or state agencies. High water-impact projects such as dams for hydropower or irrigation purposes, thermal power plants, metal mining, massive timber logging, Special Economic Zones, monocultures, interlinking of rivers need to be analyzed in a comprehensive way related to social justice, entitlements and fair redistribution. As regards dams, canals, hydropower plants, more and more groups are talking about Land and Water grabbing as inseparable issues. National networks such as the MAB in Brazil (*movimento dos atingidos por barragens*) have arisen in many countries. MAB is particularly advanced also in term of alternative practices related to energy sovereignty and democratization of energy production and consumption. The International Rivers Network has provided much information and support to such anti-dam movements (McCully, 1996).

The World Commission on Dams was an initiative of civil society reporting its conclusions in 2000. Among its members there were representatives of business and of the World Bank, and also of conservationist organizations. It arose because of the strength of resistance movements against dams, the most visible being at the time the Narmada Bachao Andolan in India well represented by Medha Patkar. The WCD's conclusions went directly against much that had been written before in favor of dams, and also against the procedure of cost-benefit analysis for deciding on dam building. The WCD report was sensitive to non-monetary valuation languages finding that large dams provide important water and power supply services, but that the social and environmental sacrifices that they impose are often unacceptable. The WCD estimated that large dams had displaced 40 to 80 million people, and that many of these people were impoverished in the process. However, its recommendations have not been implemented.[20]

Anti dam movements continue to denounce water enclosures along with forced acquisition of land, diversion of rivers, dispossession and displacement of rural and indigenous communities inhabiting territories rich in biodiversity and water sources. The Brazilian MAB and the struggle against the Transposition of the San Francisco river in the Northeast, the MAPDER network in Mexico, the successful campaign Save Hasankeyf (and save Kurdish identity), the campaigns Patagonia Sin Represas and Ríos Vivos in Latin America, the complaints from the Mekong riverine communities in Southeast Asia, are examples of articulated opposition movements to large and destructive damming projects.

Movements for water justice have learnt to use metrics developed in academia (virtual water, water footprint) and also concepts such as "minimum ecological flow". In Spain, in the struggles against

[18]The Naples Manifesto is available at http://europeanwater.org/about-the-european-water-movement/naples-manifesto

[19] Interestingly, one main spokesman for the new party AAP in India, Yogendra Yadav, has said: "… the most creative energy in our public life has not come from within politics proper but from outside politics — from people's movements on issues such as displacement, Dalits, farmers, women, right to food, right to information and above all, *jal* , *jungle* , *zameen* (water, forests, land). The difficulty is that this energy did not have a political expression, hope, and a political vehicle. In my dream script, the AAP is the natural political hope for these energies". (24 Dec. 2013, http://www.thehindu.com/todays-paper/tp-opinion/tapping-the-transformative-energy/article5495629.ece).

[20] http://www.internationalrivers.org/campaigns/the-world-commission-on-dams

inter-basin water transfers, a new term appeared c. 2000, *The New Water Culture (Nueva cultura del agua)* which became a successful political slogan. It rooted itself in the European Water Framework Directive to emphasize that water reaching the sea was not wasted at all. In India, confronted with the fact that the Ganga and its tributaries were being dammed in Uttarakhand, the director of the CSE Sunita Narain was reported to be asking for a minimum "ecological flow" of 50 percent in all projects in the winter season before the monsoon.[21]

The water issue has also entered the top priority list of groups working against the Financialization of Nature and Environmental Services[22]. Antonio Tricarico from the organisation Re:Common wrote that this financial capitalist approach *goes far beyond the current privatization of water services and utilities and would require a significant increase in the production of fresh water through desalinisation, purification and so on, as well as the storage, shipping and transportation of water through a new network of dams and large-scale canal systems to connect different water basins. Such a set-up is needed to create 'large water trading', meaning the process of buying and selling water access entitlements…* [23] Groups denouncing the Financialization of Naturee held various meetings at the FAME in Marseilles[24], at Rio+20, at the 2013 World Social Forum in Tunis and warn against the growing commodification of natural resources and environmental services (beyond water) to provide a new sphere of accumulation to capitalism through new financial assets.[25]

The defence of the commons

The *Guerra del Agua* (the "water war") in Cochabamba in April 2000 stays in the memory of water justice activists; the population of the Bolivian city took the control of the city water supply system after violent riots to stop corporate control over water supply; the companies Bechtel, Edison and Abengoa had to leave and civil society regained control over the resource. The international Water Movement has drawn lessons from this and has managed to link the issue of water management control with democracy and the commons, which are now concepts which are never split apart.

As noticed here, a new term is gaining strength in recent years in EJ struggles, *The Commons movement* (c.2008). The commons are seen as a crucial sector of the economy which must be defended to preserve decommodified access to food, water, housing, forests, clean air (and also to resources in the internet). Warnings against commodification can be traced back to the young Karl Marx's critique of forest privatization in the Rhineland that prevented poor people from obtaining fuelwood and non-timber products. EJOs defend the commons, they dislike Hardin's 1968 concept of the "tragedy of the commons" (which mixed up "open access" with commons), and they accept the opposite concept, "tragedy of enclosures" (Martinez-Alier, 2002). EJOs do quite often praise the work of Nobel economics laureate Elinor Ostrom collecting cases of well functioning commons (Ostrom, 1990).

The "Defence of the Commons" is nevertheless an old notion going back intellectually at least to Karl Polanyi, E P Thompson ("moral economy of the crowd", 1971), and in South America to Florencia Mallon's *The defence of community in Peru's central highlands* of nearly thirty years ago. Revolutionary agrarian and indigenous movements in Mexico in 1910 with Emiliano Zapata, in Bolivia in 1952, have

[21] http://timesofindia.indiatimes.com/home/environment/developmental-issues/Dams-may-dry-up-Ganga-warns-ministerial-group/articleshow/19485134.cms

[22]See for example the video spot "Financialization of Nature" produced by SOMO, Food & Water Europe, Friends of Earth, Carbon Trade Watch, WEED, Ecologistas en Acción, Aitec and others at http://vimeo.com/43398910

[23]http://www.un-ngls.org/gsp/docs/Financialisation_natural_resources_draft_2.pdf

[24] http://www.fame2012.org/en/2012/02/26/climate-and-financialization/

[25] UN support for Payment for Ecosystem Services (PES) as pushed by the UNEP project TEEB (2008-11), *The Economics of Ecosystems and Biodiversity*, is part of this trend.

defended the commons (the *ejidos*, in Mexico).[26] In Eastern Europe and Russia, the aspiration to a socialism based on peasant communes goes back to the *narodniki* from the 1870s to the 1920s. Their slogan "Land and Freedom" was taken up in Mexico and is today used in Peru (*Tierra y Libertad*, which could more properly be *Tierra, Agua y Libertad).*

The defence of the commons has a long history in many countries, with different social and political protagonists. Thus, in Britain, the "This Land is Ours" movement (in which the now well-kown environmental journalist George Monbiot was involved), was a commons movements in the 1990s with a high profile land occupation in London of the Wandsworth brewery site [27]. Some centuries before, there had been in Britain many acts of resistance defending the commons against enclosures, possibly going back to Gerrard Winstanly's *Diggers* of mid 17th century. Much later, around 1900, a more urban type of movement was present in Olivia Hill's campaign against building up of suburban woodlands in London, helping to save Hampstead Heath. She was one of the founders of the middle or upper class National Trust set up to preserve places of historic interest or natural beauty. Similar accounts of pro-commons movements before an environmental discourse was present could be produced for many countries.

In the contemporary scene, De Angelis' and Negri's defence of the commons inspire some activists although they seem to deliberately leave aside any thought on social metabolism (tons and joules, Fischer-Kowalski and Haberl 1997) and the connection to the global EJ movement, not developing any specific discourse on the environment.[28]

Here photo 7 Biopiracy

Biomass conflicts

A range of EJO concepts and policies have been borne of environmental injustices related to biomass. Complaints against tree plantations of eucalyptus, acacia, gmelina for wood or paper pulp, depriving local people of land and water, gave rise twenty years ago to the slogan and movement "*Plantations are not forests*" (Carrere and Lohman, 1996, and EJOLT report n. 3). The World Rainforest Movement collects and spreads information on such tree plantation conflicts and proposes a change in the FAO definition of forest, to exclude tree monocultures which are more properly called *green deserts.* [29] The term "green deserts" has its origins in Brazil where local communities used it to refer to the eucalyptus monocultures. In 1999, together with civil society organizations they formed a network that carried the term in its name: *Rede Alerta contra o Deserto Verde*. The term is now used by activists and sympathetic researchers to refer to any tree plantations (FASE and TNI, 2003; Emanuelli *et al*., 2009).

In another related development, the global environmental justice movement refused in the 2000s to use the environmentally benign sounding term "biofuels" for biomass based fuel production. At the World Forum on Food Sovereignty held in Mali in March 2007 representatives of rural movements, women's movements, fishermen, shepherds, environmentalists and scientists reached a consensus to refuse the term "biofuels", and use instead the word "agrofuels" because the prefix "bio" with its positive connotation was totally out of place.[30] The ETC group, founded by Pat Mooney, formerly of RAFI, partly

[26] For today's *zapatismos* from a political ecology viewpoint, see Víctor Toledo's articles in *La Jornada*, Febr. 2013. http://www.jornada.unam.mx/2013/02/01/opinion/028a1pol http://www.jornada.unam.mx/2013/02/15/opinion/024a1pol

[27] http://www.tlio.org.uk, http://www.tlio.org.uk/campaigns/wandsworth/puremonb.html

[28] Massimo de Angelis authored *The Beginning of History: Value Struggles and Global Capital* (Pluto, London, 2007) and he is editor of The Commoner http://www.commoner.org.uk/ while Antonio Negri published *In praise of the commons : a conversation on philosophy and politics* with C. Casarino (Minneapolis : Univ. of Minnesota Press, 2008) and *Commonwealth* with M. Hardt (Cambridge: Belknap Press of Harvard University Press, 2009).

[29] http://pulpinc.wordpress.com/2008/09/23/wrm-tells-fao-that-plantations-are-not-forests/

[30] http://www.grain.org/es/article/entries/607-latin-america-joao-pedro-stedile

consisting of former GRAIN and Friends of the Earth activists, exposes the term "bioeconomy" as window dressing. (It also criticizes "geoengineering" experiments).[31]

Food sovereignty was introduced by Via Campesina, an international movement of farmers, peasants and landless workers, at the World Food Summit in 1996 (GRAIN, 2005). As Via Campesina defines it, "food sovereignty" is the right of peoples to healthy and culturally appropriate food produced through sustainable methods and their right to define their own food and agriculture systems. It develops a model of small scale sustainable production benefiting women, communities and their environment. It puts the aspirations, needs and livelihoods of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations that have come to dominate the global food system.[32] The concept has been embraced by a broad range of social actors and organizations that raise their voices against GMO crops and "biopiracy", and in favour of peasant agriculture and "farmers' rights to save, exchange, and breed seeds and crop varieties"(McAfee, 2008, GRAIN, 2005). Moreover, the concept has come to be recognized by the UN Special Rapporteur on the right to food, Oliver de Schutter (2012).[33] In this way "food sovereignty" goes far beyond the older concept of food security by emphasizing self-determination. Thus in Mexico there has been a strong movement under the name *En Defensa del Maiz* in support of peasant agriculture and against imported or Mexican-grown transgenic maize that threatens and "contaminates" the local varieties in this centre of origin on maize cultivation.

In Brazil in the struggle against the use of pesticides in monocultures, the concept of *agro-toxics* (instead of pesticides) was introduced by environmentalists with such success that it was officially acknowledged by the government in a national law highlighting the importance of related health and environmental problems.

A small international EJO and think tank called GRAIN (active already in the 1980s and 1990s in the fights against agricultural "biopiracy") introduced the term "*Land-Grabbing*" for the new brutal wave of land acquisitions in Southern countries for new plantations for exports.[34] GRAIN also published the first statistics on land-grabbing. The World Bank is trying to find a less aggressive term, for instance "land acquisition" and even "land sharing" while academics (such as the editors of the *Journal of Peasant Studies*) sponsor conferences and special issues on "land grabbing". Meanwhile, a new policy against climate change has been deployed by GRAIN and Via Campesina since about 2006 summarized in the slogan "*Peasant Agriculture cools down the Earth*" (Martinez-Alier, 2011). All such concepts have given rise to large waves of academic research but they all were born outside the universities and research institutes.

Some authors like the very wide term of "land conflicts" but the specific concepts analyzed in this section (including *land grabbing* conflicts) arise from injustices in the appropriation of biomass. Not all land grabbing concepts are about biomass. For instance, there is land grabbing for price or rent speculation in urban situation and related to public works. But the large wave of land grabbing in many countries has to do with crops, pastures and tree plantations. They are different from conflicts on mining or dams, or from conflicts on the use of urban space, although they all take place on land.

For instance, some international EJ networks such as *Mines and Communities*, or in Latin America, the very active OCMAL (Observatorio de Conflictos Mineros de América Latina) or the listserve *No a la Mina* (from Esquel, Argentina), were born from conflicts on mining. They are not focused on biomass conflicts and land grabbing but on struggles against open cast mining (therefore including "byproducts" such as water conflicts, soil pollution conflicts and indeed also land use conflicts but with mining remaining the main focus). Conflicts on sea fisheries between industrial trawlers and artisanal fishermen take place offshore, and they are also biomass conflicts. Analytically in the EJOLT

[31] http://www.ejolt.org/2013/01/geoengineering-conflicts-the-etc-map/

[32] http://viacampesina.org/en/index.php/organisation-mainmenu-44 (accessed March 28th, 2013)

[33] http://lapress.org/articles.asp?art=6630 (accessed March 28th, 2013)

[34] http://www.grain.org/article/entries/4479-grain-releases-data-set-with-over-400-global-land-grabs

project we keep social metabolism and commodity chains (from resource extraction to transport to waste disposal) as the guiding threads of our work. So, a conflict on coal or copper mining is classified under the commodity in question although it is likely to become also a conflict of access to water right and indeed it is also a conflict on land appropriation.

A note on "extractivism"

The word extractivism as used by Eduardo Gudynas (researcher at a civil society organization CLAES, Latin American Centre of Social Ecology in Uruguay) and Alberto Acosta (researcher at FLACSO, Ecuador and former Minister for Energy and Mining) refers to the exploitation for export of exhaustible resources or also of renewable resources (wood, fisheries, soil fertility) so that they become exhaustible. In Latin America, both "neo-lib" and "nac-pop" presidents such as respectively, Sebastián Piñera and Juan Manuel Santos (neo-lib) or Rafael Correa and Cristina Fernández and even Pepe Mujica (nac-pop), favour extractivist export economies and are criticized for it.[35] Partisans of EJ tend to dwell on the various aspect of the "resource curse". There are two varieties of extractivism, compensatory or redistributive extractivism and neoliberal extractivism (Gudynas,2012). A move to *post-extractivism* means then a transition to a permanent or sustainable economy based on solar energy and renewable materials. It could be facilitated by quotas and taxes on raw materials exports.

However, there is need for clarification because the Brazilian struggles against deforestation in Amazonia from the time of Chico Mendes in the 1980s, gave a different meaning to the word *extractivist reserves*. The term has meant something good (Burke, 2012). Seeing that the conversion of forests into pastures for cattle increased so-called "production" (because something that was outside the market was brought into the market), the rubber tappers (*seringueiros* and anthropologist Mary Aleggretti) invented the new term, "extractivist reserves", that acquired a legal meaning after Chico Mendes' assassination in Acre in December 1988 to denote areas that would strictly maintain the standing forest, where the latex from the rubber trees and the collected Brazil nuts (*castanha do Pará*) would be taken by local inhabitants for selling, where small scale agriculture, fishing and hunting could be practiced for subsistence while other fruits and medicinal plants could be sustainably harvested. [36] A few year later, the fact that the forests fulfilled other ecological functions (water recycling, carbon absorption) became common knowledge and gave further arguments for the so-called "extractivist reserves" demarcated by law. This policy has not stopped the deforestation of Amazonia. They have been many deaths of people who try to keep the forests intact. In a repeat in the Xapurí crime against Chico Mendes, in 2011 two known activists defending an "extractive reserve" in Pará were assassinated, José Cláudio Ribeiro da Silva and Maria do Espírito Santo, near their home in Nova Ipixuna fifty kilometers from Marabá.[37] Notice nevertheless the two (and opposite) meanings of "extractivism", or rather the peculiarly Brazilian positive meaning of "extractive reserves" born in EJ struggles against deforestation. So, we can write that some of the big mining and hydroelectric investments in Brazil under presidents Lula and Rousseff (such as the Belo Monte dam) are the epitome of Latin American extractivism, threatening some of the so-called "extractivist reserves" (in the Brazilian sense of the term).

Territory

In the EJOLT project conflicts are classified according to the commodities in question, for instance, mining conflicts or oil and gas extraction conflicts or biomass conflicts. This is a socio-metabolic approach that includes resource extraction, transport, and also the conflicts on waste disposal at the end of the "commodity chains". Other principles of classification are possible, e.g. according to whether air or water pollution or soil contamination take place. Now, it is obvious that all ecological

[35] http://triplecrisis.com/marx-and-president-correas-extraction/

[36] On the role of MaryAllegretti as an "action-researcher", see the interview with her by Adriano Belisário in 2009 in http://www.revistadehistoria.com.br/secao/gente-da-historia/chico-mendes-vivo-latex

[37] Felipe Milanez, http://www.ejolt.org/2013/04/cruelty-and-impunity-in-the-amazon/

distribution conflicts necessarily take place in a territory - even the conflicts on ocean acidification or on changing rainfall patterns caused by climate change.

The notion of *territory* is deployed with special intensity in some conflicts. Indigenous communities have claimed territorial rights with ever growing intensity, and they have historically used the concept of "territory" to refer to the space in which they develop their physical, cultural, social, spiritual, political and economic lives. Indigenous and other rural communities have strongly fought for respect for the special and ancestral relationship they have to the spaces they have traditionally occupied. As part of their fight, they have claimed the international recognition of their right to the territory. This right was finally recognized in the ILO (International Labour Organization) Convention 169 adopted in 1989 and ratified by a number of states, providing for "previous consultation" before there is exploitation of resources in the territory in question. Moreover, such rights have been recognised through regional human rights systems (for example the Inter-American System for the Protection of Human Rights) and national constitutional systems. In other countries, indigenous people also have in theory a higher degree of protection, as is the case with the adivasi territories in India, even if the country is not a signatory of the Convention 169.

The concept of *territory* is not only used by indigenous populations but also by other communities who have a special relation with the spaces where they have historically lived in, for example, afro-descendants living in *quilombos* in Brazil or in *palenques* in Colombia[38] or by peasant communities ethnically belonging to national majorities. One strategic use of this concept is to defend communitarian, collective properties instead of individual ones. In many urban struggles, as we shall see in the next section, the similar notion of "place" is very much present in the vocabulary of socio-environmental conflicts.

As the concept of "territory" denotes a special intensity of human-nature interactions perhaps including *sacredness* of mountains or rivers, it has been central to some academic research on political ecology as illustrated by Arturo Escobar's work (Escobar, 1998 and 2008). Sacredness is not commensurate with market values. For instance, if a forest in India is a "sacred grove" (an institution studied by Madhav Gadgil, 1976, 1993) it should be preserved. Money cannot buy something which is sacred. Notice that in India there are also "wildlife sanctuaries", an official (post-colonial) designation by the secular state that curiously seems to imply sacredness.

There are also National Parks and other areas excluded in principle from resource extraction. Exclusion from the market opens sometimes possibilities for collaboration between the Conservationist movement and the EJ movements defending indigenous territories and communitarian property. However, the international Conservationist movement is largely financed by the extractive industries, and it has been moving since Rio de Janeiro 1992 towards monetary valuation and payment for environmental services as the main policy instrument, distancing itself from the global EJ movement.

HERE 8 Land grabbing

Transport, Waste disposal and Urban issues

Traditionally, urban communities and the EJOs around them have denounced the disproportionate burden suffered by people of color and low-income communities in regards to toxic waste and other locally unwanted land uses. Recently, urban EJOs defending the role of "*recyclers of waste*" (against expropriation of waste by commercial firms and against incineration often disguised as "energy valorization") have argued that recycling helps against climate change. Unions of *urban waste recyclers* have gone to UN climate change conferences as so-called "cooling agents", supported by an international EJO called GAIA which is active against incineration of waste (Schindler *et al.* 2012). The representative

[38] For definitions of *territory* by indigenous, peasants and afro-Colombian communities see http://www.pazdesdelabase.org/index.php?option=com_wrapper&view=wrapper&Itemid=253 (accessed April 2, 2013)

of the union of recyclers of waste of Bogotá (Colombia), Nohra Padilla, was awarded a Goldman Prize in 2013.[39] It is often claimed by NGO that *zero urban domestic waste* can be achieved.

There are some EJOs and networks -such as the Basel Action Network, BAN- fighting *toxic colonialism* or *toxic imperialism* or even *toxic terrorism*, namely the long-distance export of waste in various forms from rich to poor countries which in theory is forbidden by the Basel Treaty. Examples of such exports are ship-breaking in India or Bangladesh (Demaria, 2010, and EJOLT report n. 1, 2012), chemical residues or nuclear waste, electronic waste. [40] The famous conflict on mercury exports to South Africa by Thor Chemical during the apartheid regime was linked to the birth of Groundwork, an EJO led by Bobby Peek, another recipient of a Goldman Environmental Prize.

In Nigeria, a well known case in the 1980s influenced the growth of the EJ movement that was to become so strong in the Niger Delta against Shell. This was the Koko dumping of illegal shipments of about 4000 tons of toxic waste from Italy in 1988. "The uproar this toxic-terrorism spurred reverberated in the national public discourse. The struggle for compensation and the eventual payment of N39.7 million (250, 000 USD) to the victims by the Nigerian Ports Authority, and the government's promulgation of Decree 42 on harmful waste [Special Criminal Provision] prohibiting the transportation, import, sale and trade of harmful waste in Nigeria was key in creating awareness and bringing environmental issues into the public domain": Nigeria was not only the first African country to ratify the UN Basel Convention but considerably influenced the text (Ojo, 2013). There have been other documented similar cases in West Africa (e.g. waste dumping by Trafigura in Ivory Coast in 2006) giving rise to court cases.[41]

Industries make profits from waste, which EJOs denounce. The legal dumping of toxic waste in Warren County, North Carolina, in 1982 was the spark that ignited the self-conscious EJ movement. In Italy, the Legambiente introduced the word *Ecomafia*[42] to describe the corruption surrounding waste disposal in Campania and other areas, where there is a flourishing industry charging business and municipalities for waste disposal at reduced rates which become net profits because the waste is dumped illegally and without any treatment in caves, old mines or fields in mafia controlled territories (Massari, 2003; Greyl *et al.*, 2012; Armiero and D'Alisa, 2012).

The urban EJ agenda has become multi-faceted. In the transportation area, local groups in rich or poor cities demand *cyclist and pedestrian rights* (such as the cycle rickshaw drivers unions in India or the *Critical Mass* social movement in 300 cities of the world, mainly in the North). *Critical Mass* seems to have started in San Francisco around 1992 (Carlsson *et al*., 2012). A "critical mass" is defined as an **"**organised coincidence" of cyclists that periodically celebrate a collective bike ride in the streets; its purpose is to show to the society the great advantages that bicycles could provide to urban mobility. This is usually backed by feminist arguments, since (middle age) men in many countries constitute the bulk of car users. In Germany, citizens' action groups (BBU) and Friends of the Earth (BUND) have demanded cyclist and pedestrian rights since the early 1980s. A network of NGOs and "green" institutes initiated by them emerged, and in 1990 Markus Hesse coined the term *Verkehrswende* (traffic turnaround) denoting a basic reorientation of planning priorities towards citizens' rights which is today commonplace political parlance. Typical municipal transport plans spell this as equal shares of bicycles, trams/light rail and cars in non-pedestrian urban mobility.

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[39] http://www.ejolt.org/2013/03/victory-for-waste-pickers/ The issue of urban waste is Bogotá exploded politically in late 2013, when there was an attempt to remove left-wing mayor Gustavo Petro after he dismissed garbage collection contractors and tried to replace them by a city-run service based on recyclers unions. Garbage accumulated in the streets because the former contractors did not provide transport in the transition phase.

[40] On shipbreaking, there is an international network against this type of environmental injustice, http://www.shipbreakingplatform.org/off-the-beach-platform-2009-report/

[41] http://www.ejolt.org/2012/09/the-toxic-truth-about-trafigura-and-the-total-lack-of-environmental-justice/

[42] http://www.legambiente.it/contenuti/progetti-e-azioni/rapporto-ecomafia

EJOs appeal to *transit justice* or *transport justice*, that is the right to well-connected, affordable, and clean transit systems in cities (Agyeman and Evans, 2003; Loh and Eng, 2010; Loh and Sugerman-Brozan, 2002; Lucas, 2004). For instance, in the Bay Area in California, The Transit Riders for Public Transit (TRPT) Campaign protests against structural inequities in transport funding and investment which prioritize suburban expansion over the preservation of the existing system. In return, academics have examined spatial and social discrepancies in clean and affordable transport access, and pinpointed the variety of inequalities that are at the core of public transit in US cities -- in terms of ridership, subsidy, security, and crowding (Soja, 2010).

On the other hand, numerous grassroot groups have raised complaints against controversial transportation of merchandise or passengers, and other large infrastructures. For instance, they have opposed the Keystone XL pipeline in the United States, the new railway line in Val de Susa in the No TAV movement in Italy, the Manta-Manaus project in Brazil, Peru and Ecuador, or the TIPNIS road in Bolivia. There is now a growing European Forum against Imposed and Useless Projects (*Grands Projets Inutiles et Imposés*). In 2012 it held its 2nd meeting with 8000 participants against the planned airport of Notre Dame-des-Landes. This took place over five days in Brittany near Nantes from 7 to 11 July. The 3rd Forum was held in summer 2013 in Stuttgart, the site of a resistance movement against a grand, new, superfluous train station.[43] There are many other groups around the world complaining against damage by transport. One of great interest is *Justiça nos trilhos* (justice in the railways) in northern Brazil which itself is part of the Brazilian EJ movement and at the same time a component of an international network complaining against the Vale mining company. The movement draws attention to the accidents, noise and pollution caused by the enormous iron ore exports transported by the railway from Carajás to the coast. [44]

Going back to urban issues, food supply in US cities has come to be a worrisome issue, with community advocacy centered around rights to healthy, fresh, local, and affordable food for low-income and vulnerable residents (Gottlieb, 2005; Gottlieb, 2009; Alkon and Agyeman, 2011; Gottlieb and Joshi, 2010; Hess, 2009). Organizations such as Growingpower in Milwaukee or Just Food in New York City mobilize residents around so-called *food justice*.

From Detroit to Chicago or Los Angeles, urban farms are sprouting to address "food deserts" and make culturally-valued food available to communities of color. The concept of "food desert" (Shaw, 2014), which first emerged through studies conducted about retail availability in Scotland (Guy *et al*., 2004), has been widely used by EJ groups to denounce the scarcity of supermarkets and fresh food options in urban distressed communities.[45] To denounce and address this urban scarcity, activists engage sometimes in *guerrilla food gardening* or take part in the many urban agriculture, *permaculture and community gardening* movements in cities around the world. Some urban organizations adopt the concept of Food Sovereignty as developed by Via Campesina, arguing for the right of urban growers to make decisions on their own about how and where food is produced and about the governance and planning dimensions of urban food systems. They reshape the relations between consumers, producers as well as public institutions that go beyond material and economic exchange and that contribute to a 'moralization' of food economies. In the context of these network initiatives the expression of *food citizenship* was coined (Renting *et al*., 2012).

Urban environmental justice is also connected (as we saw above, in the section on Water Justice) to struggles for the public management of utilities, for affordable water and electricity rates (with free minimum or *lifeline* allowances), and also to *healthy, affordable housing with public green spaces*. Demands include jobs and training for energy efficiency projects and funding or redistribution of

[43] http://forum-gpii-2012-ndl.blogspot.com.es/2012_07_01_archive.html (accessed 7 April 2013). http://intercoll.net/bdf/fr/questions/question-3.html. http://forum-gpii-2012-ndl.blogspot.com.es/ (accessed 18 April 2013). See also for instance, http://www.lagedefaire-lejournal.fr/la-carte-des-grands-projets-inutiles/ (accessed 11 January 2014)

[44] http://www.justicanostrilhos.org/quem-somos, www.atingidospelavale.wordpress.com

[45] Indeed it was in Scotland where it started in the 1990s. It could have been a resident in public housing who coined the term. The extent to which "food" deserts exist and influence the diet outside the US is strongly debated. Anyway, poor hungry people in the world live in a different kind of "food deserts".

revenues from utility companies for weatherizing residential homes (Fitzgerald, 2010, Anguelovski, 2014). Here, organizations talk about Green Justice, but overcoming "energy poverty" has a significant component of social justice as well. This discussion has a potential to grow in countries with slums, and where urbanization projects may, in practice, evict poorer residents who are unable to afford the increasing costs of housing.

Residents and community organizations associate enhancing housing stock quality and increasing revenues for low-income and minority communities with initiatives meant to reduce carbon dioxide emissions and address climate change. For instance, in Massachusetts the Green Justice Energy Efficiency Campaign is defending the creation of small subsidies to allow low- and moderate income residents to weatherize the oldest and draftiest houses. Environmentalism here connects social equity and new forms of asset creation to sustainability (Agyeman and Evans, 2003) and to climate change mitigation. Academic research centers, such as COLAB at MIT, support urban local organizations working on green justice, help them network with public officials, build their leadership skills, and assist them in grant applications to the US Department of Housing and Urban Development. There are also more radical urban movements, such as squatters, that do energy and water audits and have theories on how a sustainable economy should function (Cattaneo, 2011). The connections between urban ecology and social movements have been researched for a long time (Di Chiro, 1998).[46]

"Land grabbing" is also a concept that urban EJOs have started to use to denounce the speculative practices of developers, builders, and real estate investors in blighted neighborhoods that they attempt to turn around, thereby bringing in new residents and pushing for gentrification. There is also a strong connection between activists and researchers around the *Right to the City*. Several decades ago, French geographer Henri Lefebvre argued that this right is earned by taking part in the daily making of the urban fabric by living in the city and by meeting particular responsibilities which entitle people to participate in decisions (Lefebvre, 1968, Lefebvre, 1972, Lefebvre *et al*., 1996, Mitchell, 2003). People do not only control spaces of production, but use and shape the city. Cities are not meant to be for profit and developers, but for the people themselves. Today, coalitions such as the "Right to the City Alliance[47]" have emerged in the United States. In addition to demands for economic and environmental justice, coalition members ask for greater democracy in decision making related to urban planning, together with the end of real estate speculation, community space privatization, and gentrification (Connolly and Steil, 2009, Marcuse, 2009).

In addition, struggles against "energy (and water) poverty" are not infrequent in urban areas in the South, as activists criticize the squandering of energy and water in luxury consumption or for subsidized exports. In South Africa's mining-energy-water complex, resistance movements have emerged. In Soweto (a suburb of Johannesburg, "South Western Township"), people denounce Eskom, the national electricity company, and question the behavior of public or private water companies that increase their rates and cut off supply to those who cannot afford them, while, at the same time, offering the cheapest electricity and water rates to mining companies as part and parcel of a policy of increasing primary exports (Sharife and Bond, 2012).

Also in the field of energy policy, since the 1970s civil society movements against nuclear energy have given rise to their own concepts. One of them, in Germany, was *Energiewende* (energy turn around) born in Whyl where in 1975 citizens occupied the construction site for nine months, founding there the "People's High School", discussing alternatives to nuclear energy based on a decentralization and democratization of renewable energy production and distribution. The nuclear plant was abandoned, and from the High School emerged the *Ökoinstitut*, which in 1980 summarized the concepts they developed in a study called *Energiewende*. Twenty years later, the term stimulated other "turn-around" concepts (i.e. radical changes of institutions and infrastructures) like the traffic turn-around (*Verkehrswende*) and the agricultural turn-around (*Agrarwende*) in the 1990s. A parallel term is used in 2013, *Wachstumswende* (growth turn-around), to translate the French *décroissance* or the English "degrowth".

[46] Di Chiro's next book, *Embodied Ecologies. Science, Politics, and Environmental Justice*, examines innovative coalitions combining environmental expertise and local environmental advocacy, connecting local, national and global processes.

[47] For more information, see http://www.righttothecity.org/our-history.html

The alliance between the Degrowth movement and the Environmental Justice movement

Degrowth is a movement in some northern countries. It has not grown in universities and not yet in EJOs but rather in alternative urban or rural movements disengaging from the growth market economy. Degrowth is a slogan, a *missile word* (as Serge Latouche puts it, 2009). Latouche himself, an economic anthropologist, has long been a "post-development" thinker providing a link to Marcel Mauss, Karl Polanyi and Marshall Sahlins, and to continental thinkers of the 1970s to the 1990s like André Gorz, Ivan Illich, Cornelius Castoriadis, Wolfgang Sachs who criticized economic growth and also uniform development (together with Gustavo Esteva and Arturo Escobar in Latin America and Ashish Nandy and Shiv Visvanathan in India). The degrowers' intention is to spark a contentious debate on the futures of our society.

Degrowth is based on grassroots projects such as food cooperatives, urban gardening, local currencies, co-housing projects, waste reduction and reuse initiatives, or the "transition towns" idea originating in the UK (Carlsson, 2008, Chatterton and Pickerell, 2010, Conill *et al*., 2012), essentially a bottom-up practical reincarnation of Local Agenda 21 projects of the 1990s sometimes going back to post-1968 neo-rural movements (like *Sauvons le Larzac* in France). Degrowth is based on localist projects, and proudly so. Practitioners believe, with ecofeminist economists (Waring, 1988), that caring is more important for human welfare than commodity production – we have to safeguard the caring capacities of our societies as much as the carrying capacity of our environment. Degrowth activities allow for cooperation with local, regional and even national authorities, not heavily relying on governmental measures but also not refraining from demanding national and supranational policy reversals.

"Degrowth", launched as a movement by activists in 2001, quickly became an interpretative frame for a variegated social movement where several streams of critical ideas and political actions converge (Duverger, 2011, Flipo, 2007, Bayon *et al.*, 2010, Bonaiuti, 2011, Kempf, 2007). It is an example of activist-led science now consolidating into proposals analyzed in articles and special issues of academic journals. (Asara *et al*., 2013, Cattaneo *et al*., 2012, Demaria *et al*., 2013, Kallis *et al*., 2010, 2012, Martinez-Alier *et al*., 2011, Schneider *et al*., 2010, 2011, Sekulova *et al*., 2013). Supporting the Degrowth movement, there is also a new ecological macroeconomics without growth (Victor, 2008, Jackson, 2011), building upon Herman Daly's steady state economics of 1973, Georgescu-Roegen's "bioeconomics" (1971,1979), and the debates of the early 1970s and other literature on limits to growth (Meadows, 1972, 2004, Odum, 2001) with close links to social metabolic analyses (EROI, material flows, carbon and water footprints) mentioned earlier.

Although not yet part of the global Environmental Justice movement, the Degrowth movement might enter into an alliance with southern EJOs (Martinez-Alier, 2012), for instance in its support for Resource Caps meaning a policy to reduce extraction of materials (distantly related to the Factor 4 and later Factor 10 concepts widely promoted by the Factor 10 Club 1994 that rested on eco-efficiency improvements). Resource Caps is more closely related to the *Yasunizing* idea and to *post-extractivist proposals* in Latin America as put forward by Eduardo Gudynas (2012), Alberto Acosta (2013) and Maristella Svampa (2013). The *Resource Cap Coalition* brings together European organizations advocating a global resource use reduction, a precondition for sustainability. Outside Europe, local struggles against damage from mining (such as the ban on iron ore mining in Goa in 2012) have led to proposals for a "resource cap". In this case, to reduce iron ore mining and exports from nearly 50 million tons per year to only 10 million tons.[48] But resource use reductions, particularly in Southern countries, must be realized hand in hand with poverty reduction and building of an ecological economy. In 2010 many organizations joined CEEweb's statement calling for resource caps to reduce total environmental pressure and halt biodiversity loss. Several consultations took place which led to a common position calling for a *European energy quota scheme* and the ratification of the *Rimini protocol*, a tool to cut back fossil fuel extraction. (www.ceeweb.org/rcc). This is in 2013 an ongoing process which builds on ideas put forward twenty years ago (Spangenberg, 1995). While in the North there was the idea of reducing per capita consumption to the allowable world average quantified in the reports from the Wuppertal Institute, from the South came the idea of a *línea de dignidad*, a "dignity floor" as expressed by REDES (Uruguay)

[48] http://www.ejolt.org/2012/12/the-ban-on-iron-mining-in-goa/

and the the IEP (Chile) at the time. This meant minimum free consumption allowances for all, a proposal also well known in South Africa and currently discussed in Europe. The European Degrowth movement favors in 2013 a universal "citizen's income" as a human right, expressed in monetary terms rather than in physical entitlements. (Raventós, 2007).

Degrowth is so far a small civil society movement with some political traction in France, Italy and Spain, and is gathering fans in other parts of Europe and North America. Its frequent conferences unite academics and activists. The next one in September 2014 will be in Leipzig under the banner of *Wachstumswende*. The movement argues that a democratic collective decision to consume and produce less in the global North is the most appropriate solution for the multiple crises facing the world today. We cannot get out of the debt crisis by economic growth because this worsens the ecological crisis. The renouncing of economic growth by the North would help humanity to stay within the ecological limits of the planet as regards climate change and would also contribute to a lower rate of biodiversity loss. The main allies for this new economy are the EJ movements of North and South.

Degrowth is therefore sympathetic to claims from the South for repayment of an Ecological Debt from North to South, and even more to the idea that this Ecological Debt should increase no further. Degrowth is against increases in the public and private financial debt, it pours scorn on the notion of "debt-fuelled growth", it favors much increased bank reserve requirements, and it promotes local currencies and ethical banking,

Proponents of degrowth in the North are natural allies of those who in the South champion the concept of *buen vivir* or Sumak Kawsay in Andean America (Acosta and Martínez, 2009, Acosta, 2013), Radical Ecological Democracy in India (Shrivastava and Kothari, 2012), Ubuntu in southern Africa (Ramose, 2002) or Mino Bimaadiziwin -'the good life' or 'continuous rebirth'[49] in indigenous communities of Canada, where the well-being of humans and the rest of the natural world are considered as interrelated and pursued at the same time. In India, the old Jain notion of sufficiency revived by Gandhians, *aparigraha*, expresses a moral principle against consumerism, and it is similar to the *voluntary simplicity* in the West born (we believe) in the early 1980s.[50] From ecological economics, Max-Neef's analysis of "needs" and "satisfactors" provides arguments to degrowers (Max-Neef and Kumar, 1991). Meanwhile, there are struggles against large scale mining, land-grabbing, fossil fuel extraction in many places in the South. Indigenous peoples are at the vanguard of such struggles. Despite traditional participatory exclusions (Agarwal, 2001), women are often leaders in keeping sources of livelihood in the commons, also arguing in terms of indigenous territorial rights and human rights. Such movements complain at the same time against waste dumping from the North, including climate change caused by excessive carbon dioxide emissions.

Reducing consumption in the North would diminish demand for resources taken from valuable natural areas and allow increasing consumption of those so far deprived from it, without crossing environmental planetary boundaries. Indigenous victories to preserve homelands intact mean less pollution and biodiversity destruction from mining, fossil fuel extraction and big infrastructure projects and less of a push in the direction of disastrous climate change. The EJOs are potential allies of the groups in rich countries which criticize the obsession for GDP growth. The small degrowth movement in the global North is coming together with the strong EJ movements originating with poor or indigenous peoples from the South.

HERE PHOTO 9 Leave oil in the soil

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49 This is a concept in the Canadian indigenous communities that re-emerged in 2012 with the struggle called "Idle No More". See Naomi Klein's interview with Leanne Betasamosake Simpson. http://www.yesmagazine.org/peace-justice/dancing-the-world-into-being-a-conversation-with-idle-no-more-leanne-simpson

50 http://simplicitycollective.com/the-revolutionary-spirit-of-the-voluntary-simplicity-movement. Australian sociologist Ted Trainer published in 1985 an influential book, *Abandon Affluence* (Batterbury, 1996).

"Leave oil in the soil" (1997-2007) or *Yasunizar* (Acción Ecológica Ecuador, ERA Nigeria, and the Oilwatch network) is a proposal from EJOs in the South for leaving not only oil under the ground in areas of great biodiversity value and where indigenous territorial rights and other human rights are threatened. It is also a proposal for leaving "tar sands in the land, coal in the hole, shale gas under the grass", and also "offshore no more" after the BP oil spill in the Gulf of Mexico in 2010, in order to preserve nature, to combat climate change and to move to a post-fossil fuel civilization. In the North, megaprojects resulting in centralized supply structures empowering a few large companies have been rejected by proponents of the *Energiewende* with its democratization and decentralization impetus. The idea of leaving fossil fuels in the ground has been pushed by the civil society groups Carbon Tracker and New Economics Foundation in London (nef) since 2011-12 under the mottos *unburnable oil, unburnable fossil fuels, unburnable carbon* with such success that even The Economist (4 May 2013) in an article under the title "Unburnable Fuels" explained that to slow down climate change a large amount of reserves must be left in the ground, and therefore the economic valuation of such reserves (for instance, by pension funds buying shares in fossil fuel companies) was far too high.

To leave oil in the soil was not invented in London, however. The word *yasunizar* has the following origin. Ecuador proposed in 2007 (when Alberto Acosta was minister for Energy and Mining) to leave oil in the ground (850 million barrels) in the Yasuni ITT field – to respect indigenous rights, to keep biodiversity intact, and to avoid carbon emissions. The proposal implies avoiding carbon dioxide emissions of about 410 million tons from eventual oil burning, equivalent to French emissions for one year. The original idea came from civil society. The government of Ecuador asked for partial outside compensation, 3.600 million US$ – roughly about one half of foregone revenues. The Trust Fund under UNDP administration was set up in August 2010. Investments would go for energy transition and social investments. This is an initiative to be imitated. We cannot burn all the oil, gas and coal in the ground at the present speed because of climate change. How to select the places where it is best to keep oil, gas or coal in the ground? The Niger Delta would certainly be one of such places. ERA has long called for a moratorium on new oil exploration and exploitation in this region and for an immediate end to gas flaring. ERA members sometimes say that the appropriate term should be *ogonization* because Shell was expelled from Ogoni territory for many years after 1995. Other grassroots initiatives have called for leaving shale gas in the ground (in Quebec, the Karoo in South Africa, the Basque Country, France, Germany, Bulgaria) or leaving oil under the seabed (as in the Lofoten islands in Norway and in Lanzarote in the Canary Islands). In the mobilization against shale gas in many countries, a *Global Frackdown day* was held on the 22nd of September, 2012. In France, ATTAC provided information and coordination to many citizens' groups against fracking. (EJOLT report n. 6, 2013).

In the Niger Delta, the demand has been for "self-determination" and "resource control", and for reparations for damages. The non-violent MOSOP (movement for the survival of the Ogoni people) made worldwide news in 1995 with the killing of its leader Ken Saro-Wiwa and comrades by the military dictatorship. Before this, there were many other acts of resistance. *On 4 January 1993, as the United Nations marked World Indigenous Populations day, an estimated 300,000 Ogoni, including women and children staged a historic non-violent protest, and marched against Shell's ''ecological wars''. With the expiration of the notice to quit, Shell was expelled from Ogoni. Eventually, failure to adhere to the warnings and frequent government reprisal attacks and human rights violations resulted in the death of hundreds of Ogonis, following which Shell had no option but to end its oil extraction in Ogoni. This event represents on a global scale, the most formidable community wide resistance to corporate oil operations, paving the way to keeping oil underground in Ogoni*. (Ojo, 2013). So, while the term "to Yasunize" gained international currency to describe social demands for the protection of territories of special interest due to their natural and cultural diversity or riches, it was in Ogoni where we find the first known example of leaving oil underground. Thus, the question remains whether it is "Yasuni that is being Ogonised or Ogoni that is being Yasunised?" (Ojo, 2013).

Corporate accountability and criminalization of activists

EJ activists consider Corporate Social Responsibility (as opposed to Corporate Accountability) as pure *greenwashing*. It seems that the environmental activist Jay Westerveld coined the concept of "greenwashing" in the late 1980s to criticize hotels presenting themselves as environmentally friendly by inviting guests to reuse towels as a contribution to save the environment (Motavalli, 2011). EJOs adopted the concept and extended its application to refer to all industry strategies and practices to market their

environmentally and socially destructive activities as sustainable (e.g. GRAIN, 2006 and WRM, 2010). One celebrated case is that of Stephan Schmidheiny, described in the EJOLT blog as the king of greenwashing, founder of the Business Council for Sustainable Development shortly before 1992, and sentenced to 16 years imprisonment on 13 February 2012 by an Italian court, found guilty for criminal negligent behavior in exposing many Eternit's workers and citizens to asbestos. The sentence was appealed.

Corporate fantasies such as the "triple bottom line", "sustainable mining" or sometimes wood certification schemes are described as "greenwashing" by EJOs as illustrated by the "International Declaration Against the 'Greenwashing' of Palm Oil by the Roundtable on Sustainable Palm Oil" signed by over 250 organisations worldwide.[51] In a similar ironic vein, notice the offering of *toxic tours.* While "eco-efficiency" environmentalists enjoy showing "best technical practices" including "sustainable tourism", the EJ activists scoff at such words and they like to organize *toxic tours* showing pollution horrors to their guests – even though they themselves are not against grassroots novelties in water harvesting or in solar energy.

In the period between 1992 and 2002 (Broad and Cavanagh, 1999, Broad, 2002) the EJOs developed the concept of *Corporate Accountability* (Utting, 2008) that Friends of the Earth International (whose president was then Ricardo Navarro, from the EJO Cesta in El Salvador) defended vigorously at the 2002 Johannesburg UN summit (WSSD) proposing the adoption of a Corporate Accountability Convention. Greenpeace also proposed at the time the adoption of the Bhopal Principles on Corporate Accountability and Liability.

In the movement for *Corporate Accountability and Liability*, the EJOs have been active in bringing corporations to court. In the case of United States corporations causing damages abroad, appeal has been made to the ATCA (Alien Torts Claim Act) (Utting, 2008, p.108, provides a list of cases). For other countries, lawyers have looked for other laws. The Chevron Texaco case was initially taken to the United States in 1993 under ATCA, it then went back to Ecuador whose courts decided in favour of the plaintiffs in 2011, 2012 and 2103, with much support from civil society. Arguably, the Frente de Defensa de la Amazonia (formed by indigenous and settler representatives) should be seen as an EJO as two of its leaders, Luis Yanza and lawyer Pablo Fajardo were awarded the Goldman Prize in 2008 for their community-driven legal battle against Texaco-Chevron's impacts in the Ecuadorian Amazon. At present the lawyers of the Frente de Defensa de la Amazonia are trying to collect damages from Chevron in several countries.

This and similar cases are examples of what Boaventura de Souza Santos (a scholar who consorts with activists) calls "subaltern legality", i.e. the efforts of communities whose livelihoods and identity are negatively affected by corporations or states to use the existing legal apparatus to seek redress for injustice, and to claim accountability and therefore compensations or reparations. (Utting, 2008, Santos and Rodríguez-Garavito, 2005). In this line, in 2012 and 2014 EJOLT published detailed reports (by Antoni Pigrau *et al*., Report n. 4 and Report n. 11) on the legal avenues available to EJOs to exercise such "subaltern legality" and claim environmental liabilities. The ATCA avenue seems however to be closing down after the 2013 Supreme Court decision in the US in the Kiobel vs Shell case. Kiobel is the name of one of the companions of Ken Saro-Wiva killed in 1995. One could conclude that there is no way of obtaining environmental justice in rich countries' courts from damage done in the South.

EJOs have put emphasis on the notion of liability, and also on the right to know the operations of transnational corporations. It is in fact very difficult sometimes for consumer to know the origins of commodities, or the destination of profits. One could perhaps trace the geographical and social origins of precious woods, coffee, gold or diamonds (as in the Kimberley process against trade in "blood diamonds", now in deep trouble) but it is well nigh impossible for a consumer to know where bulk commodities such as oil, coal or copper come from. Consumers in importing countries suffer irremediably from *consumer blindness* (Healy *et al*., 2013).

Beyond the movement for Corporate Accountability and Liability, the use of another new concept is growing in the global EJ movement, that of *Ecocide*. It first use apparently goes back to the Vietnam

[51] W. Overbeek et al, eds, 2012, also http://www.ejolt.org/2013/11/calabar-declaration/

War, when American scientists concerned about the use of Agent Orange started a movement to ban what they called "ecocide" (Zierler, 2011). The term "ecocide" was re-introduced by London barrister and legal scholar Polly Higgins. In March 2010 she proposed to the UN that Ecocide be a new type of crime against peace. In Germany, Ökozid was a book series and a journal from 1985 to 2000, and the term is quite common. There is a global mapping on ecocide under way: http://wish20.upriser.com/ and there is a civil society initiative ("End Ecocide") to collect one million citizens' signatures to be delivered to the European parliament to try and make ecocide a crime. There are many calls from EJOs for an *international environmental crimes tribunal*.[52]

"Ecocide" is complementary to demands for civil liabilities which are often unsuccessful. On 19th March 2013, Nnimmo Bassey, former president of Friends of the Earth International, executive secretary of Oilwatch, in a meeting in Abuja marked the first 20 years of activity by ERA and the half-successful attempts to bring Shell to court in The Netherlands for its socio-environmental liabilities in the Niger Delta. There, he recalled that "(although) we sometimes resort to civil (legal) actions as a measure of resistance we note that these are not sufficient to stem environmental crimes. To stop those who reap profits from environmental damage, laws governing those activities ought to be urgently upgraded to make it possible for criminal charges with long jail terms to be pressed against individual criminals and those who hide behind corporate shields. Ecocide would be an appropriate umbrella law to confront the massive lawlessness that runs rampant across Nigeria and many nations of the world today".[53]

Instead of criminalizing the companies or state actors destroying natural environments and human livelihoods, the EJOs worldwide know that it is the *environmental defenders who are often repressed, "criminalized"* by the state and killed by the police, hired gunmen or paramilitary forces. Many well known "environmentalists of the poor" have been killed since Chico Mendes in 1988 and Ken Saro-Wiwa and companions in 1995. The NGO Global Witness produced in 2012 a report on hundreds of environmentalists killed, including fishermen, indigenous people and peasants who defended their territories where nature, life and culture are strongly connected.

Of the three streams of environmentalism in the world today (Conservationism/Eco-Efficiency/Environmental Justice), the third one is by far the one that contributes the largest number of victims. In their claims, activists denounce the violation of human rights and also of the *Rights of Nature* (as included in Ecuador's Constitution of 2008, article 71, after an original idea from Acción Ecológica). EJOs see themselves as fighting crimes against humanity and crimes against nature. They want go beyond "anthropocentrism" into the defence of Mother Nature by a variety of means.

Conclusion

The present article attempts to do three things. First, it reinforces the thesis that there is a global environmental justice movement (Sikor and Newell, 2014). Second, it traces the origins and explains much of the vocabulary of this global EJ movement born and growing since the 1980s and 1990s. Third, it emphasizes the fact that many (but not all) the concepts and slogans of the EJ movement were born outside academia, as it is the case in other social movements where elementary and crucial concepts (the "right to one's own body" in Feminism, or the slogan "land to the tiller" in agrarian movements) were born in the homes, in the streets or in the fields. Academic research supports the movements by refining such concepts and sometimes providing new ones. Several of the EJ activists' concepts and proposals listed here as a "political ecology from the bottom up", have later given birth to research programmes in the social sustainability sciences.

The EJ movement started to grow in the 1980s and 1990s out of many conflicts on resource extraction and waste disposal due to the increase in social metabolism. Riding on this movement, a statistical political ecology is being developed in the 2010s with *inventories and maps of environmental*

[52] See the interviews with general attorney Antonio Gustavo Gómez of Tucuman, Argentina in the EJOLT documentary on dimensions of environmental justice, http://www.youtube.com/watch?v=JSPBRG3GZDo

[53] http://www.ejolt.org/2013/03/era-twenty-years-of-fighting-environmental-crimes/

conflicts worldwide, often done by EJOs or networks of EJOS or at other times based on collaboration between academics and EJOs as in the EJOLT project.

Sometimes the doubt is voiced that belief in environmental constraints or planetary boundaries entails a threat to liberal democracy and to individual rights. An international eco-bureaucracy (already described as the "IMF of Ecology" in Martinez-Alier, 1991) would impose top-down limits to economic and population growth, drawing eco-adjustment plans for all countries of the South. Alternatively, environmental threats would entail a retreat into particularistic bio-regionalisms and "life-boat ethics" excluding strangers and foreigners by force if needed. Such anti-democratic trends certainly exist. However, there is also an opposite trend of "social-environmental cosmopolitanism", embodied in the global environmental justice movement. By "cosmopolitanism" is meant here the notion that people are bound together by their common humanity, and indeed by their common belonging to nature. This implies duties of care towards fellow humans and towards nature that cannot be sacrificed to identifications with family, ethnic group, religion, social class (Dobson, 2012: 247).

The United States Environmental Justice of the early 1980s started off with complaints against "environmental racism" but it soon became concerned also with environmental justices worldwide. The meetings at the World Social Forums with thousands of activists, the world assemblies of La Via Campesina (with over one thousand participants from many countries), the smaller meetings of Friends of the Earth International and other networks, are the main occasions where the environmental justice activists strategize, supplementing their contacts through internet. This is socio-environmental cosmopolitanism at its best, where concepts such as ecological debt, climate justice, biopiracy, food sovereignty and many other have been nurtured. At the 2004 WSF in Mumbai, many activists from other countries heard directly from the first time in their lives about Dalits' and Adivasis' claims. This was not an addition of new particularisms but on the contrary an expansion of the scope of socio-environmental justice to realities not known enough outside India. It was not difficult for many participants from Latin America and Africa to identify with Dalits and Adivasis.

The World Social Forums of the 2000s certainly pushed forward the globalization of EJ. The alternative "treaties" signed at Rio de Janeiro in 1992 had shown already the many links existing among environmental groups. Friends of the Earth (born in California) became international, bringing in organizations already active since the 1980s like CENSAT in Colombia or WAHLI in Indonesia. But, outside Friends of the Earth, one could also find other important local organizations in many countries linking the environmentalism of the poor with wider notions of environmental justice and climate justice as the Centre for Science and Environment in Delhi in 1991. A global EJ movement was in full swing in the 1990s aware of itself. This is now recognized in the best research on this movement (Sikor and Newell, 2014). Activist-academics belonging to the United States EJ movement since the early 1980s travelled and became influential in South Africa and Brazil, also contributing to the creation of EJ networks (Porto, 2012b). Academic work was published since the mid-1990s if not before making explicit connections between the EJ movement in the United States and other manifestations of EJ in Latin America, Africa and Asia (Martinez-Alier, 1997, Guha and Martinez-Alier 1997, 1999). These connections had become obvious after the deaths of Chico Mendes in Brazil in 1988 fighting deforestation and of Ken Saro-Wiwa and his Ogoni comrades in Nigeria in 1995. By the mid-1990s classic books written by activists analyzing EJ movements across the world against dams (McCully, 1996) and against tree plantations (Carrere and Lohman, 1996) had been published.

In academia, the last decades have seen the growth of the social sustainability sciences, such as human ecology, ecological economics, political ecology, environmental law, human geography, environmental sociology, ecological anthropology, environmental history, environmental politics, urban ecology, agroecology, industrial ecology, environmental toxicology and public health. The very names of such fields or disciplines are of academic origin, with journals, doctoral programmes, research institutes and some professorships also under such names. Environmental activists profit critically from them; close working connections are not least due to the fact that in some European countries some activists-turned-professors work in institutes initiated by civil society through its struggles that have become a recognized part of the academic system. They range from Wetenschapswinkeln located in the Netherlands, to green research institutions like the New Economics Foundation in the UK or the *Ökoinstitut* in Germany.

HERE PHOTO 10 Critical mass

In this article we have not focused on "capacity building" for civil society organizations. On the contrary, we examined activist-led science, i.e. civil society's ability to conduct research and create concepts of political ecology "from the ground up" which are then taken up with or without acknowledgement, refined, and applied by academics and so-called policy makers. We have analyzed such concepts explaining the context in which they have emerged over the last thirty years: environmental justice, popular epidemiology, environmental racism, sacrifice zones, the environmentalism of the poor, ecological debt, biopiracy, climate justice, water or hydric justice, food sovereignty, "tree plantation are not forests", "green deserts", land-grabbing, *Yasunization* and *Ogonization*, "leave oil in the soil, leave coal in the hole", resource caps, transit justice, urban waste recyclers, "zero waste", "peasant agriculture cools down the Earth", corporate accountability and liability, local referendums with veto power, unmasking of greenwashing, consumer blindness, the alliance between the degrowth movement and environmental justice, a different financial system not based on increasing public or private debts, support for the concept of ecocide and the proposal for an international court for environmental crimes, stopping the so-called "criminalization" of activists by states, enforcement of indigenous territorial rights, the rights of nature, the post-extractivist economy, and still others.

One could ask why the term environmental justice has taken off in general use to a greater extent than the other terms considered in this article. One reason is that EJ is more encompassing than other terms such as climate justice or water justice, which are like subdivisions of environmental justice. Another complementary, tentative explanation is that EJ was put into circulation earlier than other terms, already in the early 1980s in the United States. Other concepts, such as the "environmentalism of the poor", the "ecological debt", "biopiracy", date from the late 1980s or early 1990s. However, the defense of indigenous territorial rights and the defence of the commons, and possibly also working class environmentalism and ecofeminism, which are terms used nowadays in the global environmental justice movement, date from the 1970s or even much before this.

Activists do not usually claim authorship rights on such concepts. This is behaviour very different from that of academics. Activists do not care about impact factors in refereed academic journals but they do care about the social success of their proposals. The activists' neglect of academic values favors cooperation between activist and academics because they do not compete in the same turf. However, tension arises if and when activists suddenly perceive that their ideas are being pinched by academics for professional advantage.

There are people in the social sustainability sciences (as also in feminist scholarship and other fields) who simultaneously belong to worlds of activism and academia. A few activist-authors (such as Bob Bullard in the US since the 1980s, Patrick Bond in South Africa) appear by name in our account. They should not be seen as "organic intellectuals" (in Gramsci's sense), leaders of movements from behind the scene, but rather (together with non-activist authors) as useful intellectual scavengers who take up concepts conceived in strategy meetings or in the heat of battle by EJOs, and then define, refine, dissect, classify, transfer and apply them to other geographical contexts.

Ecological distribution conflicts on resource extraction, on transport and infrastructures, and on waste disposal arise because of the growth of social metabolism and because of the structural asymmetries in the burdens of pollution and in the access to natural resources that are grounded in unequal distributions of power and income, in social inequalities of ethnicity, caste, social class and gender. For instance, many populations who will suffer most from climate change (and are supposed to start "adapting" to it) are historically and at present not responsible for it because their emissions are below two tons of carbon dioxide per person per year. Hence the claims for a climate debt as part of a larger ecological debt that also includes a debt for ecologically unequal trade and a debt for biopiracy.

Instead of further accumulation of profits and capital by dispossession and contamination, EJOs propose that the economic system should change to a steady state economy after a period of degrowth in the rich countries, an economy characterized by "prosperity without growth" with a much greater degree of social equality, at least halving the current rate of extraction of fossil fuel to prevent climate change and avoid damage to nature and to human rights at the frontiers of extraction and land grabbing. This should go together with resource caps on extraction of materials, for instance export quotas on minerals and biomass. These are demands from local EJOs.

The flows of energy and materials in the world economy have never been so large as today. This increased social metabolism is causing more and more ecological distribution conflicts. This has given rise to a social movement for EJ around the world formed by many organizations and networks which put forward their own concepts and proposals for action, and criticize and even denounce as "greenwashing" other concepts and proposals coming from other streams of environmentalism.

Practice draws on theory but practice also produces theory. EJOs often draw upon concepts coming from the sustainability sciences, for instance they know, use and sometimes criticize the "ecological footprint", the HANPP (human appropriation of net primany production of biomass), "peak oil" and the EROI, material flow analysis, the Environmental Kuznets Curve, life-cycle analysis, the ecological terms of trade, cost-benefit analysis and multi-criteria assessment, resilience, valuation of ecosystem services… EJOs use the notion of "ecological footprint", which is the inverse of "carrying capacity", i.e. not the maximum number of people (or any other species) that a given territory may hold but the actual space directly and indirectly used by a given number of people. The EJOs dislike the notion of carrying capacity but they appreciate the "ecological footprint". The EJOs have conceptual and moral difficulties in dealing with population issues and Malthusianism, but perhaps they are moving slowly to support bottom-up feminist neo-Malthusianism as proposed already one hundred years ago by Emma Goldman and Maria Lacerda de Moura.

EJOs also create new concepts. In EJOLT (as in a previous project, CEECEC, Martinez-Alier *et al*., 2011, Healy *et al.*, 2012) we navigate between science and activism in the fields of ecological economics and political ecology.

To conclude, the world of EJOs has come to exist because of the many conflicts caused by the increase of social metabolism and the inequalities of power and income, and resultant injustices in the access to natural resources and in the burdens of pollution. EJOs were not born from reading books but have produced their own books (and documentaries) as byproducts of their activism. The EJ movements respond to and express the conflicts that arise from the clash between economic growth and the environment as a source of livelihoods and as a site of cultural values. They are certainly not a "post-materialist" movement in Ronald Inglehart's sense. Political scientists, social historians might be interested in environmental justice as one more "social movement" with its repertoire of actions. This is certainly an interesting approach. However, for practitioners, more interesting are the possible alliances with other social movements in a "global justice" movement of movements which might have had its *première* in Seattle in 1989. The main reasons for action are very practical environmental reasons reinforced by the linkages between local and global issues and networks. This is so from the beginning in the United States where Civil Rights plus the fight against Waste Dumping produced the Environmental Justice Movement, to today in the Amazon of Ecuador against new oil and mining projects or in the Niger Delta against gas flaring and oil spills.

EJOs and their networks are developing a political ecology from the bottom up overlapping with the academic social sustainability sciences. They are interesting to analysts of new social movements but they are even more interesting for their efforts to change the economic, political and cultural systems in the direction of sustainability. There were many environmental struggles in history (Armiero, 2008) before the term "environmental justice" was introduced by activists. This is common in social history. There were strikes before the word "strike" was newly used internationally in the different languages as a collectively organized cessation of work, and there were collective demands for improved working conditions before the "labour movement" or "working class" movement became aware of itself.

The main concepts used by the global environmental justice movement since the 1980s, including that of environmental justice itself, do not come from academic research but from the strategies and battles of the movements themselves. Such concepts are not initially validated by publication in peer-reviewed journals, they are used politically whether academic recognition is or is not achieved, and may then permeate into the academic agenda. The test of their validity is acceptance within the movement itself in concrete battles, in international meetings and by sympathetic observers from academia or governments or the UN bureaucracy. Thus, the grassroots movement against privatization of urban water services rightly glorifies the struggle in Cochabamba, Bolivia in 2000 led by activist Oscar Olivera. Years later, with Pablo Solon as Ambassador to the UN, the government of Bolivia pushed the UN to declare access to water as a human right. The EJOs' concepts are meant to influence political reality and they are sometimes translated into practical politics and public policies. As with the concept of the "ecological

debt", there are long incubation periods between the time when a new concept is introduced at the cutting edge of the global environmental justice movement and the time when the same concept becomes an object of mainstream academic research and publication in major journals or is applied or at least mentioned in governmental policy documents or decisions.

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