

EXTERNAL RESPONSIBILITY AND THE 'EXTRA-TERRITORIALITY' DIMENSION IN BIODIVERSITY LOSS.

[The case of Catalonia]

David Llistar, the Observatory on Debt in Globalisation (ODG).
david.llistar@odg.cat

Published October 2014.

Financed by the Generalitat of Catalonia.
Ministry of Territory and Sustainability

Who is destroying global biodiversity and how? There is clear evidence that the areas of the planet with the highest rates biodiversity loss are areas that are subject to considerable pressure from the consumer economies. This pressure is the result of interferences transmitted over large distances. Yet relatively little effort is being made to control and prevent the transnational phenomena linked to this global problem which some are calling the "6th great global extinction" (Barnosky et al., 2011). If economies interfere in biodiversity beyond their own political or administrative boundaries, provoking the destruction of biodiversity in territories thousands of kilometres away, immediate political measures should be taken to halt that phenomena. But that is not yet happening.

Several scientific studies have been conducted worldwide that analyse how public policies should be deployed in order to guarantee that the 'extra-territoriality' dimension of the governmental responsibilities and obligations is properly taken into account.

There are reference case studies at the national level in the UK (Scott Wilson Ltd, 2006) recently completed and updated (West et al., 2013); Holland (Kamphuis et al., 2010); Sweden (Nykvist et al., 2013) and Switzerland (Jungbluth, Stucki, & Leuenberger, 2011) (Frischknecht et al., 2014); and also at the European Union level (Watson, Acosta, Wittmer, & Gravgard, 2013).

At a subnational level there are studies concerning the economies of Catalonia (Llistar, Jurado et al., documento interno 2009, internal document, updated, completed

and forthcoming) and Basque Country (Urkidi et al., 2014), both in Spain. Footprint studies such as those conducted by the Global Footprint Network (Galli, Wackernagel, Iha, & Lazarus, 2013) at different governmental levels must also be considered.

The Catalan study was commissioned by the Government of Catalonia in 2008 to complement its own conservation policies as well as the international agreements it had engaged with common sense measures that could close the gap between the ideal situation and the reality. It was foreseen as an opportunity to redirect local policies towards the conservation of global biodiversity. In other words, as a progress towards a social and environmental transition to socioeconomical models that do not delocalize the destruction of biodiversity. The importance of the Catalan study stems from the fact that is maybe the first study that refers to a subnational economy, and that it uses a methodology that is relatively simple to replicate in order to identify the sensitive geographical areas subject to the interference of the economic sub-sectors and agents that most contribute to the loss of biodiversity.

The **conclusions** reached by all the previous studies confirmed the same hypotheses, eventough different methodologies were used. From the point of view of conservation policies, and above all in the light of the serious problem of global biodiversity loss, in all cases, the growing internationalisation of the economies analysed was, to differing extents, interfering in the destruction of the major biodiversity hotspots. Furthermore, the transnational mechanisms were mostly found to be out of control, demonstrating the habitual North-South anti-cooperation processes (Llistar, 2009).¹ There are no pub-

¹ "Environmental anti-cooperation" is defined as those political activities and transnational mechanisms that exert negative interference on biodiversity and the people who depend upon it.

lic controls to limit the pressure exerted on biodiversity components and processes beyond national borders (with the exception of controls over the wildlife trade), nor is there any assessment of which internal policies cause most damage, through which transnational mechanisms they work, or which ecoregions, ecosystems, habitats, species and endemisms they affected. The studies therefore recommend the inclusion of external responsibility criteria relating to global biodiversity loss in different government measures, such as, for example, the import of transgenic soya for local meat production. In other words, they suggest introducing the principle of extra-territoriality -or "global responsibility"- into domestic policies. It is something very similar to what is known in development aid policies as "policy coherence for development": effectiveness in the eradication of global inequalities and poverty should not only be a question of Official Development Assistance policies (ODA), but alone to be achieved through non-ODA policies. *This requires what is known as a whole-of-government approach.*

How does a local economy interfere with the biodiversity of the rest of the world? Notes from the Catalan case to be replicated in other contexts

The research we are referring to was designed to be a prior and necessary step in the design of public policies on biodiversity conservation in Catalonia, aimed at giving them a global dimension. Nevertheless, the results can easily be extrapolated in general terms to other resource-devouring economies. The study can also be useful as a methodological reference in the field of nature conservation in other economic and administrative contexts. It offers a way of mapping indicators for political ecology that provides a geographical focus on impacts on biodiversity or on any social or environmental asset, going beyond the more simplified indicators

such as the ecological footprint or the human acquisition of net primary productivity (HANPP). This paper provides a description, without going into too much detail, of the methodology and the results of the study, looking at each of the transnational mechanisms, and it concludes with some reflections that may be useful for political ecology.

Given the scope of the study (global, in geographic terms, multisectoral in economic terms and multi-level in terms of biological diversity), the **methodology** consisted in firsts defining the search margins, and then limiting them to specific geographical areas of biodiversity that met three conditions: they had to show high intensity loss of biological richness, some clear evidence of environmental interferences originating in the activities of the Catalan economy; and that those activities had a significant effect on the destruction of biodiversity. To summarise, three focusses were established for the mapping: the location of biodiversity hotspots, the activities related to Catalan internationalisation, and the specific impactology of each activity on biodiversity elements and processes (through impact matrices). This avoided analysing all areas of the globe for any kind of economic activity.

The Catalan Footprint

In 2012, 7.5 million people lived in Catalonia. Today the economy of Catalonia represents around a fifth of the Spanish Gross Domestic Product (Idescat, 2013). Historically, Catalonia has had a significant industrial base, and highly specialized. The percentage of production generated by the industrial sector in 2010 was 18.5%, compared to 18.6% in the Euro Zone and 15.6% in the Spanish State as a whole. To this industrial foundation, we must add a widely diversified tertiary sector that today is the most relevant in the Catalan economy, at 71.2% in 2010. The construction sector comes below industry and services, amounting to 9.1% of GDP, and it is currently severely hit by the recession, following the crisis (in 2005 it amount-

ed to 16% of GDP). As in most other European countries, the role of agriculture in the economical structure is small, and in 2010 it represented only 1.1% of GDP.

Table 1. GDP at market prices – 2010²

Sector	GAV ² (%)
Services	71.2
Industry	18.5
Construction	9.1
Agriculture	1.1

Source: Statistical Institute of Catalonia (2012)

Nevertheless, this type of economic classification does not take into account the consumption of resources represented in biophysical terms, nor the impact of their import in terms of social and environmental costs -present and future- for the whole global system. The most widely used simplified indicator that gives an idea of the availability of resources and the impact of the economic, social and environmental model of a territory (in our case, Catalonia) in the planetary ecological system is the ecological footprint (Wackernagel & Rees, 1998).

If we analyse the **ecological footprint** of the entire Catalan population, we can see that in 1998, maintaining the Catalan standard of living required a biologically productive area 6.19 times greater than the area of Catalonia, and in 2003 this relationship was 7.77 times its territory (Mayor, Quintana, & Belmonte, 2005). The most recent measure of the Catalan ecological footprint is for the year 2006 and the figure given is 8.39 times the area of Catalonia (Mayor, 2008). Since the 1998 calculation, the country has increased in a 34.7% (2.15 times its area) its demands on the surface of the planet. It therefore seems that Catalonia's ecological footprint is not only increasing because of the size of the population, that is increas-

² Global Added Value.

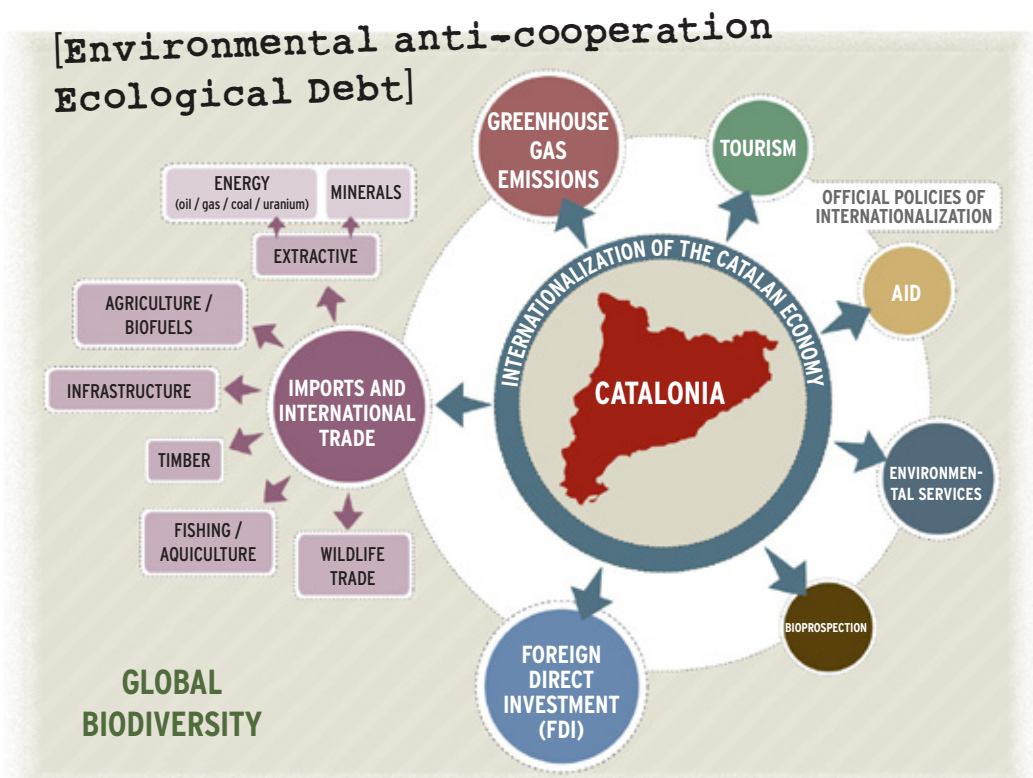
ing, but also because each inhabitant has increased its own average consumption. This means that our economy is closely linked to resource consumption and, on the contrary, is not turning into a dematerialized economy. An updated ecological footprint assessment would probably show an important increase, perhaps reaching double figures.

Taking into account the relative weight of each of the categories of activity that make up the ecological footprint, it is worth highlighting food production and energy consumption, as these are the categories that require the greatest amount of territory in order to guarantee current standards of living. Together (in 2006) they represented almost 90% of the total value of the ecological footprint (50.65% and 39.16%, respectively). After these, in order of greatest consumption of space, we find the import of goods (7.57%), which is quite significant, and forestry (1.83%). Urbanised land comes last (0.78%) together with the production of other organic goods (0.12%), with considerably lower contributions. The study of the ecological footprint is useful because it indicates which economic activities grab most social and environmental space, be that transnationally or transgenerationally. However, it does not specify where that grabbing takes place.

To know where it takes place we used the methodology described above. Maps of the areas of greatest biodiversity and greatest destruction at a global level (critical areas known as biodiversity *hotspots*, to use the concept introduced in the 1980s by *Conservation International*

and later widely used in the scientific literature (Myers et al., 2000)) were cross referenced with the impacts of the "Catalan factor", often traced through direct references made by the affected collectives, environmental justice networks, or from grey literature found through searches on the internet and in journal collections. The relationships that ODG has with a variety of environmental justice networks such as Oilwatch or ECAwatch were key in many cases. The list of findings was organised according to the anti-cooperation mechanisms, and to the habitual conceptual frameworks used by the social and environmental justice networks, and in the activist research conducted by ODG and other similar groups, to be then described in the *Teoría de la Anticooperación* (Llistar, 2009). The results are as follows and are resumed in this diagram:

Different vectors and mechanisms through which biodiversity is impacted on

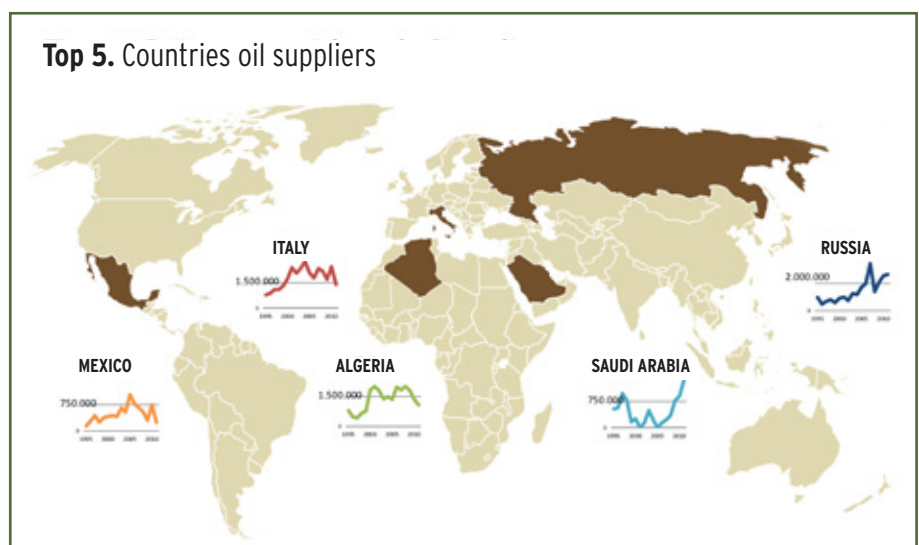


The first vector of anti-cooperation is that of imports. **Imports** act as the principal transnational driving force resulting in the loss of biodiversity. The sequence starts with local demand in an administrative framework such as Catalonia. This is transmitted to exporters through a chain of commercial and financial operators seeking to maximise profits in the shortest possible time. Together with similar demands transmitted from similar consumer economies, this generates a sort of extractive pressure on territories rich in raw materials and live species, creating conditions that are favourable to the capital involved. Attention has been drawn to this process of extraction on many occasions, in the academic and grey literature, as it is the central cause of biological degradation and the advance of the agricultural, oil and mining frontiers, and of the detriment of forests, human communities and other ecosystems of biological and cultural diversity. Delocalized models of agrofoods production (including fisheries), and the energy and mineral extraction models created by internationalised economies like Catalonia become, in practice, systems of **delocalized predation**, where the buyer claims ignorance of the exploitation conditions at origin, or appeals to competence, delegating responsibility to the debatable capacities of the governing authorities in the exporting countries. The difficulties faced by the governments of small, fragile and/or corrupt states to protect biodiversity, the asymmetry of the forces involved, and the partial interests of governing elites in these countries lead to a "law of the jungle" against the jungle itself.

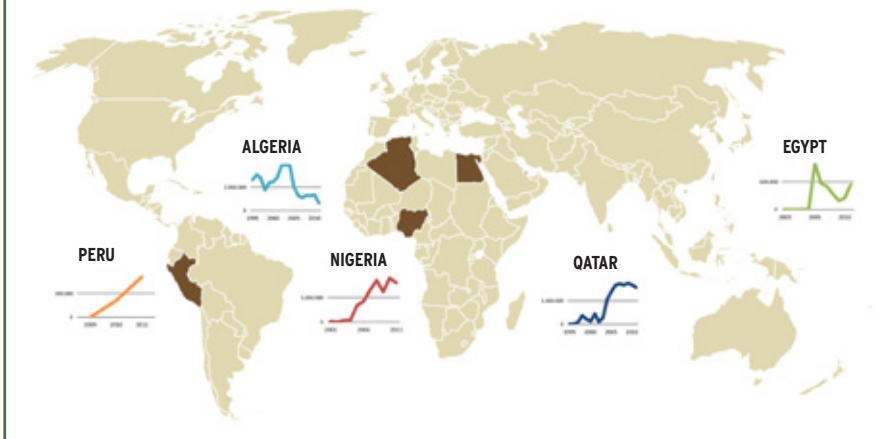
Different imports have been analysed: those of oil, gas and coal, uranium, soya, palm oil, flowers and fish, timber products, and also bioprospecting activities by pharmaceutical companies, and copper

mining. The first six **commodities analysed**, for example, have a direct link to the **energy metabolism of the Catalan society** and to the model put into practice by political decision makers. 93% of primary energy consumed by the Catalan economy in 2009 came from non-renewable sources (oil and its derivatives accounted for 47.2%, natural gas 24.6% and uranium 20.1%) (ICAEN, 2010). Furthermore, these energy sources are not available within the Catalan territory, which means a total dependence on external imports. In the period 2007-2011, the main sources of oil imports, in order of importance, were Russia, Mexico, Saudi Arabia, Iran, Nigeria and Libya. During the same period, natural gas imports were coming from Algeria, Nigeria, Qatar, Egypt, and other minor suppliers. Oil and gas consumption have led to one of the greatest human and ecological disasters in the world, that of the Niger Delta. Meanwhile, Indonesia and Colombia were the principal suppliers of coal. Biodiesel imports came from Argentinian soya and Indonesian palm oil imports. Nuclear fuel used in the three Catalan nuclear power stations was in the form of bars of uranium extracted in Russia, Australia, Niger and Kazakhstan. We show this dependence, interaction and potential interferences in the following maps:

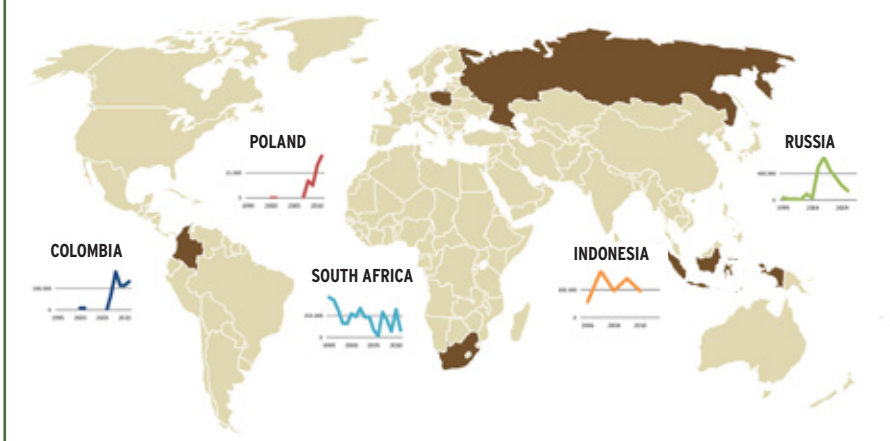
Catalan imports of raw materials for energy



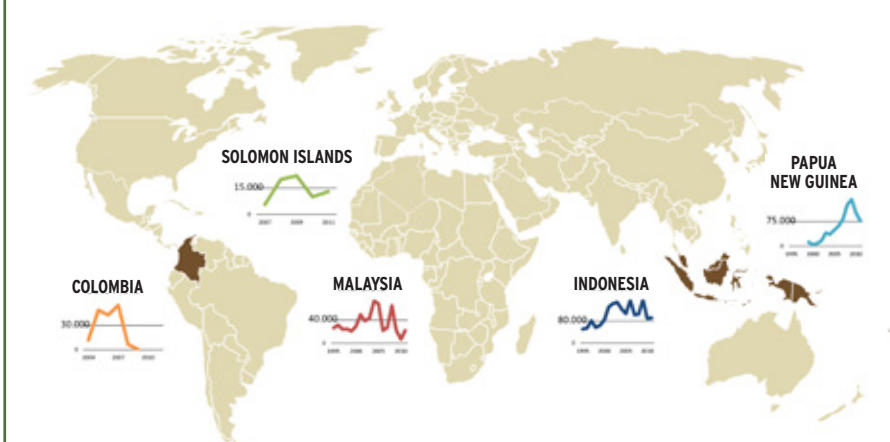
Top 5. Countries gas suppliers



Top 5. Countries carbon suppliers



Top 5. Countries palm suppliers



Elaborated by ODG from Datacomex statistics.

The available statistics in the majority of cases do not offer information about the area of extraction, although some cartographic institutes, such as that of Ecuador, are beginning to georeference the sites and offer their data on official websites. However, it is sometimes effective to cross-check reference official extraction maps with those of conflict zones, mostly through collaborative efforts with networks of affected communities and/or of environmental resistance, such as Oilwatch, the Mexican Network of Environmentally Affected Communities, the Rivers Network, etc. In the case of the Nigerian oil or Colombian coal arriving at the Spanish borders, it is logical to relate these to oil extraction in the Niger Delta and to the great open coal mine of Cerrejón en la Guajira, as these are the principal zones of exploitation for these two energy stocks in those countries.

The second significant vector of anti-cooperation is that associated with the effects of **climate change** on habitats, ecosystems and species in sensitive zones. There is no new information on this factor to add to that already available (Campbell et al., 2009). Some predictions suggest that approximately a quarter of the Earth's species could be lost by 2050 as a result of climate change if there is not a change of model.

A third vector is that of companies of Catalan origin operating outside the boundaries of Catalonia, under different formulas associated with **foreign investment** or **trade in services** (plant investments, construction contracts for infrastructure, the presence of financial capital, tourism services, etc.). This requires an analysis of the presence of Catalan transnationals and the financing or underwriting of operations carried out by third parties, where these are in some way destroying local biodiversity. While the nature of Catalan investment in Latin America and Africa is linked to the export of raw materials, which is what causes the greatest impact on biodiversity, in Asia, investments are principally associated with industrial delocalization. The financial services and banking sector, energy, water, raw materials, chemicals, pharmaceuticals, construction and hotel industries were all analysed to assess their relevance. The results are varied, and provide evidence that needs to be further developed in future studies. Cases such as the construction of 40,000 luxury houses in the dunes close to the Brazilian city of Natal co-financed by a catalan bank, with the project name "Natal Elegance"). Or that of a well known Catalan cement company operating in Bangladesh close to the Indian border which has been denounced by local groups. Or the grabbing, in Gambia, of between 150 and 200 thousand hectares of land for the production of agrofuels ("Project Afropalm 2020 Gambia", co-financed by another Catalan bank). Or the investment funds offered by banks with their headquarters in Catalonia that speculate with food prices.

Linked to the flow of foreign investment, the study also analyses the arrival of the phenomena of *biodiversity offsetting*, which refers to the financial mechanisms related to the commercialisation and compensation of biodiversity. A new vector exerting pressure on nature is that of financialisation, which can act as an incentive for the restoration of ecosystems, but which also acts as a new

source of conflicts over dispossessions and the destruction of complex and mature ecosystems (Sullivan, 2013).

The fourth vector of anti-cooperation relates to the **trade of wild species** (alive or dead) and was analysed both in terms of the legal traffic as reported to CITES, and in terms of illegal trafficking circuits. At a global level, illegal trafficking is estimated to be worth around 55,000 million euros, making it the third most important illegal trade after drugs and arms. Owing to its strategic geographical location, more than 30% of this illegal trade in plants and animals passes through the Spanish State. Spain is used as a link point between the countries of origin and the destination countries (from tropical Africa and Latin America to Europe and Japan; from South East Asia to the USA and Canada). There have been some reported cases in Catalonia.

As CITES-Spain reports (2012), between 2004 and 2009 the trade was dominated by the import of skins, flanks and pieces of animals that in 98% of the cases came from reptiles, above all, skins from lizards (genus *Tupinambis* and *Varanus*), snakes (genus *Python* and *Ptyas*) and crocodiles (genus *Cayman* and *Alligator*). Once imported, many of these are re-exported in the form of dyed and finished skins, shoes, bags and other leather products. A small percentage of the skins imported are mammal furs (Argentinian fox, red lynx, Canadian lynx, etc.). The import of live animals has decreased since 2005 owing, to a large extent, to the restrictions in the import of live birds following the outbreak of bird flu. Approximately 85% of live imports are reptiles, predominantly the common iguana (*Iguana iguana*) bred in captivity, turtles and tortoises (of the *Testudinidae* and *Emydidae* families) and some pythons. To give a representative example, Catalonia has legally imported 514 hippopotamus from Tanzania and Zambia, and 2,175 chameleons from Ghana, Madagascar, Tanzania and Cameroon in 2006-2007. Why is that so? The driving force behind the trade in species, both legal and illegal, are fourfold: luxury (furs and

leather, jewellery, restaurants) linked to the exclusivity of rare, and therefore expensive species; nutraceuticals (for example, the Omega3 capsules from seal fat consumed in Catalonia as parapharmaceuticals); trophies, hunting and sport fishing; the possession of pets (such as the barbary macaque, an endemic species in the Rif and Atlas mountains of North Africa, introduced into Europe through Algeciras).

Other specific drivers have been considered and analysed, including the consumption patterns of Catalan tourism (3.5 million foreign trips during 2011), the import of illegal timber, and specific official active policies that have a potential impact outside the administrative territory of the Catalan government, such as ethical public spending, support for the internationalisation of Catalan business and even the impact of official Catalan development aid.

Dynamic map showing cases of loss of biodiversity caused by Catalan anti-cooperation.

Finally, given the importance of language and culture in Catalonia, the study examines the links between the loss of biodiversity and the loss of cultural and linguistic diversity, which has been particularly devastating for indigenous communities. The study looks at the areas inhabited by indigenous populations that are potentially affected by pressure from the Catalan economy, and at the problems produced associated with biodiversity conservation. In particular it examines the case of the Wayúu people, affected by the largest open-cast coal mine in Latin America, on the border between Colombia and Venezuela, whence the coal imported by the Spanish economy comes.

Discussion

The study described here demonstrates the multiple direct and indirect channels through which a consumer driven capitalist economy (like that of Catalonia) interferes negatively with the conservation of biodiversity



beyond its political borders. It describes Catalan environmental anti-cooperation from the perspective of the conservation of nature. Two results can be inferred that are potentially useful both for Catalan policy makers, and for researchers looking at similar economies. The first result is political, and the second methodological:

i)- If environmental anti-cooperation really exists, then external environmental responsibility also exists, within a framework in which responsibilities are in fact shared and differentiated. Perhaps it is better to say that there is a **"global responsibility"** as it is distributed across the Globe (although there is a predominance of interference in the highly biologically productive tropical ecoregions, and/or in poorer countries with states that are unable to control the pressures exerted on their territory). To economies and societies like Catalonia, this global responsibility means, in the first instance, a moral obligation which some have called the **ecological debt**, which is historical in its nature. However, there is also an urgent pragmatic obligation to close the existing gap between the official rhetoric about the global problem of the "Sixth great extinction" of species and ecosystem "services", and the direction taken by national and sub-national public policies. Ultimately it is a question of including criteria of respect for global ecology across the entire spectrum of measures implemented by all governments, particularly those of the economies that devour more raw materials. To use the most politicological jargon we could call for the application of the principle of **"policy coherence for conservation"** when talking about the planet's biodiversity. This could be inspired by other emerging fields of public policy that seek to apply the principle of extra-territoriality from a cosmopolitan and internationalist perspective, as, for example, in the field of policy coherence for development (PCD), or laws that aim to avoid the violation of human rights in third countries, such as the US Aliens Tort Act.

ii)- This type of study could and should be replicated in other administrative contexts around the world, as has already happened in the United Kingdom, Sweden, Holland, Switzerland and the European Union. This is particularly important at a national level, as most regulatory competences are centralised there, but it can also be applied to the framework of the European Union and any other international regionalism. The **trifocal methodology** proposed by this study (hotspots, internationalisation and impactology), can be easily applicable to other countries or administrative consumer contexts, and could be particularly appropriate for the public conservation agencies of subnational governments, where there are fewer resources available than in national agencies. Of course, having systematic evidence does not guarantee that governments will adopt criteria of global responsibility. Nevertheless, it is a necessary first step that can lead to gradual changes in the cognitive framework of conservation policies, that are today based on an obsolete architecture that seems unable to face the urgent situation of global biodiversity destruction. The pressure for this essential shift should, if possible, be coming from within and without the affected territories at the same time, and in the midst of this crowd there of interferences is an urgent need for accurate visions.

- Frischknecht, R., Nathani, C., Büsler, S., Itten, R., Wyss, F., & Hellmüller, P. (2014). *Development of Switzerland's worldwide environmental impact. Environmental impact of consumption and production from 1996 to 2011*. Uster: Federal Office for the Environment FOEN.
- Galli, A., Wackernagel, M., Iha, K., & Lazarus, E. (2013). *Ecological Footprint: Implications for biodiversity. Biological Conservation*.
- ICAEN. (2010). *Balanç energètic de Catalunya*. Barcelona: ICAEN.
- Jungbluth, N., Stucki, M., & Leuenberger, M. (2011). *Environmental impacts of Swiss consumption and production: a combination of input-output analysis with life cycle assessment*. Federal Office for the Environment FOEN.
- Kamphuis, B. M., Arets, E., Verwer, C. C., Berg, J., Berkum, S. van, & Harms, B. (2010). *Dutch Trade and Biodiversity: Biodiversity and Socio-economic Impacts of Dutch Trade in Soya, Palm Oil and Timber*. LEI Wageningen UR.
- Llistar, D. (2009). *Anticooperación. Interferencias Norte-Sur. Los problemas del Sur Global no se resuelven con más ayuda internacional*. Barcelona: ODG-TNI-EeA-Icària Editorial.
- Llistar, D., & Jurado, A. (2009). *La responsabilitat exterior de l'economia i societat catalanes sobre la biodiversitat global*. (forthcoming publication). Departament de Territori i Sostenibilitat. Government of Catalonia.
- Mayor, X. (2008). *Petjada ecològica, consum del territori com a recurs? L'atzavara*, (17), 13-21.
- Mayor, X. M., Quintana, V., & Belmonte, R. (2005). *Aproximació a la petjada ecològica de Catalunya*. Generalitat de Catalunya, Consell Assessor per al Desenvolupament Sostenible.
- Myers, N., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A., & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403(6772), 853-858.
- Nykvist, B., Persson, A., Moberg, F., Personn, L., Cornell, S., & Rockström, J. (2013). *National Environmental Performance on Planetary Boundaries*.
- Scott Wilson Ltd. (2006). *SCP Evidence Base: International impacts of UK and EU Consumption (Biodiversity)*.
- Urkidi, L., Garmendia, E., Musoles, L., Mantxo, M., Arto, I., Barcena, I., ... Lago, R. (2014). *Justicia Ambiental Global: impactos socio-ambientales de la economía vasca en el Sur*. Leioa: UPV/EHU.
- Wackernagel, M., & Rees, W. (1998). *Our ecological footprint: reducing human impact on the earth*. New Society Publishers.
- Watson, D., Acosta, J., Wittmer, D., & Gravgaard, O. (2013). *Environmental Pressures from European Consumption and Production. A study in integrated environmental and economic analysis*. European Environment Agency.
- West, C., Dawkins, E., Croft, S., Brugere, C., Sheate, W., & Raffaelli, D. (2013). *Measuring the impacts on global biodiversity of goods and services imported into the UK*. DEFRA.