

## Whose values or valuable for whom?

### Biodiversity as global commons and the politics of the Yasuni-ITT initiative

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#### **Abstract:**

The notion of value is inherent to human society. Even though consciously or unconsciously values are assigned to most objects around us, the debate of what should be valued and based on what grounds re-emerges with regards to ecosystems, biodiversity and related ecosystem goods and services. Ecuador's Amazon region harbors astounding biodiversity richness in its rainforests. This is especially true for the Yasuni National Park, a UNESCO world biosphere reserve. However, oil exploration is eating into the remaining undamaged areas of the park, with consequences reaching far beyond the risks of pollution and disturbance to the ecosystem and its inhabitants.

This paper discusses different perceptions of values with regards to the Ecuadorian Yasuni-ITT initiative and relates those to the technical proposal that puts forward to forego oil exploration, based on the condition that Ecuador will be compensated with at least half of the expected revenues. Assuming that the Yasuni National Park and its biodiversity represent a global commons, this paper will examine the theoretical motivation and reasoning of the ambiguous but innovative proposal put forward by the Ecuadorian government. It is argued that instead of focusing purely on the prevented carbon dioxide emissions that are currently at the focus of the initiative, the center of attention should be the significant biodiversity richness and the ecosystem services the area provides not only for the region, but for the entire world.

*Keywords: Ecuador, Yasuni-ITT, UNESCO, Oil, Biodiversity*

## Introduction

Over the last decades the global discourse and attitudes towards nature and conservation of nature has changed and it has been realized that healthy ecosystems and biodiversity are not only important in itself but also for human wellbeing (MEA 2005). It became evident that a sound environment was the essential prerequisite for all human development and human welfare (Daily 1997). However, even though the awareness of the detrimental effects of deteriorating environmental health has increased, environmental deterioration has gained pace. Levin (2010) argues that the problem is to be found in the notion of the global commons we all live in, where no one bears the full costs nor receives the full benefits of their actions (Levin 2010). Global climate change and an increasing loss of biological diversity, with an estimated extinction rate nearly 100 times higher than the natural background rate (Myers 2003), reshaped political discourses in almost every part of the world. The year 2010 was declared as the International Year of Biodiversity by the United Nations, highlighting the significance of biodiversity not only as the foundation of most ecosystem functions on which human well being is dependent on, but also for its cultural and spiritual importance (CBD 2010).

Today, new policies are increasingly scrutinized and judged by their effects on the environment, at least theoretically. Nevertheless, the clash between development, foremost economic development, societal aspirations and environmental conservation persists. Nature conservation versus development remains a challenge that is progressively addressed around the world, albeit under different conditions and circumstances (Chan et al. 2006). The majority of the remaining healthy and biodiversity rich ecosystems are located in, to our definition ‘underdeveloped’ regions and countries, where the pressure and public debate about development and conservation is not only internally becoming more vocal. These debates are also increasingly carried onto the international arena and receive a great deal of attention from more ‘developed’ countries, international organizations and scientists transcending between academia and politics. Just to mention some examples, the constructing of a road through the Serengeti National Park in Tanzania has received strong international opposition from ecologists and biologists being afraid of the effects on the migration routes of African wildebeest and zebra (Dobson et al. 2010). The disastrous effects of oil palm plantations in Malaysia and Indonesia on the other hand have been highlighted by a variety of international civil organizations engaged in climate change and also the more traditional conservation organizations (The Economist 2010).

The Republic of Ecuador is a mega diverse country containing astonishing biodiversity richness and various geographical landscapes. However, the country has

been shaped through the negative effects of extractive activities such as oil production and mining with devastating effects on tropical forests and human health. Especially the northern Amazon of Ecuador has been affected by oil exploration since the start in the early 1970s. The region has been marked by a history of spills, environmental destruction and colonization (Mena et al. 2006; Finer et al. 2008). Even though Ecuador is an OPEC country with comparatively large oil resources, revenues from its production and exportation have seldom reached the majority of its citizens who, in turn, bear most of the negative impacts. A shift in government in 2006 raised the hopes of many that the period of blundering and careless natural resource extraction is going to come to an end. However, old structures and an economy that is based to most parts on resource extractions do not change in the glimpse of an eye and certainly not without strong efforts. Raphael Correa, the latest president of the Republic of Ecuador announced in 2007 a plan that would deviate from the traditional extractive way of generating revenues for his country (Correa 2007). The idea behind the plan, a major paradigm shift, is to get the international community, including states and philanthropists to compensate Ecuador for its efforts of leaving a large amount of oil in a part of the Yasuni National Park unexploited. The initiative is anchored around the discourse of prevented carbon emissions, central in the debate around global climate change. But, as this paper argues, if the paradigm shift shall be substantial and taking into account long term sustainability, the focus on prevented carbon emissions is a rather weak sustainability argument. What should be the focal point of the debate is the outstanding richness in biodiversity and the risk to the entire ecosystem that an extraction of the Yasuni oil, even under a scenario of best available technology and low impact drilling, could entail.

This paper will present a description of the Yasuni-IIT initiative and the main points of the proposal. To what extent international denominations like the UNESCO status are actually having an impact in decision making will be addressed and, subsequently, the paper will explore the question of why and how biodiversity must be considered in the debate about protecting an area that is a global commons.

### **From a national park to the Yasuni-IIT initiative**

The Yasuni National Park, Ecuador's largest national park with an area of 9,280 km<sup>2</sup> was created in 1979 (Larrea and Warners 2009). Studies have found that the moist forests of Yasuni are one of the most biologically rich areas in the Amazon basin and most probably in the world, with at least 43 regionally endemic amphibians, birds and mammals (Finer et al. 2008; Bass et al. 2009; Finer et al. 2010). It is assumed that during the last glacial period, when most of the Amazon rainforest was a savanna, only small remnants of rainforests survived in the eastern shadow of the Andes. Yasuni,

being one of those areas was a shelter for the biodiversity that inhabited the rainforest in those times and therefore counts with the evidenced species richness observed today (Pitman et al. 2002; Mayle et al. 2004). One hectare of forest in Yasuni harbors nearly as many tree species as the United States and Canada combined. Among the different indigenous tribes living in Yasuni and its surrounding area, two tribes are voluntarily uncontacted, the Tagaeri and Taromenane numbering around 300 people for whom the Ecuadorian government established an intangible zone in the central and southern parts of Yasuni (Finer et al. 2009; Larrea and Warners 2009).

The richness of Yasuni, however, is not only limited to above ground. Like in many parts of the western Amazon, the below ground wealth is characterized by vast oil reserves. About 65 percent of the Ecuadorian Amazon is already zoned for oil extraction, overlapping national parks and indigenous territories, such as the Waorani indigenous territory. Concession blocks are assigned to national and various international oil companies, such as Petrobras Ecuador and Agip (Finer et al. 2008). This is also the case for parts of the Yasuni National Park, where oil exploration is already happening or eventually will go forward. Yasuni-ITT stands for the oilfields Ishpingo, Tambococha and Tiputini that denominate a block in the north eastern part of the park (see Figure 1). It is the ITT block the proposal is centered around. Reserves in this block are estimated to be approximately 900 million barrels of heavy crude oil, representing 20 percent of Ecuador's estimated oil reserves of 4.6 billion barrels.

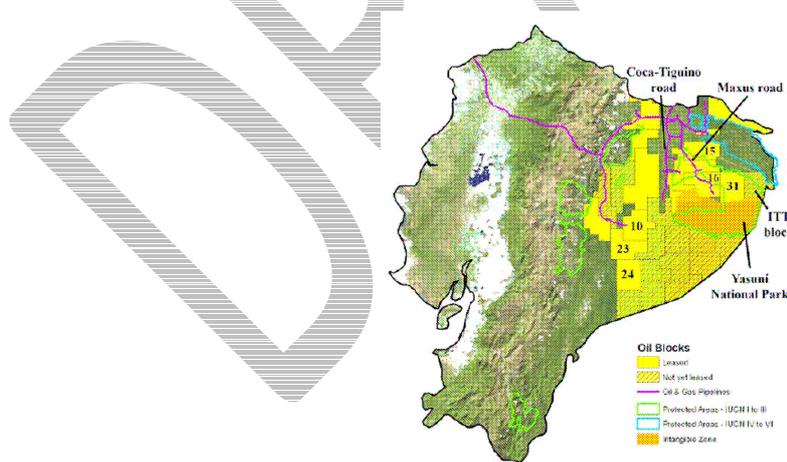


Figure 1 - Map of Ecuador and the location of the Yasuni National Park; Source: [www.sosyasuni.org](http://www.sosyasuni.org)

The production of heavy crude oil in Yasuni-ITT would bring about the further opening of a nearly untouched area through the construction of roads. Furthermore, it would also entail, especially of water and air that even with best technology is unavoidable. Examples in other parts of the northern Ecuadorian Amazon have shown that the construction of roads and the resulting facilitation of access to the area lead to

increased poaching, timber extraction, colonization and consequently land conversion for agriculture (Sierra 2000; Dew et al. 2003; Bilsborrow et al. 2004).

In 2007, Rafael Correa took office as the new president of Ecuador. In his citizen revolution (Span.: *Revolución Ciudadana*) one of the objectives was to move away from natural resource extraction to a more sustainable path of development for the country. This ambition has also found its way into the new Ecuadorian constitution that has given explicit rights to nature in itself and the right of the citizen for a good life (Spanish: *Buen Vivir* or in Quichua: *Sumak Kawsay*) (República 2010). Yet, the new constitution of Ecuador only applies to future extraction and cannot be called upon already existing or planned extraction projects and concessions. The politics of the current government are still to a large extent based on the exploitation of natural resources, such as mining and oil, created tension within and among the various indigenous communities of the Ecuadorian Amazon basin and the government (Perreault 2003). Nevertheless, by proposing the Yasuni ITT initiative Ecuador becomes the first country in the world that is putting forward an actual plan to forego extractive activities in a grand scale if compensation for the lost income is received. According to Larrea and Warnars (2009), there are about 850 million barrels of petroleum in the ITT block and the expected revenues the Ecuadorian state would receive are estimated at around US\$ 7 billion. However, if half of these revenues, i.e. US\$ 3.5 billion can be collected over the span of 10 years Ecuador will leave the reserves unexploited (Larrea et al. 2010). The main argument that is put forward in the discussion about the initiative and that is at the heart of the cost benefit calculation are the prevented carbon emissions from the non-extracted oil. When burnt, the 850 million barrels would lead to an estimated 407 million tons of emitted CO<sub>2</sub>, contributing to global warming. Considering construction, deforestation and other related activities related to oil extraction, the total emissions would even be higher. The line of argument that follows is based on the comparison of the value of the petrol and the value of the emissions credits on the carbon market, at a price of US\$ 17.66 per ton of CO<sub>2</sub>, which are estimated at US\$ 7.19 billion (Larrea and Warnars 2009). Based on the numbers by Larrea and Warnars (2009) the oil is worth more left underground provided that the non emitted carbon emissions can be marketed, which they cannot under the current compliance market. According to the calculations, the initiative is based on the assumption that basically one barrel of oil generates about US\$ 8.57 of profits when extracted. If the same barrel is not extracted, then the prevented carbon emissions from that barrel being left underground are worth 9.54 US\$ in the carbon market. In the official Yasuni proposal these carbon emission reductions would be issued and could be sold as Yasuni Guarantee Certificates [YGC], and not as Certified Emission Reductions [CER's], as under the current climate mitigation mechanisms these kind of initiatives are not yet included (Larrea and

Warnars 2009). The whole initiative is thus centered around the argument of mitigating climate change in terms of avoided emissions. After about two years of developing the ITT proposal and asking for international support and donors, discrepancies emerged in early 2010 over the exact terms of reference that are stated in the trust fund. These terms of reference constrain the spending of the funds, limiting the use to social and environmental projects in Ecuador. Most of the potential donor countries, among them Norway, Germany, France and Belgium, insisted on these constraints in order to avoid the use for projects that result in negative environmental and social impacts. However, Rafael Correa referred to these terms as a new form of colonialism and a threat to the independence of Ecuador's sovereignty (Martin and Finer 2010). Despite these quarrels and ups and downs of the initiative, Correa signed the agreement with the United Nations Development Programme [UNDP], the agency that administers the trust fund in which the money is going to be collected, in August 2010 (UNDP 2010).

### The UNESCO declaration

Internationally, the Yasuni National Park received attention when The United Nations Educational, Scientific and Cultural Organization [UNESCO] declared it a world biosphere reserve in 1989. For natural areas and ecosystems, this status symbolizes outstanding value and scientific importance of universal relevance (UNESCO 1972). The UNESCO declaration stipulates in article 4 that:

*“Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain.”*

Additionally, paragraph 1 in article 6 states that:

*“Whilst fully respecting the sovereignty of the States on whose territory the cultural and natural heritage mentioned in Articles 1 and 2 is situated, and without prejudice to property right provided by national legislation, the States Parties to this Convention recognize that such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate.”*

In essence, the UNESCO does not have the mandate to exercise any kind of legal measures against a state that potentially undermines the environmental integrity of a designated area. Hence, the convention indirectly allows the possibility to explore

options such as the one proposed in the ITT initiative, where the state on whose territory the area is located seeks for co-operation among the international community to ensure the status of an area because it is a recognized world natural heritage. This statement shifts responsibility partly away from the national government and puts pressure on the international community to contribute, as stated in article 4, financially to ensure the conservation of the natural heritage(UNESCO 1972).

From a legal perspective, although the right to a healthy environment is anchored in the Ecuadorian constitution (República 2010) making extractive activities in national parks illegal, this can be circumvented by presidential decree and by the vote of the national assembly if it serves the interest of the country. At the point of writing no cases were known where any legal steps have been taken against the Republic of Ecuador for violating its own constitution.

### **Biodiversity as a global commons**

According to the CBD (2010), the term biodiversity signifies the variability and richness of species, species abundance, as well as diversity between species and ecosystem, and genetic diversity. Recognizing the importance of conserving biodiversity the Convention on Biological Diversity [CBD] was created in 1992 and since then ratified by most countries. Unfortunately, as with many international conventions which are in theory hard law and therefore binding, enforcement of the CBD is weak.

Even though the importance of biodiversity is increasingly recognized and financial valuation tools are developed revealing a positive cost benefit perspective on conservation (e.g. the TEEB reports), protecting biodiversity must not only valued as for its instrumental or specific anthropocentric purpose, but also from a moral as well as ethical perspective (Chan et al. 2006). In that sense and for the purpose of this paper, the concept of intrinsic values is used as a synonym for non-instrumental values (e.g. O'Neill 2003). With regards to the Yasuni ITT initiative, I claim that not the carbon dioxide emissions that would result from the oil exploration should be the main focus of the discussion, but the regions outstanding biodiversity, which represents a global commons of significant value to current and future generation. Apart from generally recognized global commons, such as the oceans, the atmosphere and Antarctica, biodiversity as an encompassing concept is connected to a variety of sensitive issues when framed as a global commons. One of them is national sovereignty over the use of resource within a country's border, biodiversity and forests being one of them, consequently impeding the engagement and involvement of other national states into one's national issues (Pearce, 2005). This, however, should not make us abstain from discussing it.

Biodiversity as an embracing concept, including species and ecosystems, in general cannot be owned by anyone, neither states nor individuals. Although there are exceptions, for example companies that patented genetically modified organisms or markets for ecosystems services that attribute in some aspect property rights to the services derived from biodiversity. But even though biodiversity is unequally distributed on a global scale with tropical regions being richer in species and biodiversity hotspots (Myers et al. 2000), biodiversity as a global public good does neither belong to any individual nor a group of people or, for that matter, a government. Special conventions, e.g. the UN Convention on Fishing and Conservation of the Living Resources of the High Seas from 1958 or the Antarctic Treaty System, govern territories and the natural resource use in these territories that do not belong to nation states. Because biodiversity and ecosystems are inherently connected and the goods and services derived from these ecological systems are consumed in places other than where they are generated, biodiversity needs to be protected with the efforts of the whole international community (Pearce 2005) and the responsibility for its conservation needs to be shared among nation states. Linked to the discussion about deforestation of the Amazon rainforests, an ecosystem of utmost importance for the whole world (Malhi et al. 2008), the debate about ecosystems and biodiversity being regarded as global commons has gained momentum (e.g. Schiff 2010) and voices have called for stronger international involvement in managing and protecting the Amazon beyond the national jurisdiction of e.g. Brazil.

The different values that are connected in the debate about Yasuni stem from diverse ideologies and spread over different time frames as well as spatial scales. Various values can be distinguished. Firstly, there are commercial or economic values, i.e. use values of the oil reserve that are expressed in monetary terms, based on the price for oil in the international market. These are values or revenues that remain to a large part within the borders of Ecuador. Then there is a more abstract, but still calculable value of the prevented emissions from the oil extraction, locally and consumption, regionally and globally. These values are the center of the debate and the main argument for the initiative, which stresses that a benefit-cost analysis reveals a potential greater benefit from selling prevented emissions in the form of CDM's rather than selling the petrol (Larrea and Warnars 2009). Nevertheless, the instrumental value of Yasuni's carbon storage capacity in its biomass and soil, which would be disrupted if the plan for development would go forward, is another important aspect that has not been included in the calculations. Not only could the carbon storage as an ecosystem services be quantified and expressed in monetary terms, but also the value of other ecosystem services, such as water provision, climate regulation and biodiversity habitat could be calculated to obtain an approximate figure. Another instrumental value is

tourism and cultural or spiritual values. Attempting to express these values, Costanza et al. (1997) calculated the value of the world's ecosystem services. In their analysis, they estimated the average value of one arbitrary hectare of tropical rainforest with US\$ 2,007 per year. For the 928,000 ha of the entire Yasuni National Park, the value of ecosystem services would be around US\$ 1,862,496,000 per year. For the ITT block, covering some 175,000 hectares, the estimation is around US\$ 351,225,000 per year, matching the amount that the government of Ecuador asks as a yearly payment over the next 10 years in order to forego oil extraction. Moving beyond pure numbers, there are the intrinsic values of the park and its biodiversity, everything that is beyond the measurable, quantifiable or 'valuable' in economic terms. Finally, there are bequest and option value that transcend time scales and reach into the future, affecting generations not yet born. However, knowing the value and importance of Yasuni does not suffice to overcome the challenge of preventing oil extraction in the park. Getting the international community to accept payment or compensation for the ecosystem services delivered by the park is impracticable as it would require a major paradigm shift in our economic way of thinking and would have far reaching consequences in international politics.

### **ITT - Prevented carbon emissions rather than biodiversity**

The value of biodiversity, either for its use values for direct human benefit, or its non-use values, is inherently difficult and values expressed in economic terms can only give a very rough estimation rather than being taken as a true value to be used in calculations. However, in the context of conservation, the argumentation for intrinsic values has been dismissed recently by many conservationists, recognizing that it is not strong enough to convince policy makers to change course (Turner and Daily 2008). Therefore, the discourse in conservation has been modified, using a climate change argumentation to accommodate the potential of the global carbon market, which has increased significantly in recent years. For 2009, the national and international trade of carbon certificates and emission rights was estimated at around US\$ 136 billion (Reuters 2010). Therefore, making use of the climate change argument that emphasizes the prevented emission from oil extraction and consumption as the main argument for putting forward the Yasuni ITT initiative in its current state is sensible and pragmatic, even though the CGY's generated through the proposal are not equivalent to Certified Emission Reductions from the compliance market. However, the proposal uses and builds on the instrumental and quantifiable values that are believed to be more powerful in convincing potential donors of the direct benefits of supporting the initiative, rather than the more abstract and less tangible conservation motivations. It has even been suggested that on a country level the CGY's could be used as an equivalent to CER's. Nevertheless, the focus on prevented emissions and carbon markets has consequences as it is subject to market forces beyond the control of Ecuador or any

other single country. If the oil price increases in the future, which it likely will, then Ecuador could demand higher compensation. If the market for carbon credits decreases and one ton of CO<sub>2</sub> becomes cheaper, then the calculation would lose ground as it undermines the argumentation of prevented emissions being as valuable as the oil reserves when extracted. Thus, framing the initiative in that way undermines what is truly at stake; it is the degradation of an area of outstanding value, in itself and for current and future generations as well as local, regional and international stakeholders, the territory of two uncontacted indigenous groups living in voluntary isolation, in short a common heritage of humankind.

## Discussion

The Yasuni ITT initiative has received positive and negative feedback over the last years since its creation. One could call it blackmailing of the international community by the Ecuadorian government, holding hostage a biodiversity hotspot and threatening to degrade it. The initiative could pave the way for a whole range of proposals and calls for financial compensation by other countries. In some way, the ITT initiative represents a tool for developed countries to channel development aid into Ecuador in the form of donations for Yasuni, in return for CGY's from Yasuni. Seen from a development aid perspective, the proposal creates a win-win situation for the donor country because it will receive praise from its citizens for protecting the environment, while theoretically reducing its CO<sub>2</sub> emissions, and for Ecuador because it will receive immediate cash funds. Especially when considering that even if oil exploration would start instantly, revenues would only start to flow in a couple of years, after extraction and commercialization.

Using the argument of preventing carbon emissions might be pragmatic in the debate around Yasuni, because it is easier to grasp in some sense and numbers are constructed more easily, showing the perceived economic superiority of foregoing oil extraction under the current market situation. However, one should not forget the strong political discourse of the initiative. On one hand, the urge and push of the government of Ecuador to find a new development path, and on the other hand expanding oil production in neighboring blocks of the ITT, within the Yasuni National Park, and handing out concession for oil extraction on indigenous territories in the southern parts of the Ecuadorian Amazon (Finer et al. 2008). The politics of the Correa government are, in the best case, ambiguous, if not even conflicting. While the international focus is laid on the ITT initiative and the prevented carbon emissions, Ecuador is building its first refinery in Manabi, a coastal province, and the oil related activities in the Amazon do not show signs of slowing down or ceasing in the near future (Martin and Finer 2010). New

oil fields are opened up constantly in remote and pristine areas. Considering this reality, what is then the point of struggling with the ITT proposal and to what extent then does it really help to change the currently predominating development paradigm. Politically, pursuing the ITT proposal is a win-win for the Cororean government, if the ITT proposal fails, because not enough donor countries were willing to engage and pay the demanded compensation, then they are to blame for the failure and the consequent degradation of the ITT area. If the proposal however succeeds, the government would be receiving at least US\$ 350 million each year over ten years and not have to carry the environmental and social cost of oil extraction. Furthermore, the government would gain a green image internationally. Doubts about the guarantees of the governmental decision to keep the oil underground are met with the claim that if a future government withdraws from the proposal and drills for oil, the signature of the agreements and the establishment of the UNDP trust fund would serve as a mechanism to repay the compensations (UNDP 2010). However, it is likely that the oil price is going to increase in the future and oil production in the future will yield a higher revenue than currently. In that scenario too, the government of Ecuador benefits from the proposal, getting funds enabling investment right away and, if choosing to drill in the future and being obliged to repay, still probably making a profit, although depending on a future oil price.

## Conclusion

The notion of paying a country for foregoing an income generating activity is a concept that is rather difficult to understand and justify for many, especially if the area at stake is protected by national laws and internationally recognized as important global heritage. It raises doubts for the credibility of a government to be committed to its own laws. The Yasuni ITT initiative is an innovative proposal that Ecuador has been acclaimed for internationally. It is certainly worth considering and discussing, but given Ecuador's current political volatility and contradictory policies, the initiative is facing uncertainty.

The potential loss of outstanding biodiversity, habitat and ecosystems services our and future generations depend on need to be brought back into the discussion. The fact that there is oil underground should, from that perspective, be of less importance in the decision. If there were no oil but another valuable resource, such as gold, what would be the main argument then and what would an alternative benefit cost calculation look like? The remaining tropical forests represent a vast natural resource, not only measured in their timber value but in their value for the global society considering the array of ecosystem services they provide. Developing countries often face a double pressure, the pressure to develop coming from their citizens, and, on the other hand, from other countries to gain access to natural resources. Combining these with

conservation is an enormous challenge. Being compensated for a loss in revenue is reasonable, since the benefits of environmental stewardship are felt beyond borders. Thus, the stewardship of these ecosystems could or even should be framed as providing an essential service to the world and as a consequence should be compensated.

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