

**Yasuni-ITT Initiative:
A BIG IDEA FROM A SMALL COUNTRY**



**Ministerio
del Ambiente**



**Ministerio
de Relaciones Exteriores,
Comercio e Integración**

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PRESENTATIONS

GLOBAL SHARED RESPONSIBILITY FOR AN EMBLEMATIC INITIATIVE

In 2007, when the Yasuní-ITT (Ishpingo-Tambococha-Tiputini) Initiative was launched, Ecuador began an innovative debate on alternative forms to project the natural heritage, as well as public policies and the rights of the cultures and societies linked to the conservation territories.

Compared with other countries around the world, Ecuador's contribution to climate change is utterly marginal, given its low exosomatic consumption of energy. Even so, for the Government of Ecuador, the Yasuní-ITT Initiative is a priority proposal of its foreign and environmental policy, which exceeds Kyoto negotiations to face climate change because this Initiative not only proposes the reduction of greenhouse emissions but presents a mechanism to prevent them.

The Initiative implies a conceptual break based on a different economic and ethical ideal. We cannot continue to maintain the idea of a *cowboy* open economy, as Kenneth Boulding said in 1968, an economy of growing increase of entropy – which means, we cannot aim for an unlimited economic growth based on a source like fossil fuels¹. The World's current challenge to address climate change must retake the principles of the *spaceship* economy – which means, an economy in a closed system, finite in its resources and limited as generator of residues, where we must measure the ecological footprint of our actions². Ecuador proposal to the international community is a concrete and viable mechanism to keep underground the oil of an area in the Amazon region. This constitutes a call to attention to break the paradigms based only on the market and on an open economy. As stated by E. Morin³, we promote an ethical system where the actions of the society-State-market take into consideration that nature and cultures must live indefinitely.

If we submit to the parameters of the conventional –*cowboy*- economy, we will see that the decision of a country to use its natural resources is determined by the international price of raw materials, the expectations of its reserves, its competitiveness, etc. In fact, Harold Hotelling, already in the 1930's, proposed a guideline to establish the best path for the exploitation of non-renewable resources, based on the marginal cost of extraction and the scarcity income⁴, not considering environmental, social or cultural aspects.. At a first glance, and within a scheme isolated from the rest of the world, for any primary-exporting country like Ecuador, these reasons would be decisive in favor of extraction.

However, from the perspective of a closed –*spaceship*- economy, the Yasuní-ITT Initiative proves that there are viable and concrete alternatives for the conservation of the biodiversity. The ITT corridor is not only a proved oil reserve. It is also the territory of several indigenous nationalities and tribes, including the Tagaeri-Taromenane community, which live in voluntary isolation. It is also an area that houses an undeniable natural wealth that has been the subject of national and

¹ Boulding, K. E. 1966. The Economics of the Coming Spaceship Earth. H. Jarrett (ed.), Environmental Quality in a Growing Economy, pp. 3-14. Baltimore, MD: Resources for the Future/Johns Hopkins University Press.

² Ibidem

³ Morin, E. 1977. El Método, Vol. 1. La Naturaleza de la Naturaleza. Paris, Seuil, col. Points.

⁴ Hotelling, H. 1931. "The Economics of Exhaustible Resources", in the Journal of Political Economy, vol. 39, nº 2, April, pp. 137-175.

international interest to preserve and manage in a sustainable way. Ecuador acknowledges its obligations to preserve the Amazon basin's biodiversity just like we preserve Galápagos Island's biodiversity. Such conduct benefits humanity as a whole. It is normal then that we should make this call for shared responsibility.

The Yasuní-ITT Initiative constitutes a technical and political answer from a southern hemisphere country to the World's urgencies to thwart environmental deterioration. It will prevent the emission of millions of metric tons of CO₂ and will ensure the continuity of a sensitive social, environmental and cultural ecosystem. The funds obtained by the Initiative will be destined to achieve the necessary changes in the supply matrix of energy and production, reducing the use of fossil fuels by replacing them with renewable forms of energy such as hydraulic, geothermal, eolic, tide and solar. As set forth by the Constitution of the Republic of Ecuador, it is a decisive step towards the search for *Sumak Kawsay*.

Ecuador has issued its permanent claim regarding the World's ecological debt as part of the vision of historical environmental (in)justice. Thus, we share the claims of various African and Latin American countries regarding the "historical responsibility" for the disproportionate emission of greenhouse gases over many decades by industrialized countries, even after it became very well known that the concentration of carbon dioxide in the atmosphere was increasing rapidly. We are looking for Global Sustainability as a challenge of international common but differentiated responsibility and social equity, between those that damage the environment and those that suffer the consequences.. Glaciers and water sources are disappearing in Andean countries. The eventual increase in sea levels would affect our coasts and the largest city of the country, Guayaquil.

In our search for other constructive initiatives, in addition to the Yasuní-ITT Initiative during the Third Summit of OPEC (Riyadh, November 2007), President Rafael Correa took up again the ideas of one of the founders of Environmental Economy and the theory of the management of (un)sustainability -Herman Daly-, and proposed a 3% tax on the export prices of crude oil, to be used in the struggle against climate change and to compensate the energy costs of developing countries (Daly-Correa tax)⁵. Our country told OPEC and the world that climate change is a reality and that there are Economic Politics' tools to deal with it.

For a single country, in an isolated way and without the participation of the international community and national political decision, it will be very difficult to maintain a model as the one proposed in the Yasuní-ITT Initiative. We must shift from a purely economic vision to a multidimensional vision, to a multicriteria decision, where the legitimate financial needs of countries are counterbalanced by social, political, cultural, and international reasons which can determine alternative paths for conservation.

⁵ Gallardo, L., K. Koenig., M. Christian & J. Martínez-Alier. 2008. *Para luchar contra el cambio climático. Dos propuestas del Ecuador*. In *Le Monde Diplomatique* in Spanish, No. 150. <http://www.monde-diplomatique.es>.

Under the principle of Common but Differentiated Responsibilities developed by the United Nations Framework Convention on Climate Change, Ecuador proposes to the Region and the World a new Model of Conservation and Sustainable Use of the natural and patrimonial resources, based on the International Common Responsibility.

Fander Falconí Benítez
Minister of Foreign Affairs, Trade and Integration

FOR THE PROTECTION OF THE MOST IMPORTANT LUNG IN THE PLANET

Ecuador is moving towards development with the firm purpose of conserving natural resources, which are the heritage of both the country and of its inhabitants'. With responsible policies and innovative programs, the Government analyzed several solutions aimed at preserving our biodiversity, a vision, which is contemplated in the environmental policy, put in place by the National Government. Aware of our natural wealth, we are constantly seeking effective and equitable solutions to reach a fair equilibrium between production and preservation, in order to ensure that the environment is at the service of men and that men take good care of it.

Initiatives that generate great benefits with minimum risks of impact are possible, and they must be carried out promptly. An important example is the Yasuní-ITT initiative that, by avoiding oil exploitation in an area of vital biological and cultural importance, seeks to contribute to the conservation of biodiversity, to the fight against climate change, and the promotion of social equity in the country.

Preventing oil extraction in the Yasuní, one of the planet's most biodiverse areas, will contribute to the reduction of global warming. This decision presented by Ecuador, is aimed at conveying an important message regarding the country's new development model, based on the respect for the rights of nature, social equity, and the sustainable use of resources. This new vision implies breaking with the anthropocentric vision of development. Therefore, it constitutes a great challenge in the current global context, as we establish solid bases for sustainability and economic growth not dependent on us sacrificing the country's natural heritage.

Through the Yasuní-ITT initiative and the actions undertaken within the framework of the United Nations Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), the National Strategy on Climate Change, as well as national programs on biodiversity conservation and protection of populations living in voluntary isolation, the National Government, through its Ministry of the Environment, is orientated determinedly towards the conservation of natural wealth.

The initiative emerges from the awareness of the synergies that exist between the ecosystems and the services they provide, extractive activities, and the development of the population. Through it, we seek to offer alternatives that maximize the social and environmental benefits arising from the conservation of our natural and cultural heritage the implementation of development alternatives will offer new opportunities for human beings to live in optimum harmony with nature, our main life source.

It is evident that the country, by not extracting oil reserves in the area, will not receive huge revenues. However, Ecuador considers that it is more important for the environment that oil remains underground. In return for this decision, the country expects to receive compensation equivalent to the value of the unexploited crude of the ITT field located in the Yasuní National Park.

Ecuador is a developing country, it has an immense biodiversity, but at the same time it depends on the revenues generated from oil exploitation. We are appealing to the rest of the nations, seeking the support of responsible countries and citizens alike in order to reach a transition towards a more sustainable development model. For this, we acknowledge the imperative necessity for a change in the established international cooperation systems regarding climate change, biodiversity and development, and we are willing to lead the way that will guide us towards that change.

A new milestone has been reached in our nation's history and it has set a precedent for other countries around the world. Our Government of the Citizen Revolution is generating effective projects aimed at a responsible and respectful management of nature. This initiative has put Ecuador as a great protector of natural life reserves on the planet.

Marcela Aguiñaga Vallejo, Esq.
Minister of the Environment

YASUNI-ITT INITIATIVE

April 22, 2009. Earth Day. Four gigantic puppets walk through the streets of Central London to remind us who are the new Horsemen of the Apocalypse: red symbolizes war, green is climate change, white represents “crimes of money” and the black, poverty.⁶

Each one more dramatic than the other, the horseman of climate change constitutes – perhaps because it could lead to the other three – the greatest global challenge facing current generations, who are already suffering from the first effects of this global phenomenon, but their inaction could make them responsible for impacts yet to come.

Increasing temperatures, rising sea levels and more frequent and intense extreme weather events such as floods, droughts and hurricanes, which have already begun, will have dramatic effects all over the planet. And, once again, developing countries will be the worst affected.⁷

As the world becomes warmer, millions of people will find their basic elements of life disrupted: access to water, food production, health and the environment.

Nevertheless, there is still time to halt the galloping of the horseman, that is, if we begin now to take decisive and forceful measures together.

Ecuador is among the countries that are highly vulnerable to climate change. The most severe projected effects are the virtual disappearance of the Andean glaciers, the intensification of the El Niño phenomenon and the savanization of the Amazon region.⁸

⁶ In Paz and Miño, Cesar. El Telégrafo Newspaper. 26 April 2009.

⁷ UNDP (2008). *Human Development Report*. <http://hdr.undp.org/en/reports/global/hdr2007-2008/>

⁸ Nicolas Stern (2007), *The Stern Review, The Economics of Climate Change*.

BOX 1.

THE GREENHOUSE EFFECT

Sunlight enters the earth – overcoming the albedo effect of the atmosphere- and is transformed into caloric energy that increases the earth's average temperature from -22°C to $+14^{\circ}\text{C}$.

This heat is retained in the atmosphere by 6 greenhouse gases (water vapor, carbon dioxide, methane, nitrogen oxide, ozone and chlorofluorocarbons-CFC). These gases act like the glass in a greenhouse: allowing solar energy to enter in the form of light. When this light hits the surface, it is transformed into heat which cannot escape because of the gasses which block it. Thanks to this principle of physics, life on earth has flourished.

Since the industrial revolution began, 200 years ago, humans have been using the mineral carbon in its different forms - coal, wood, gas and oil - as energy sources. More and more of these elements are burnt daily, releasing CO_2 which is stored in the atmosphere. As a result, from 1900 to 2000 the concentration of CO_2 in the atmosphere has risen from 270 parts per million (ppm) to 390 ppm. This resulted into the increase of the average temperature of the planet from 13.6°C to 14.4°C .

The higher concentration of CO_2 in the atmosphere is also caused by the destruction of the forests, which through the process of photosynthesis, act as huge carbon sinks.

If the use of energies dependent on carbon and the destruction of forests continue unregulated, temperatures will continue to rise to the end of the 21st Century, from between 1.8°C to 5.8°C . Climate models indicate that the effects upon human activities are manageable if the change is below 2°C . Any increase greater than that will have devastating and catastrophic effects.

BOX 2

THE ORIGIN OF THE PROBLEM: USING CARBON AS AN ENERGY SOURCE*

Carbon, a main building block of life, it is contained within the biomolecular structure of all living beings. Burning this mineral provides humanity's main energy source.

In the atmosphere this element is present in the form of CO₂, in the oceans as carbonates and in the earth as carbonate rocks, carbon, gas or oil.

Through photosynthesis, the entire planet's plant cover (forests, grasslands, tundra, *paramos* or high altitude plateaus, phytoplankton) absorbs CO₂ and incorporates carbon into its tissues, giving off oxygen in the process.

Later, herbivores eat vegetables and the carbon becomes part of their bodies; this carbon is then returned to the atmosphere through breathing and to the soil in the form of excrement or decomposition.

CO₂ dissolves in water which means that ocean waters store large quantities of the gas.

The skeletons of dead marine organisms accumulate on the sea beds, and after they decompose, they are transformed into carbonate rocks. Also through the process of erosion, carbonate rocks on land end up in the sea.

In this way the carbon cycle closes.

THE EARTH'S CARBON RESERVOIRS AND THE IMPACT OF HUMAN ACTIVITIES.

The planet's large carbon reservoirs are: (1) Oceans: 66%, (2) Gas, oil and coal deposits and the planet's plant cover: 33%, (3) The atmosphere: 1%.

Human activities are dramatically increasing the carbon content in the atmosphere, due to the release of the carbon that is accumulated in both plant cover and in oil, natural gas and coal reserves.

* Sevilla, Roque (2009). Administrative and Leadership Council of the Yasuni-ITT Initiative, Quito, Ecuador.

BOX 3

GLOBAL WARMING IN NUMBERS

If the current trends continue, the economic cost of global warming could reach 20% of the global Gross Domestic Product (GDP). Nevertheless, we can still prevent the most severe effects. Making a timely investment equivalent to 1% of global GDP, the increase of temperature could be limited to 2°C and the concentration of greenhouse gases kept below 550 parts per million (ppm). This endeavor, however, requires a substantial shift in the global economy: reducing current emissions by 80%, achieving a reduction of at least 25% by 2050¹.

Even though the Kyoto Protocol (KP) and other international efforts have achieved significant results in mitigating climate change, these have clearly been insufficient given the magnitude of the problem. The KP proposed a reduction of greenhouse gas emissions to 95% compared to 1990 levels. Unfortunately, as of 2006, global CO₂ emissions, due to fossil fuel burning, were 35% above 1990 levels and continued growing at a rate of 3% annually.

The burning of fossil fuels is the main source of greenhouse gas emissions, of which 65% comes from industrialized countries. However, deforestation, which mainly takes place in developing tropical countries, accounts for 18% of the total.

The enormous challenge that the planet faces to revert these trends cannot be met by the KP, and demands joint and coordinated action of the whole world, including developing countries, which currently have no binding commitments. "Even if the rich world takes on responsibility for absolute cuts in emissions of 60-80% by 2050, developing countries must take significant action too."³

¹Stern, Nicholas (2007). *The Stern review*. The Economics of Climate Change, Cambridge.

²Brown R., Lester (2009). *EcoEconomy Indicators*. <http://www.earth-policy.org/Indicators/>

³Stern. Ob.cit.

A SMALL COUNTRY, A BIG IDEA

As Nicolas Stern said, “Even if the rich world takes on responsibility for absolute cuts in emissions of 60-80% by 2050, developing countries must take significant action too”⁹.

Ecuador proposes to play its part and face up to this global challenge. Given the recent confirmation of large heavy crude deposits in the Yasuni-ITT field, which accounts for 20% of country’s total oil reserves, in September 2007 the President of Ecuador, Rafael Correa, presented before the United Nations a valiant decision: to keep the ITT field crude in the ground indefinitely, if the international community – taking on its share of responsibility - donates at least half of the profits the State would receive if it were to extract this crude.

“With our project Ecuador is offering a concrete and innovative proposal that contributes to the reduction of CO₂ emissions and the conservation of biodiversity”¹⁰, the President told the United Nations.

The essence of the initiative is Ecuador’s commitment to refrain from exploiting proven reserves of 846 million barrels of heavy crude oil¹¹, thus preventing the emission of 407 million metric tonnes of CO₂, which would result from burning these fossil fuels.

“This would be an extraordinary example of global collective action” Correa expressed “that would not only reduce global warming, which benefits the whole planet, but also introduce a new economic logic for the XXI Century, which assigns a value to things other than merchandise.”

THE YASUNI-ITT INITIATIVE: A CREATIVE, HOLISTIC AND REVOLUTIONARY IDEA

In 1972 Ecuador became an oil exporter, and since then this product has been the centerpiece of the national economy. However, the environmental and social impacts of the oil industry have also been quite dramatic.

Along with global warming, another huge environmental threat that the planet faces is the loss of biological diversity. Ecuador is one of the 19 “megadiverse” countries in the world and is also noted for the richness and variety of its indigenous cultures.

The Yasuni-ITT Initiative is a holistic and revolutionary proposal because in addition to addressing the root of global warming and biodiversity loss- it also aspires to reduce poverty and inequality in the country. In addition, the initiative offers an opportunity for oil producing developing countries, such as Ecuador, to transform their extractive economies and seek dignified development opportunities through the sustainable use of their natural resources.

⁹ Stern, Nicholas (2007). *The Stern review*. The Economics of Climate Change, Cambridge.

¹⁰ Correa, Rafael. Speech given to the United Nations Presidents Forum on Climate Change, New York, September 22, 2007 (www3.presidencia.gov.ec, 2009).

¹¹ The density of ITT crude oil is 14.7° API (American Petroleum Institute).

The Initiative:

- Attacks global warming by preventing carbon reserves from being released into the atmosphere. It involves not exploiting this resource, leaving the oil and gas indefinitely underground and, in the case of the forests, guaranteeing the conservation of these giant carbon sinks.

The massive programs of reforestation, forestation and natural forest recovery will lead to more CO₂ being absorbed from the atmosphere.

In addition, reducing the use of oil in power generation and industrial production, and replacing it with carbon-free technologies for industries and households, will also reduce CO₂ emissions. In this way, Ecuador can leave its extractive economy behind and advance towards an alternative, equitable and sustainable development process.

- Prevents the loss of biodiversity, by guaranteeing the protection and sustainable management of 38% of Ecuadorian territory, which is one of the most biodiverse regions on the planet. It also guarantees the survival of the last two tribes who live in voluntary isolation in Ecuador – the Taromenane and the Tagaeri.
- Reduces poverty and inequality by prioritizing investment in education, training, health, the development of sustainable technologies and non-extractive economic activities that favor the poorest and most marginalized sectors of society in the projects' areas of influence.

To summarize, this is an initiative with a comprehensive approach that seeks to integrate three complementary objectives simultaneously: reduce CO₂ emissions, protect biodiversity and reduce poverty in Ecuador. These objectives coincide with, and reinforce, the Millennium Development Goals.

To make the initiative viable, the Ecuadorian government initially accepts to assume up to half of the opportunity cost of keeping the oil in the ground.

GIVING TO RECEIVE...

In return for its decision to keep the oil in the Yasuni-ITT field indefinitely underground, Ecuador will receive international donations that will go towards a capital fund, administered by an international trust fund with the participation of the main donors.

The capital fund will be invested preferentially in fixed income shares that expand renewable energy generation in Ecuador, taking advantage of the country's enormous hydroelectric, geothermal, wind and solar power potential, thus overcoming the country's fossil fuel dependence, which currently accounts for 47% of power generation. This fund will provide the State with fixed interest payments in

perpetuity that will be used in four areas, in accordance with the guidelines of the National Development Plan¹²:

1. **Effectively conserving and preventing deforestation in 40 protected areas, totaling 4.8 million hectares, and appropriately administering 5 million hectares** of natural forests that belong to indigenous and Afro-Ecuadorian communities, with their active participation. The total surface area protected would amount to 38% of Ecuador's territory, one of the highest percentages in the world. Properly conserving the Yasuni Park would also allow the Tagaeri and Taromenane peoples to remain in voluntary isolation.
2. **Reforestation, forestation, natural regeneration and appropriate management of one million hectares of forest** owned by small landholders, on land that is currently threatened by soil degradation. Also a substantial reduction in the current rate of deforestation, considered to be one of the highest in South America.
3. **Increased national energy efficiency** and energy savings.
4. **Social development** in the areas influenced by the three above objectives, with programs in education, health, training, technical assistance and the creation of productive jobs in sustainable activities, such as ecotourism, agriculture and agro-forestry.

Put another way, the Yasuni-ITT capital fund creates new mechanisms to reduce and capture emissions by investing in the prevention of deforestation, reforestation, developing renewable energy sources and improving the country's energy efficiency. Some of these reductions, like new sources of alternative energy, are in line with the current Clean Development Mechanism (CDM), and others, like deforestation prevention (REDD), are in the process of being incorporated into the post-Kyoto policy framework.

The CO₂ emissions avoided by keeping the oil underground reach 407 million tonnes. The additional projects financed by the capital fund could mitigate at least 820 million tonnes of CO₂ emissions in the next 30 years, by avoiding deforestation, reforesting depleted areas, and changes in Ecuador's electricity generation and demand, thus tripling the initial effect¹³.

¹² SENPLADES (2007). *National Development Plan 2007-2010*. Quito.

¹³ Silvestrum. *Analysis of the IYY-Yasuni Initiative vis-a-vis Carbon Markets*. Semi final version. 2009.

BIODIVERSITY IN THE YASUNI NATIONAL PARK

The Yasuni National Park is regarded as one of the most biologically diverse places on earth. It was created in 1979 and declared a UNESCO World Biosphere Reserve in 1989. The Park is located in the upper Napo basin in the western Amazon region, and has an area of 928,000 ha. Its strategic position, close to the equator and the Andes cordillera, gives its climatic conditions that are unique in the Amazon region, with relatively high and uniform temperatures and rainfall levels.

Scientists agree on the Park's unique value due to its extraordinary biodiversity, state of conservation and cultural heritage. The reserve has an estimated 2,274 tree and bush species, **and 655 species have been counted in just one hectare: more than the total number of native tree species in the United States and Canada combined.** The Park has 593 recorded bird species, making it one of the world's most diverse avian sites. There are also 80 bat, 150 amphibian and 121 reptile species as well as 4,000 vascular plant species per million hectares. The number of insects is estimated to be 100,000 species per hectare, the highest concentration on the planet. The species found in the park have a high level of endemism.

The park has the highest density of amphibious, mammal, bird and plant species in the Amazon region. In addition to high biodiversity, the projected temperature rise in the park due to climate change will be comparatively moderate, which makes the region strategically important for the future conservation of species. The Park's unique characteristics can be explained by a number of factors: a stable climate, with high rainfall, and warm but stable temperatures during the different seasons. The diversity of its soil types creates various ecosystems on dry and flood-prone land. It has been suggested that the territory was a refuge in the Pleistocene era, **a geological period when glaciers drastically cooled the earth's climate, converting the majority of the Amazon region into grassland. Species concentrated in a few places – “the Pleistocene refuges” – where jungle still flourished, like Yasuni, leading to a process of speciation or the differentiated evolution of new species.** The Pleistocene began 1.8 million years ago and ended 10,000 years ago.

Yasuni National Park is home to two indigenous groups that have voluntarily chosen to stay in isolation from the western culture: the Tagaeri and the Taromenane, both belonging to the Waorani ethnicity.

The exceptional and unique richness of the park is currently threatened by oil drilling activities, accelerating deforestation and the construction of roads.

Sources: Scientists Concerned for Yasuni National Park, letter to the President of Ecuador, November 25, 2004; Bass M, Finer M, Jenkins C, et al. (2009), *Global Conservation Significance of Ecuador's Yasuni National Park*. Submitted to PLoS ONE.; Horn, Carina (2006) "The Birth of the Mighty Amazon" in *Scientific American*, May, p. 40-45.

THE INDIGENOUS PEOPLES OF THE YASUNI NATIONAL PARK

Within Yasuni National Park live a number of indigenous groups: the Kichwa or Naporuna, Waorani, Tagaeri, Taromenane. The indigenous people of the Waorani nationality, who have lived in the Ecuadorian and Peruvian Amazon region since ancient times and occupy most of Yasuni National Park, went from being considered “human” to being seen as savages once they came into contact with Western culture. In their language, waorani means “true humans,” and the first missionaries and expeditioners referred to the Waorani as “aucas,” which in Kichwa means “savages”, since they did not accept any contact with outsiders and attacked any who invaded their lands. Their fame as warriors is very well known through stories of confrontations with other peoples and among Waorani clans. They were traditionally hunter-gatherers who were self-sufficient and formed kinship-based alliances.

The Waorani have been marked by their isolation and forced contact. Their subsistence was traditionally based on hunting, gathering and nomadic agriculture; they have survived the besieging of other indigenous cultures and western civilization by penetrating deep into the interfluvial plains, like the one between the Napo and Curaray Rivers. Traditionally they have rejected contact and trade with their neighbors. Despite this, in 1956 they began to have contact with the Summer Institute of Linguistics (SIL) and a program was started to limit them to 16,000 hectares in the “Waorani Protectorate”, where many still reside today marginalized and trapped in poverty. The impact of the oil and logging industries have been deep on this culture, and some family groups have opted for voluntary isolation, such as the Tagaeri and Taromenane, who inhabit the medium and lower zone of the Yasuni Biosphere reserve and the Intangible Zone, to the south of Waorani territory and the Yasuni National Park.

The Tagaeri and the Taromenane maintain their cultural way of life in their traditional territories, but the situation is extremely fragile due to their vulnerability, lack of protection and the overwhelming mismatch between them and the advance of western civilization, which arrives through the colonization of their territories, evangelization, illegal logging, extraction of non-renewable natural resources and other legal activities such as tourism and scientific research.

Tagaeri is a generic name of the clan of Tagae, a Waorani warrior who chose isolation. One or various culturally close groups, with a similar language and probably related by kinship in the more distant past, are the Taromenane. These groups have been victims of repeated killings and currently the threat to their physical integrity comes from oil exploration, the trafficking of wood and animals, and incursions into their territory by the military, colonizers, tourists, indigenous Kichwas and even some hostile Waorani. In the territory which they occupy, from dwellings observed and signs of their presence, testimony by Waorani themselves, and sightings by loggers and oil workers, their population is calculated to be between 80 and 300 people.

Many Waorani describe the Taromenane as almost mythological creatures, giants, similar but different. They keep themselves hidden, and even cook at night so as not to be located by the smoke. They represent a threat to nobody, except to those who intrude upon their isolation.

The Ecuadorian government has guaranteed the rights of indigenous peoples, especially the right to maintain, develop and strengthen their identity and traditions; to not be displaced from their lands; their beliefs, knowledge and traditional medicinal practices; the protection of ritual and sacred sites, plants, animals, minerals and ecosystems of vital interest¹. Article 56 of the Constitution contains a specific mention – for the first time - of the peoples in voluntary isolation that inhabit the Yasuni:

“The territories of peoples in voluntary isolation are ancestral homelands, irreducible and untouchable, and they will be off-limits to all extractive activities. The State will adopt measures to guarantee their lives, to ensure that they can remain in voluntary isolation, respect their self-determination and ensure that their rights are respected. The violation of these rights will constitute the crime of ethnocide, and will be dealt with by the law”.

The Tagaeri-Taromenane intangible zone (ITT) has an area of 758,000 hectares and was created in order to provide a minimal amount of space to permit the subsistence of isolated peoples, and

extractive activities there were stopped. Beginning in 2008 the Ecuadorian government began to take actions to protect the isolated peoples.

This box was written with the valuable contribution of Laura Rival, Oxford University.

¹ Government of Ecuador, 2008: *National Policy towards peoples in voluntary isolation.*

BOX 6

OIL RESERVES IN THE YASUNI-ITT FIELD AND THE PREVENTED EMISSIONS OF CO₂

Recent estimates¹ show that there are 846 million barrels of recoverable heavy oil with a density of 14.7° API in the ITT block. It is estimated that daily production will be approximately 107,000 barrels for 13 years, with the wells continuing to produce for an additional 12 years in declining quantities. Even though the proven reserves in the ITT field total 944 million barrels, it is possible that there are another 1.53 billion barrels in reserves; this value is uncertain as the 3D seismic prospection of the deposits has not been carried out.

The Yasuni-ITT initiative involves an internationally binding commitment made by Ecuador to indefinitely keep the ITT oil reserves in the ground, thus preventing the emission of 407 million metric tonnes of CO₂, which would be released by burning the extracted oil. The real value of the emissions avoided is greater if one takes into account the direct and indirect deforestation that results from oil exploration, the emissions generated by oil production and construction of the infrastructure, the methane produced by cattle in colonized areas, and other sources.

The amount of CO₂ emissions that would be prevented as a result of this initiative is considerable: surpassing the annual emissions of Brazil (332 million Metric Tonnes) and France (373 million Metric Tonnes), or equivalent to Ecuador's emissions for 13 years². Using as a benchmark the current prices in the European Market for Certificates of Emission Reduction (CERs), US\$ 17.66 (May 25, 2009) per metric tonne of CO₂, the economic value of emissions prevented by the initiative would reach US\$ 7.188 billion³.

¹ Beicip Franlab (2004) Update on the ITT studies. Upstream economic evaluation. Final report. Project 202 150; Petroproducción (2009) ITT Project. (Powerpoint presentation, April).

² UNDP (2008). Human Development Report. <http://hdr.undp.org/en/reports/global/hdr2007-2008/>

³ If the emissions prevented are distributed over a 13 year period their current value is US\$ 5.09 billion, using a social discount rate of 6% annually.

THE CONSERVATION OF BIODIVERSITY

Biodiversity has not only an intrinsic value, but constitutes the origin of our existence as a species. The benefits that ecosystems have in terms of regulating the weather, the water supply, food supply, wood, medicines and other renewable goods directly benefit 1.6 billion people in the world, mainly in developing countries¹.

Tropical rainforests form the most biologically diverse reserves on the Planet, harboring 28% of all land vertebrate species and an even greater proportion of invertebrates and other living species².

The Amazon is the largest tropical rainforest in the world. Ecuador, which shares the Amazon rainforest and also has 16 distinct ecosystems with a wide variety of climates, occupies first place in the planet for the number of vertebrate per unit area – second place if counting only endemic species – and is among the leaders in terms of the absolute number of amphibious, bird and butterfly species³.

Human activity in the last 50 years has severely affected biological diversity, in particular in tropical rainforests. The current rates of species extinction are 1000 times higher than they would be under natural conditions⁴, which constitutes the greatest threat to planetary biodiversity since the extinction of the dinosaurs, 65 million year ago. The global reduction in biodiversity between 1970 and 2005 has been estimated at 30%, based on population counts of a high number of representative species. This problem is even more serious in tropical ecosystems, where the reduction reaches 51% (see Graph 1).

Global warming will aggravate this situation. According to Stern⁵, a global temperature increase of between 1 and 2°C – considered as moderate – could lead to the extinction of between 15 and 40% of existing species. In the case of the Amazon, without effective action, global warming and deforestation could convert 30 to 60% of Amazon region's tropical forest into savannah or grasslands, which would have a profound impact on the earth's climate and biodiversity⁶.

The Yasuni-ITT Initiative promotes not only the conservation of the Yasuni National Park, but also Ecuador's 40 protected areas and the 5 million hectares that are in the hands of indigenous communities which, taken together, represent 38% of Ecuadorian territory.

¹ World Bank (2003). *Biodiversity and Forests at a Glance*. <http://siteresources.worldbank.org/>

² World Resources Institute (WRI) (2005). Millennium Ecosystem Assessment. *Ecosystems and Human Well-being: Biodiversity Synthesis*. Washington, D.C.

³ Josse, Carmen (ed.) (2001). *La Biodiversidad del Ecuador: Informe 2000*. Quito, MAE, EcoCiencia, UICN.

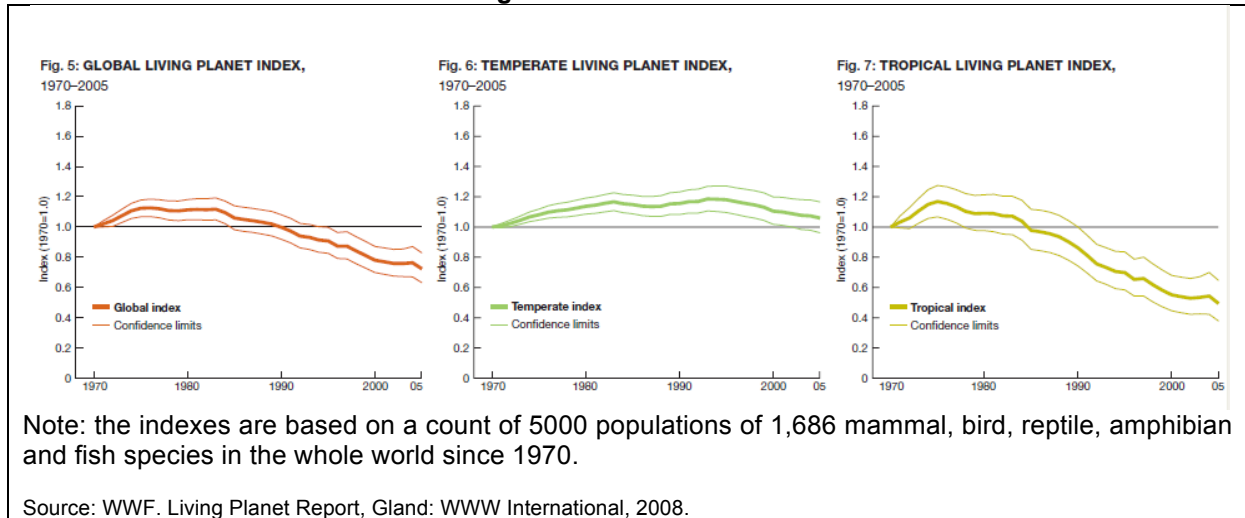
⁴ WRI. Ob. cit.

⁵ Stern, Nicholas (2007). *The Stern Review. The Economics of Climate Change*. Cambridge.

⁶ WWF (2008) *Climate Change in the Amazon*. December (www.panda.org); WWF (2006) "Climate Change Impacts in the Amazon" in *Review of Scientific Literature*. March (www.panda.org).

Graph 1

Living Planet Index: 1970-2005



**WORKING TOWARDS A HUMANE AND FAIR EQUITABLE HUMAN DEVELOPMENT:
OVERCOMING POVERTY**

Current Global production meets the basic needs of all of humanity. At present, global income per person is \$US 6,954¹, eight times greater than the poverty line which would easily make it possible, given an adequate redistribution of wealth, to eliminate poverty. However, according to the most recent data from the World Bank, 2.6 billion people, 40% of the world's population, are still affected by poverty and, among those, 1 billion live in extreme poverty².

Even though poverty levels have reduced since 1981, with China leading the way, the advances in Latin America have been moderate and Africa is suffering from serious stagnation. According to the UNDP, the possibilities of meeting the Millennium Development Goals for 2015 that include reducing extreme poverty by half with respect to 1990 levels are limited, with the exceptions of China and India.

Except for China and India, the social inequality between countries has increased -using the Gini coefficient³- from 0.47 in 1980 to 0.52 in 2000. Moreover, the proportion of income per person in Africa and Latin America, with respect to industrialized countries, persistently declined between 1980 and 2001. In Sub-Saharan Africa this figure fell from 3.3% to 1.9% and in Latin America from 18% to 12.8%⁴.

The increasing social inequality in the world has been accentuated by globalization.

In addition to inequality between countries, there are also large social differences between people within countries. Latin America is considered to be the region with the highest levels of social inequality in the world and evidence confirms that this trend has strengthened in the last decades. The Gini coefficient for income per person in Latin America has increased from 0.48 in the 1970s to 0.52 during the 1990s⁵.

A rigorous study by the United Nations University⁶ concludes that:

1. The richest 1% of the world's population owns almost a third of global wealth (31.6%), and the richest 10% control more than two-thirds (71%).
2. At the other extreme, the poorest half of the world's population possess just 3.7% of the wealth and the poorest 10% a mere one thousandth of global wealth.

In light of this and Ecuador's current situation, the Yasuni-ITT Initiative, puts at the forefront sustainable human development in the project's areas of influence through investment in education, health, housing and the creation of productive employment in sustainable projects. All of this is in harmony with nature by abandoning the current extraction-based development model that depends on exploiting oil and forests. In this way, the proposal contributes to the fulfillment of the Millennium Development Goals.

¹ UNDP (2007). *Human Development Report*. New York.

² World Bank (<http://iresearch.worldbank.org/PovcalNet>).

³ The Gini coefficient measures social inequality and varies between 0 and 1. A completely equitable situation is 0 and maximum inequality is 1.

⁴ United Nations (2005). *The Inequality Predicament*. New York.

⁵ De Ferranti, David and others (2003). *Inequality in Latin America and the Caribbean: Breaking with History?* World Bank, Washington D.C.

⁶ Davies, James B.; Sandstrom, Susanna; Shorrocks, Anthony y Wolff, Edward N. (2006). *The World Distribution of Household Wealth*. UNU-WIDER, Helsinki.

THE CAPITAL FUND AND ITS GUARANTEE

The minimum capital compensation required must be equal to half of the earnings that Ecuador would receive if it were to extract the oil from the Yasuni-ITT field. The investments made will constitute the Fund guarantee and it is important in the future that this fund has a value equivalent to the value of the carbon dioxide stored in the ground, so as to reduce the incentive that future governments may have to refund the money and extract the petroleum.

In the unlikely event that a future government decides to exploit the oil in the Yasuni-ITT field, the guarantees of the CGYs would become redeemable and the Trust Fund would return contributions to the donors, suspend capital investment in energy projects and the payment of yields to Ecuador. This would take place five years before oil production in the field began, given the long timeframes involved in oil prospection and production projects.

Oil prices have fluctuated greatly in the past and are very difficult to predict. To avoid uncertainty, the decision was made to estimate the amount of capital that would cover the opportunity cost, using current prices of carbon credits, and to update this estimate every year.

Currently, with the price of the benchmark WTI crude at US\$ 61.21 (May 25, 2009), the earnings that the State would receive by extracting the ITT oil would have a present value of US\$ 6.98 billion, using an annual social discount rate of 6%.

The market value of the CO₂ emissions avoided is a similar sum, US\$ 7.19 billion, if one uses the current CER prices in the European market (ETS) as a reference¹⁴. Its current net value is thus US\$ 5.09 billion, with an annual social discount rate of 6%.

The benefits that the State will receive from the interest paid on this fund, to be earned in perpetuity from the additional prevented and reduced emissions from conservation, reforestation and the development of clean energy, have a present value of US\$7.24 billion. US\$5.57 billion of them are from the interest earned from the fund, and US\$1.67 additional billion are from indirect benefits¹⁵.

¹⁴ On May 25, 2009, CERs were trading at US\$ 17.66 per metric tonne of CO₂. The EUA emission permits were valued at US\$ 19.91 per tonne. The value of US\$ 7.188 billion is calculated based on the 407 million tonnes of CO₂ emissions prevented by not exploiting the ITT field oil.

¹⁵ It is estimated that the fund contributions will take place during 13 years, with annual contributions equivalent to the monetary value of 31.3 million metric tonnes of CO₂. The fund's annual interest rate is assumed to be 7%, and the annual discount rate 6%, which is the same rate used to estimate oil revenue present value.

BOX 9

OIL AND THE ECUADORIAN ECONOMY

Since 1972 oil has been the mainstay of the Ecuadorian economy and continues to play a fundamental role. At present, hydrocarbons account for 53% of the country's total exports and oil revenues made up on average 26% of the government's revenue between 2000 and 2007. This dependence on oil has however brought serious economic, social and environmental problems. Per capita income growth between 1982 and 2007 was a mere 0.7% annually; poverty affects 38% of the population and 13% of the population lives in extreme poverty. Unemployment is also high with 8%, and 53% of the workforce is underemployed. Oil production has significantly contributed to environmental degradation in the Amazon region. Each year 198,000 hectares are deforested, at an annual rate of 1.4%, one of the highest in Latin America.

Numerous studies confirm the huge limitations that countries, whose economies are based on oil exports, face in order to achieve appropriate development¹.

The future vulnerability of the Ecuadorian economy is even greater, when one considers that the extraction of proven oil reserves will only last for 30 more years. The country needs to begin the transition to a new development strategy based on its ample biodiversity and cultural heritage, and maintain it in a sustainable way. The Yasuni-ITT Initiative represents a turning point in facing up to this historic task.

¹ Berry, Albert (2008) "Growth, Employment and Distribution Impacts of Minerals Dependency: Four Case Studies" en *South African Journal of Economics*, vol. 76: S2 August. Humphreys, Macartan; Sachs, Jeffrey and Stiglitz, Joseph E. (2007) *Escaping the Resource Curse*. New York, Columbia University Press. Sachs, Jeffrey (1995) "Natural Resource Abundance and Economic Growth", National Bureau of Economic Research, Working Paper 5398. Thorp, Rosemary (2009) "Dilemmas and Conflicts in the Mining Sector: What History Teaches", keynote address on Rethinking Extractive Industry Conference. York University, Toronto, March 5-7.

SOURCES OF CAPITAL

The contributions to the international cooperation fund to keep the ITT reserves underground will come from two main sources: voluntary contributions and transactions linked to the carbon market.

Voluntary donations would come from:

a) Governments of Partner Countries and International Multilateral Organizations.

- Contributions coming from emission permit auctions or carbon taxes.
- Debt-for-conservation swaps.
- Other donations.
- Specific projects in renewable energy generation, deforestation prevention, conservation and social development.

b) Contributions from Civil Society Organizations.

c) Contributions from socially and environmentally responsible private sector companies.

d) Contributions from citizens worldwide, including Ecuador.

Market-based contributions would come from the sale of certificates of prevented emissions by refraining from exploiting fossil fuels, as an alternative mechanism to the emission permit auctions. This mechanism does not currently exist; however this proposal involves creating this mechanism as a pilot project.

In exchange for the contributions, the Ecuadorian government will provide a guarantee to maintain ITT oil reserves indefinitely in the ground. The government will issue guarantee certificates for the nominal value of the compensations (Yasuni Guarantee Certificate - CGY), up to a total of 407 million tonnes of carbon dioxide not emitted. The real backing for the guarantees will be the value of the investments made by the capital fund.

How CGYs will fit into current climate change mitigation mechanisms

The European Union leads the way in reducing greenhouse gas emissions. Its targets go beyond those agreed upon in the Kyoto Protocol (to reduce emissions by 2012 to 5.2% below their 1990 levels) and it proposes reductions of 20% by 2020 and 50% by 2050. These objectives can be reinforced, within the U.N. Framework Convention on Climate Change, by including the participation of developing countries, in a scheme with shared and differentiated responsibilities¹⁶.

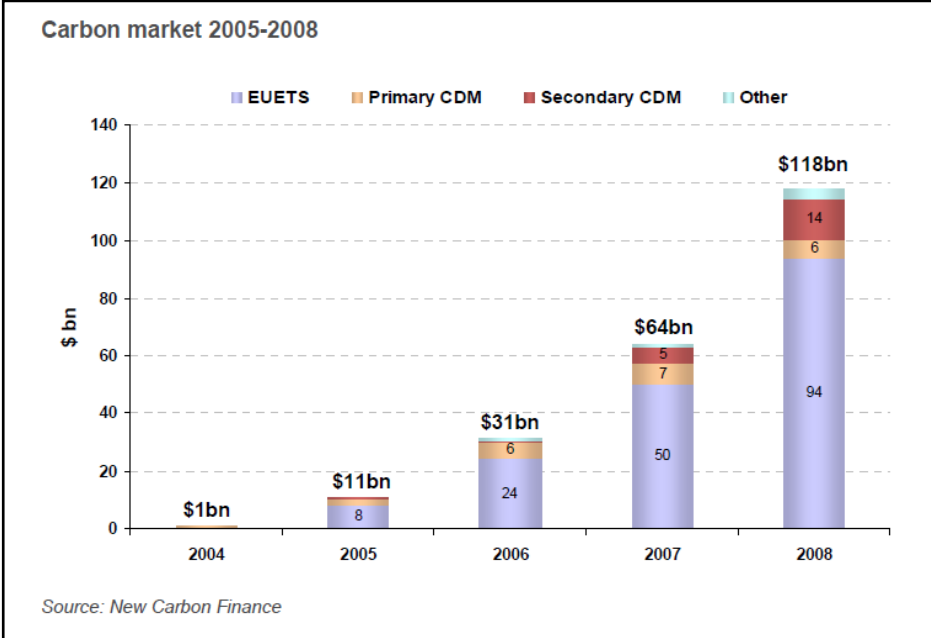
To meet these targets the European Union Emissions Trading Scheme (EU ETS) has been set up, which allows companies that have surpassed emission reduction

¹⁶ European Commission (2007). EU Action against Climate Change: Working with Developing Countries to Tackle Climate Change. Brussels.

targets to sell emission permits (EUA¹⁷) to those companies that have not reached their targets, within a framework of certain regulations. Developing countries are also able to receive carbon credits through a mechanism recognized in the Kyoto Protocol (Clean Development Mechanism- CDMs), which for the most part have been accepted into the EU ETS. The Certified Emission Reductions (CERs)¹⁸ that come from the Clean Development Mechanisms are sold at prices slightly lower than the EU Emissions Allowances (EUA).

The European market for Carbon Credits (ETS) has grown considerably and represents 70% of the global market. The value of one metric tonne of CO₂ has fluctuated between 12 and 30 Euros since 2006 and the volume sold reached 4 gigatonnes¹⁹ in 2008, equivalent to US\$ 118 billion, almost four times the 2006 value (see Graph 2). In 2008 the average price per tonne of CO₂ in the ETS market was US\$ 32.5. However, in the voluntary market the prices and the volumes are substantially lower.²⁰

Graph 2



Ecuador proposes an innovative mechanism to reduce greenhouse gas emissions: refraining from exploiting fossil fuel reserves in highly environmentally sensitive areas in megadiverse developing countries. This new path is not contemplated within the current carbon market regulations, currently in force through the CDM.

Ecuador proposes the following alternatives to those countries open to the Yasuni-ITT Initiative:

1. Contribute to the international Yasuni-ITT fund, with resources that can come from future auctions of EU Emissions Allowances (EUA) (EU directive April 9, 2009), as well as the possible carbon emission taxes on CO₂, like those created in Sweden and Slovenia, levied on transport and agriculture, and other sources.

¹⁷ European Union Allowances.

¹⁸ Certified Emission reduction.

¹⁹ A gigatonne is a billion tonnes.

²⁰ <http://www.environmentalleader.com/2008/07/10/carbon-market-worth-59-billion-in-h1-2008/>, <http://www.ecx.eu/>

2. For USA and Canada, that they formally recognize the CGYs as carbon credits and include them as a pilot project, under specific conditions, in the carbon market. CGY credits will not increase the total amount of emission permits, but rather will be part of them.
3. Other contributions specifically linked to the goals of the project.

This initiative will establish a new way to avoid emissions that, if successful, could be applied to other developing countries in the future, which are also megadiverse and choose to indefinitely halt the extraction of fossil fuels in highly biologically or culturally sensitive areas.

Contributions by countries

Ecuador expects the main contributions from industrialized countries, included in the Annex I of the Kyoto Protocol. Each country contribution was estimated in proportion of its GDP. Annual contributions were based on a 13 year period. Main contributions, which do not exclude other countries in the world, are presented in Table 1.

Table 1
Main expected contributions by countries

Country	2005 GDP (Billion US \$)	Per capita GDP (US \$)	Share GDP	Total contribution (million US dollars)	Annual contribution
United States	12417	41890	36.98	2658.2	204.48
Japan	4534	35484	13.50	970.7	74.67
Germany	2795	33890	8.32	598.4	46.03
United Kingdom	2199	36509	6.55	470.7	36.21
France	2127	34936	6.33	455.3	35.02
Italy	1763	30073	5.25	377.3	29.03
Spain	1125	25914	3.35	240.8	18.52
Canada	1114	34484	3.32	238.5	18.34
Russian Federation	764	5336	2.27	163.5	12.58
Australia	733	36032	2.18	156.8	12.06
Netherlands	624	38248	1.86	133.6	10.28
Belgium	371	35389	1.10	79.4	6.11
Switzerland	367	49351	1.09	78.6	6.04
Sweden	358	39637	1.07	76.6	5.89
Austria	306	37175	0.91	65.5	5.04
Poland	303	7945	0.90	64.9	4.99
Norway	296	63918	0.88	63.3	4.87
Denmark	259	47769	0.77	55.4	4.26
Greece	225	20282	0.67	48.2	3.71
Ireland	202	48524	0.60	43.2	3.32
Finland	193	36820	0.58	41.4	3.18
Portugal	183	17376	0.55	39.2	3.02
Czech Republic	124	12152	0.37	26.6	2.05
Hungary	109	10830	0.33	23.4	1.80
Luxembourg	37	79851	0.11	7.8	0.60
Slovenia	34	17173	0.10	7.4	0.57
Iceland	16	53290	0.05	3.4	0.26
Total	33575		100.00	7188.0	552.92

Note: Some small Annex I countries are not included in the table.

**ADDITIONAL EMISSIONS REDUCTIONS FINANCED BY THE YASUNI-ITT FUND:
THE INITIATIVE'S VIRTUOUS CIRCLE**

The capital of the International Trust fund will be preferentially invested in fixed income shares (preferential shares with a guaranteed yield) in sustainable electricity generation projects (hydroelectricity, geothermal energy, wind, solar), and the profits from these investments will finance projects in:

1. Conservation and preventing deforestation in 38 % of the national territory.
2. Reforestation and forestation of 1 million hectares.
3. Efficiency improvements in national energy consumption.
4. Social development and sustainable production for the populations living in the initiative's area of influence.

All of these objectives, except the last one, reduce greenhouse gas emissions, and could generate CDM projects, currently recognized by the Kyoto Protocol, or be registered as deforestation prevention projects, within REDD programs, which has been proposed in the post-Kyoto discussions.

According to the Silverstrum¹ consulting firm (2009, p. 41), the projects would prevent or reduce the release of 820 million tonnes of CO₂, without including the changes in supply and demand of energy:

Activity	Mitigation potential in 20 years (CO₂ in millions of tonnes)
Forestation and reforestation	100
Avoided deforestation	600
Forest Partner Program for preventing degradation	120
Total	820

Current deforestation rates in Ecuador have been estimated at 198,000 hectares per year. The Project proposes to eliminate deforestation gradually over a period of 30 years. The emissions prevented total 777 million metric tonnes of CO₂, with a current value of US\$ 1.28 billion, at a price of US\$ 5 per MT.

The progressive elimination of thermoelectric power generation in Ecuador and its replacement with renewable sources (hydroelectric, geothermal, wind and solar) will prevent 43 million MT of CO₂ emissions, and has a current value of US\$ 263 million, at a price of US\$ 17.66 per MT. The total amount of reduced or avoided emissions over the next 30 years, including reforestation, prevented deforestation, renewable energy generation and improved energy efficiency, will reach 1 billion MT of CO₂.

Some of the initiative's contributions could go directly to specific projects along the lines mentioned above, acquiring the form of investment credits in mitigation, like those that have been proposed by international consultants. In conclusion, the Initiative proposes that 407 million tonnes of CO₂ stays underground and with the investment projects, at least an additional 820 million tonnes is mitigated, which would triple the initiative's effectiveness.

1 Silverstrum, (2009). "Analysis of the IYY-Yasuni Initiative vis-a-vis Carbon Markets". Semi final version.

BOX 11

HOW WILL CAPITAL FROM THE YASUNI-ITT FUND BE INVESTED?

The investments of the Yasuni-ITT fund must have a minimum reasonable risk and generate interest that will be used in development projects planned in the Initiative. Those projects which are outlined in the Initiative's plan will be eligible to receive funds, if they involve a measured amount of risk, have some level of profitability and at the same time contribute to the sustainable development of the country.

Future investments in hydroelectric and geothermal projects would fit within these criteria, especially as these currently are the renewable energy sources with the greatest potential for Ecuador. The Yasuni-ITT fund could acquire preferred shares in the projects, if they meet the necessary investment parameters. This type of share has a predetermined fixed yield, independent of the company's earnings. The fixed yield, to be agreed upon, depends on the characteristics of each Project, maintaining a minimum of risk and allowing the government to safely receive income on the fund. At the same time, these investments will contribute to the sustainable development of the country and create new reductions in carbon dioxide.

The administration of the international trust fund will be assumed by an international organization like the United Nations, one of its agencies like the UNDP, or the Inter American Development Bank.

TOWARD A MODEL OF SUSTAINABLE DEVELOPMENT IN ECUADOR

The Ecuadorian economy depends on petroleum and current proven reserves allow for between 25 and 30 years of future production. The development of renewable sources of energy has lagged, and as a result half of the electric energy in the country is generated by hydrocarbons.

In 2007, oil production fell for the first time by 5.6%. In response to the increase in imports and internal consumption, net exports fell by 11.6% in volume terms. This situation illustrated the beginning of the inevitable decline in the country's oil production capacity. In reality, government-owned production in the mature fields of Petroecuador (Auca, Sacha, Sushufindi and Lago Agrio) has dropped from 280,000 barrels per day in 1994 to around 170,000 bpd in 2007 (see Graph 3), but this drop has been compensated by the growing production of heavy crude in the Amazon region.

The country's proven petroleum reserves currently total 4.16 billion barrels. Including probable reserves, this figure is more like 4.6 billion. Various projections show that, even under optimistic scenarios which assume the discovery of new deposits, Ecuador will stop exporting petroleum in 28 years and stop producing it within 35. Graph 4 shows the Ministry of Energy's projections for oil production by field.

This decline phase can be initially mitigated or neutralized by incorporating new heavy crude oil fields or improving light crude extraction from mature fields. Nevertheless, exports will cease within 15 to 28 years.

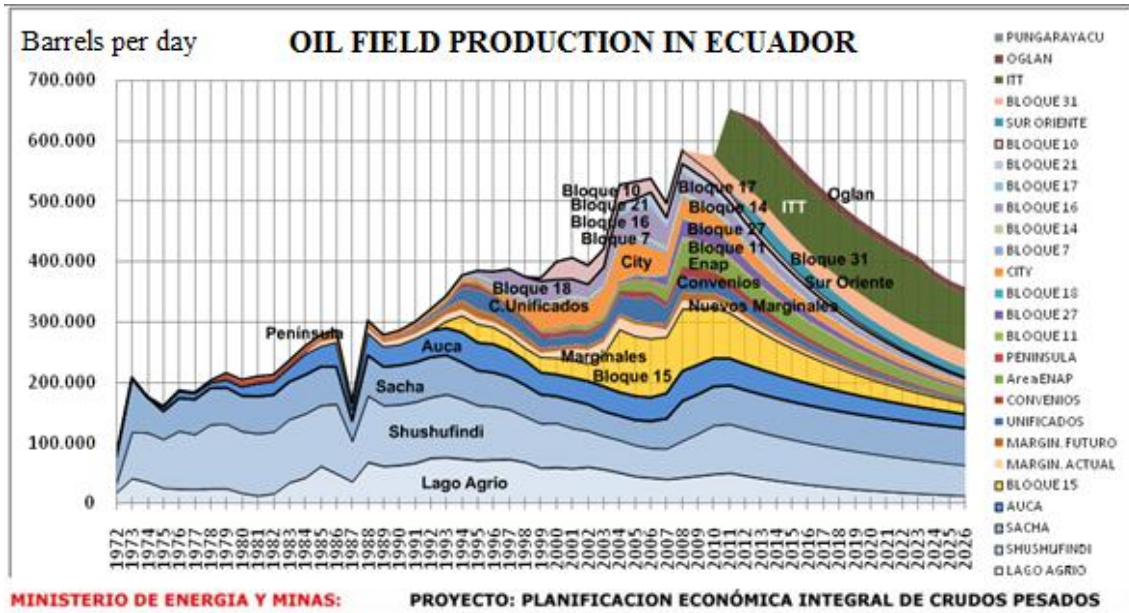
During this period, an energy transition must take place from oil to renewable systems.

Over the past 25 years, investment in renewable energy sources has been weak and this has reinforced the increasing dependency on petroleum and its derivatives. Today, hydroelectric plants meet 43% of Ecuador's demand for power, 10% is imported from Colombia and Peru, and 47% comes from thermoelectric plants (Graph 5).

In recent years, there has been a return to public investment in hydroelectric projects, and the first steps have been taken towards a future expansion of renewable sources, like wind, geothermal and solar power.

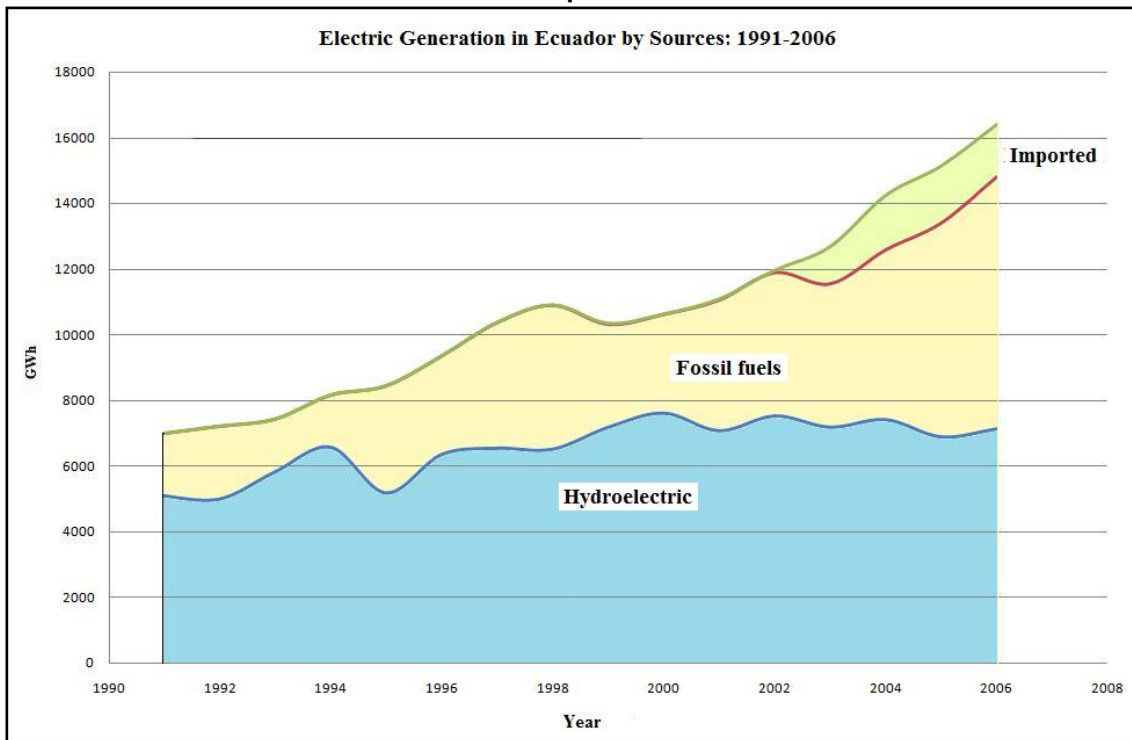
From a broader perspective, it can be said that the development models implemented in Ecuador have been disproportionately based on the extraction of natural non-renewable resources, under conditions of limited sustainability and with huge negative effects on local/regional ecosystems. These models, in addition, have reinforced a highly unequal social structure and have left the basic needs of most of the population unmet. The Yasuni-ITT Initiative is encouraging the beginning of a transition toward a socially more equitable and environmentally more sustainable development strategy.

Graph 3
OIL PRODUCTION POTENTIAL BY FIELDS



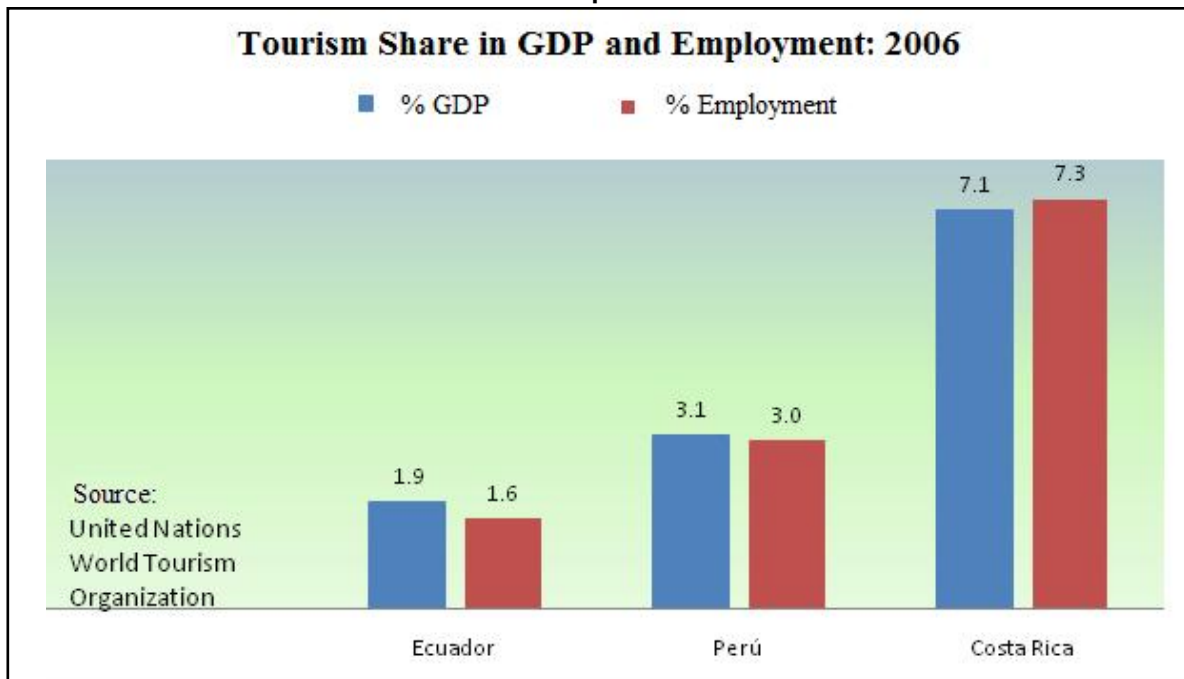
MINISTRY OF ENERGY AND MINES. COMPREHENSIVE ECONOMIC PLANNING OF HEAVY CRUDES PROJECT.
Source: Ministry of Energy and Mines, 2007.

Graph 4



Source: CONELEC. www.conelec.gov.ec.

Graph 5



Source: World Economic Forum. *The Travel & Tourism Competitiveness Report 2007*. Geneva: World Economic Forum, 2007.

BOX 13

THE YASUNI-ITT INITIATIVE: A REPLICABLE PROPOSAL

As a proposal to keep fossil fuel reserves underground indefinitely in areas that are highly environmentally and/or culturally fragile, the Yasuni-ITT initiative is pioneering a mechanism to prevent emissions of greenhouse gases with the participation of developing countries.

Countries that could qualify for this new mechanism should meet the following conditions:

Be developing countries. One of this mechanism's main attractions is that it simultaneously fulfills three objectives: it combats climate change, maintains biodiversity and reduces poverty and inequality. The initiative also promotes sustainable development.

Be megadiverse countries located between the tropics of Cancer and Capricorn, where tropical forests are concentrated. These countries host most of the planet's biodiversity.

Have significant fossil fuel reserves in highly biologically and culturally sensitive areas.

Among the countries that fulfill all of these conditions are; Brazil, Colombia, Costa Rica, Democratic Republic of Congo, Ecuador, India, Indonesia, Madagascar, Malaysia, Papua New Guinea, Peru, Bolivia, the Philippines and Venezuela.

The United Nations Environment Program (UNEP) has designated 19 countries in the world as "megadiverse".

OIL AND DEVELOPMENT: A PROBLEMATIC RELATIONSHIP

Although at first glance, it would seem obvious that countries who export oil or mineral resources have relatively better chances to achieve development than other countries which lack these resources, studies have found that the exportation of petroleum has a negative impact on the development outlook of a country.

A comparative study done by the World Bank¹ demonstrates that almost none of the oil-exporting countries managed to efficiently channel the resources resulting from high oil prices between 1973 and 1985 for their own development. In general, national economic results were disappointing. The theory of the "Dutch disease" holds that the effects of export booms associated with a single product, like oil, turn out to be negative because economies do not manage to diversify and are vulnerable when the favorable external conditions change for the worse.

Jeffrey Sachs² found a negative and statistically significant correlation between the exportation of natural resources (primarily oil, minerals and primary agricultural products) and the economic growth obtained, based on empirical data on the annual behavior of 97 developing countries between 1971 and 1989. In other words, countries specializing in exporting oil, minerals and other primary goods grow slower than other developing economies.

Albert Berry³ found that, based on a comparative analysis of Indonesia, Venezuela, Chile and Nigeria, oil and mineral exporting countries have significant difficulties in achieving satisfactory results with respect to job creation and the distribution of income. Rosemary Thorp, a renowned specialist in the economic history of Latin America, says that in general, mining and oil producer countries have encountered serious problems in their institutional development, and this weakness in turn has affected their long-term development possibilities.

In general, these and other studies point to the fact that countries which are highly dependent on the exportation of oil or minerals are vulnerable and fragile, and have obtained relatively poor results in terms of economic growth, institutional development, job creation and equality.

¹ Gelb, Alan and associates (1988). *Oil Windfalls: Blessing or Curse?* New York, Oxford, Oxford University Press.

² Sachs, Jeffrey (1995). "Natural Resource Abundance and Economic Growth". National Bureau of Economic Research, Working Paper 5398.

³ Berry, Albert (2008). "Growth, Employment and Distribution Impacts of Minerals Dependency: Four Case Studies" en *South African Journal of Economics*, vol. 76: S2, August.

⁴ Thorp, Rosemary (2009). "Dilemmas and Conflicts in the Mining Sector: What History Teaches". Keynote Address, Rethinking Extractive Industry Conference. Toronto, York University, March 5-7.

BOX 15

THE ENVIRONMENTAL BENEFITS OF THE YASUNI NATIONAL PARK

Biodiversity is the foundation of invaluable ecological services provided by primary forests, like global climate regulation and water source conservation. Its potential for use in health-related research has been widely recognized. As such, its existence constitutes an invaluable asset. In light of the accelerated extinction of species on Earth – unprecedented in the last 65 million years – conserving the biodiversity of the Yasuni National Park is an unquestionable priority.

The environmental benefits of Amazon ecosystems – and their enormous biodiversity – are immeasurable from an economic point of view, as Martinez Alier¹ states. In the case of the Yasuni National Park, some attempts have been made to put a value to them. *Earth Economics*² has estimated that its environmental benefits would have a net present value of 9.89 billion dollars. Larrea³, meanwhile, has estimated that the environmental costs of oil production in the ITT would be at least US\$1.25 billion in present terms. This latter estimate includes only the effects of deforestation, the loss of ecotourism potential and the non-timber-related services of the forest, and excludes a number of externalities of oil exploitation like spills, local pollution, effects on public health, etc.

¹ Presentation to the seminar on the Yasuni-ITT model held November 21-23, 2007, at the Simon Bolivar Andean University, in Quito.

² See <http://www.eartheconomics.org/yasuni2007/index.html>

³ Presentation at the above mentioned seminar.

BOX 16

PROPOSAL FOR OIL EXTRACTION FROM THE ITT FIELD

According to information currently available, the proven and probable reserves of the ITT field total 950 million barrels of oil, and this number could increase with 3D seismic prospecting, since there are estimated possible reserves of an additional 1.53 billion barrels. With stable production, 846 million barrels could be recovered from the currently proven reserves¹.

The exploitation of the ITT field would involve a production of about 103,000 barrels per day, over a period of approximately 13 years, at the end of which the wells would begin their declining phase, until reaching, at the end of about 12 more years, 56,000 bpd. The high density of the crude (14.7° API) makes it difficult to transport it through existing pipelines, and this factor, together with the high sulfur content, reduces the prices. In order to avoid these complications, the plan is to build a synthetic crude conversion plant in order to improve the density, which will have to be installed in the ITT block and which will process the oil before transport. This plant requires a capital investment and also the construction of a high-power thermoelectric plant. The resulting crude of 18° API can then be shipped through the heavy crude pipeline and then processed in the future oil refinery being planned in El Alamo, in Manabi Province. Offshore technologies would be used to avoid the need to build roads and minimize deforestation and environmental impact.

Petroecuador is currently studying the creation of a company in association with an international oil company to extract the oil, with the state's share of revenues to be at least 65%. The initial estimated capital investment would be US\$3.5 billion, with an operating cost of \$12.32 per barrel and a transportation cost of US\$2.60 per barrel. The thermoelectric power generation and the synthetic crude conversion plant would consume at least 12% of the fuel produced.

¹ Sources: Petroproducción (2009). ITT Project. Powerpoint Presentation (April). Beicip Franlab (2004). Updated ITT Study. Upstream Economic Evaluation, Final Project Report. 202 150.

THE YASUNI-ITT INITIATIVE

Questions and Answers

THE BENEFITS

1. How does the Yasuni-ITT Initiative work?

- a. The Government of Ecuador commits to indefinitely refraining from exploiting the oil reserves of the ITT field within the Yasuni National Park, thus guaranteeing the conservation of its unique biodiversity and respect for the non-contacted indigenous peoples living there.
- b. The government will receive, in turn, an international compensation fund equivalent to at least of 50% of the profits that it would receive were it to exploit the reserves.

2. What are the direct benefits of the Yasuni-ITT Project?

- a. 407 million tonnes of CO₂ will be prevented from being emitted into the atmosphere, creating a new method of mitigating greenhouse gas emissions, and there will be no oil and gas extraction from areas that are highly socially and environmentally sensitive in developing countries.
- b. The enormous biological wealth of the Yasuni National Park - considered by UNESCO to be unique in the world - will be preserved, along with the 39 remaining protected areas and indigenous and Afro-Ecuadorian areas in Ecuador, which host one of the largest reserves of biodiversity on the planet.
- c. Respect the indigenous cultures of the peoples living in voluntary isolation within the Yasuni Park.
- d. Social development projects will be implemented in the project's area of influence, addressing health, education, and sustainable employment.
- e. Support for Ecuador's transition from an extractive economy, based on petroleum production, to a sustainable development model, with the widespread use of renewable energy sources, respect for biodiversity and social equality. The amount of CO₂ emissions that will be reduced and prevented through the ecosystem conservation efforts, reforestation and the development of clear energy sources will reach one billion tonnes over the next 30 years.

3. Are there any additional or indirect benefits?

Yes. The reinvestment of the donated funds into renewable energy sources will reduce or eliminate the generation of electricity from petroleum derivatives, which currently accounts for 47% of all electric power in the country. In this way, future CO₂ emissions will be even further reduced. The conservation of protected areas and the reduction in Ecuador's rate of deforestation is a second benefit in addition to the mitigation of climate change and the preservation of biodiversity. In addition, the social programs will promote education, health care and the sustainable development

of productive employment in the project's target areas, which cover a significant part of Ecuador. There is also one other benefit – the capital funds can be invested in hydroelectric and geothermal power projects with guaranteed profitability.

4. The Yasuni Initiative seeks to protect the Yasuni National Park, which is extraordinarily diverse, but currently there is oil production taking place within the park, which is causing obvious damage and threatening the survival of the two indigenous peoples living in voluntary isolation.

The proposal does not only protect the ITT field, which occupies nearly 200,000 hectares within the Yasuni National Park (23% of the total surface area), but also includes a commitment to monitor the rest of the Park, in which exists inherited oil activity, as well as effectively safeguard the other 39 protected areas (occupying a total of 4.8 million hectares, some 19% of the total surface area of Ecuador) which encompass the greatest amount of biological diversity per unit of area in the world. The proposal also includes the protection of currently undisturbed indigenous lands, which account for an additional 19% of the national territory.

The success of this project will furthermore allow the Ecuadorian government to study the possibility of shutting down some oil production operations within and outside of the Yasuni National Park, where it will be better to receive compensation for carbon capture, incorporated into the Yasuni-ITT Initiative, than to extract the oil from the ground.

This will also allow the Ecuadorian government to concentrate on improved recovery from existing wells, instead of engaging in new exploration in highly environmentally sensitive areas which has very negative environmental effects.

5. What public participation will there be in designing the initiative and in making decisions on what projects to fund? How will the groups in voluntary isolation take part?

The initiative involves several stages. The first, which is the current stage, is intended to obtain international acceptance of this innovative proposal.

The second is to ensure the political support of Ecuadorian society. This will involve:

- a. Publicizing the initiative throughout the country among various social groups (indigenous and Afro-Ecuadorian communities, academia, the private sector, and local governments) to obtain their support.
- b. The design of mechanisms through which Ecuadorian citizens can contribute economically to the initiative.
- c. Holding consultations with Amazon region indigenous peoples, to ensure that the needs of the groups in voluntary isolation are satisfied, without impacting the self-imposed solitary conditions of the Tagaeri and Taromenane.
- d. Creating a citizen oversight body, made up of representatives from various social sectors, in order to monitor compliance with the commitments acquired through this initiative.
- e. Appoint a citizen representative to sit on the Board of Directors of the international Trust Fund.

- f. Facilitating communication and linkages with other citizens of the world interested in supporting this initiative from their own countries.

THE SUPPORTERS

6. Who supports the Yasuni-ITT Project?

The Project has received formal support from various internationally recognized individuals, including Mohammad Yunus, Desmond Tutu, Jody Williams and Rigoberta Menchú, Nobel Peace Laureates; Rita Levi Montalcini, Nobel Laureate in Physiology and Medicine, ex-presidents Mikhail Gorbachev (former USSR), Felipe González (Spain), Fernando Henrique Cardoso (Brazil), Ricardo Lagos (Chile), Prince Charles of Great Britain, Danielle Mitterrand, President of the France Libertés Foundation, among others. The Project has also received the official backing of the German Parliament, with unanimous support from all the represented political parties, as well as the European Union, and other international organisms such as the United Nations Environment Program (UNEP); The Organization of Petroleum Exporting Countries (OPEC), Andean Community of Nations (CAN), Andean Development Corporation (CAF), the Organization of American States (OAS), and numerous civil society organizations, like the International Union for Conservation of Nature and Natural Resources (IUCN). The parliaments of a number of European countries have also expressed support for the initiative.

Also, various Ecuadorian civil society organizations have endorsed the plan: Accion Ecológica, Oil Watch, Amazon Watch, the Confederation of Indigenous Nations of Ecuador (CONAIE) and other indigenous organizations.

FINANCIAL STRUCTURE

7. What is the CGY?

The Yasuni Guarantee Certificate (CGY) will be a financial document issued by the State to donors of the Initiative, as a guarantee that the oil reserves will remain in the ground for an indefinite time period. The value of the CGY will be a multiple of the metric tonnes of non-emitted CO₂. This is a non negotiable instrument that does not earn interest and does not have an expiration or maturity date, since the guarantee is in perpetuity and will be redeemed only in the event that the Ecuadorian government decides to start the oil exploration and production within the ITT fields.

8. Who is contributing to the Yasuni-ITT Project?

The donations to the international compensation fund for maintaining the oil reserves of the ITT field underground will come from two main sources: voluntary contributions and transactions in the carbon market.

The voluntary contributions can come from:

- a. Governments of countries supporting the proposal and international/multilateral organizations.
- Donations.

- Debt-for-conservation swaps.
- Specific projects in renewable energy source development, conservation and social development.
- b. Contributions from civil society organizations.
- c. Contributions from socially and environmentally responsible private sector companies.
- d. Contributions from citizens worldwide.

The resources from future auctions of emission permits (EUAs) could also be invested in this project (EU Guideline of April 9, 2009), in addition to the CO₂ emission taxes levied on transportation and agriculture, like those created in Sweden and Slovenia. It is estimated that this source will contribute the majority of the funds to be raised.

All of these contributions will be made in exchange for a guarantee from the Ecuadorian government to keep the ITT oil reserves in the ground. The State will issue Yasuni Guarantee Certificates (CGY) for the amount of the compensation until reaching the total of 407 million tonnes of carbon dioxide not emitted. The real backing for the guarantees will be the amount of the investments made with the capital fund.

9. How will the funds received through the Yasuni-ITT Initiative be invested?

The contributions made to the Yasuni-ITT Initiative will be used exclusively for reducing greenhouse gas emissions, preserving biodiversity, reforestation, protecting indigenous cultures, and improving the quality of life in the areas of influence of projects. This will involve the implementation of renewable energy sources, conservation and social investment within the framework of a strategy aimed at consolidating a new model of equitable and sustainable development in Ecuador.

GUARANTEEING THE PROPER USE OF THE FUNDS AND THE NON-EXTRACTION OF THE RESERVES

10. How will the Initiative guarantee transparency in the use of the funds?

The funds will be invested in projects to generate energy alternatives for Ecuador, and they will be administered and audited by an international trust fund. Any returns from these investments will be used exclusively for projects defined in this proposal, under the guidelines of the National Development Plan, and to consolidate the environmental and social policies defined in the new Constitution of Ecuador. All donors will have detailed access to information on the use of these resources.

11. What mechanism will be employed to ensure that the projects that emerge out of the Yasuni Initiative take place within the proposed guidelines and that money from the Fund is not used for programs that are already financed within the General State Budget?

The revenue from the sale of the CGYs will be deposited into an international trust fund – which will have a Board of Trustees comprised of the major donors to the Initiative, the Ecuadorian government and representatives from Ecuadorian civil society – which will work to ensure that the trust fund complies with the mandate of investing in previously established areas. The project will support and enhance the new equitable and sustainable development policies as defined in the new Constitution and in the National Development Plan being implemented by the national government.

12. How will the proper management of the 40 protected areas be ensured, assuming that the trust fund has sufficient resources to do so?

There is a plan to manage each protected area, which has been prepared by the Ministry of the Environment in collaboration with USAID (US Agency for International Development), IUCN (International Union for Conservation of Nature), Conservation International and The Nature Conservancy²¹. This plan will be followed rigorously to maintain biodiversity and protect the human rights of the peoples living in voluntary isolation.

In addition, today there is an added interest in properly managing the Protected Areas, not only for their biological value but because of a growing interest in eco-tourism.

13. How will donors be guaranteed that in the future the ITT field is never exploited?

The State of Ecuador will provide, as a guarantee for the contributions, CGYs at the nominal value of the contributions. In the unlikely scenario that in the future, the government of Ecuador decides to extract oil from the ITT fields, the guarantees will be made redeemable and the State will lose ownership of the fund, the investments will be transferred back to the donors, and the treasury will cease to receive the returns. The total amount of the contributions should equal the value of the carbon dioxide emissions prevented by keeping the oil underground. It is hoped that the initiative's capital funding will be at least 50% of the profits that the government would be receiving if the oil was being produced. However, Ecuador will try by all possible means to receive an international contribution of 100% of the expected oil profits, thus reducing or eliminating any economic incentive that could result in a reversal of this agreement. From the policy point of view, the Development Plan and the Constitution of 2008 ensure the continuity of the sustainable development strategies that Ecuador has adopted.

14. How can we demonstrate that the failure to exploit the ITT field in Ecuador will produce a reduction in CO₂ emissions, if the lack of oil produced by one supplier is immediately replaced by another?

²¹ Ministry of the Environment. (2005). *Análisis de las necesidades de financiamiento del Sistema Nacional de Áreas Naturales Protegidas del Ecuador*.

It is true that in the short term, the oil not supplied by one producer can be replaced by another, if the internationally installed capacity is there²². But over the long-term, the reduction in CO₂ emissions is real, because oil is a non-renewable natural resource, and therefore finite. Estimates of world oil reserves project that at the current rate of extraction, world oil production will last for only 40 more years²³. Within this period, not extracting oil reserves is a net positive contribution.

Furthermore, the Yasuni-ITT Initiative projects that the financial resources to be obtained will be invested in new projects that will absorb or reduce additional CO₂ emissions, in deforestation prevention programs, reforestation and the development of clean energy sources. The joint emissions reduction potential of these projects is estimated to reach between 820 million and one billion tonnes, in addition to the 407 million tonnes prevented by keeping the oil underground.

The projects include the following:

- a. Protection and administration of 40 protected areas and indigenous territories.
- b. Reforestation of one million hectares.
- c. A shift in the Ecuadorian power supply toward clean energy systems.
- d. Improve the energy efficiency throughout the country.
- e. Financing production, education and capacity-building for rural communities in the areas of influence of the projects so that they can improve their quality of life through agriculture, ecotourism and sustainable forms of production.

15. What is the plan to shift the Ecuadorian energy supply?

47% of the power generated in Ecuador comes from thermoelectric plants. The country has a very high potential of renewable generation sources – hydroelectric, geothermal, wind, tide and solar power – that is still untapped. The initiative will finance the development of these alternative technologies and replace those that depend on the burning of fossil fuels.

16. How will energy demand be changed?

Two measures are already being taken to reduce the consumption of fossil fuels:

- a. Replacing traditional light bulbs with energy-saving ones; and
- b. The removal of taxes on the importation of hybrid and electrical vehicles.

This policy will go further with the funding of solar panels for heating water of households; encouraging electricity-driven public transportation in cities; capturing

²²According to the widely accepted theory of the Hubbert peak, the world production capacity of oil is currently approaching its maximum and then will begin to decline below demand due to the limitation of world reserves. See: Deffeyes, Kenneth. *Hubbert's Peak. The Impending World Oil Shortage*. Princeton: Princeton University Press, 2001.

²³BP. (2008). *Statistical Review of World Energy*. London.

greenhouse gas emissions from sanitary landfills; and the use of biogas digesters in rural households. All activities will take place within the context of a national policy to enhance energy efficiency.

17. How does the Yasuni-ITT Initiative fit into Ecuador's current environmental and energy policies?

The Yasuni-ITT Initiative strengthens and reinforces Ecuador's current policies aimed at moving from an extraction-based, inequitable and unsustainable development model to a new inclusive and socially, environmentally and financially sustainable model.

The major policy documents that support this strategic orientation include the Constitution of 2008, the National Development Plan 2007-2010, the National Development Strategy 2009-2025 (of the National Planning Secretariat, SENPLADES), and in particular the policies of the new Ministry of Electricity and Renewable Energy, along with new programs being implemented by the Ministry of the Environment.

The new Constitution establishes the concept of *buen vivir* (good living) as a goal of participatory, inter-cultural, equitable and sustainable development, and recognizes the rights of ecosystems to exist and prosper. The development plans define a medium and long-term strategy for sustainable human development.

The new Ministry of Electricity and Renewable Energy is seeking to reduce the dependency on fossil fuels and promote the development of clean and efficient technologies. Furthermore, the Ministry of the Environment is implementing the Forest Partner Project to reduce deforestation and encourage conservation.

THE KYOTO PROTOCOL AND ALTERNATIVE OPTIONS

18. Can the Yasuni-ITT Initiative be implemented under the mechanisms of the Kyoto Protocol?

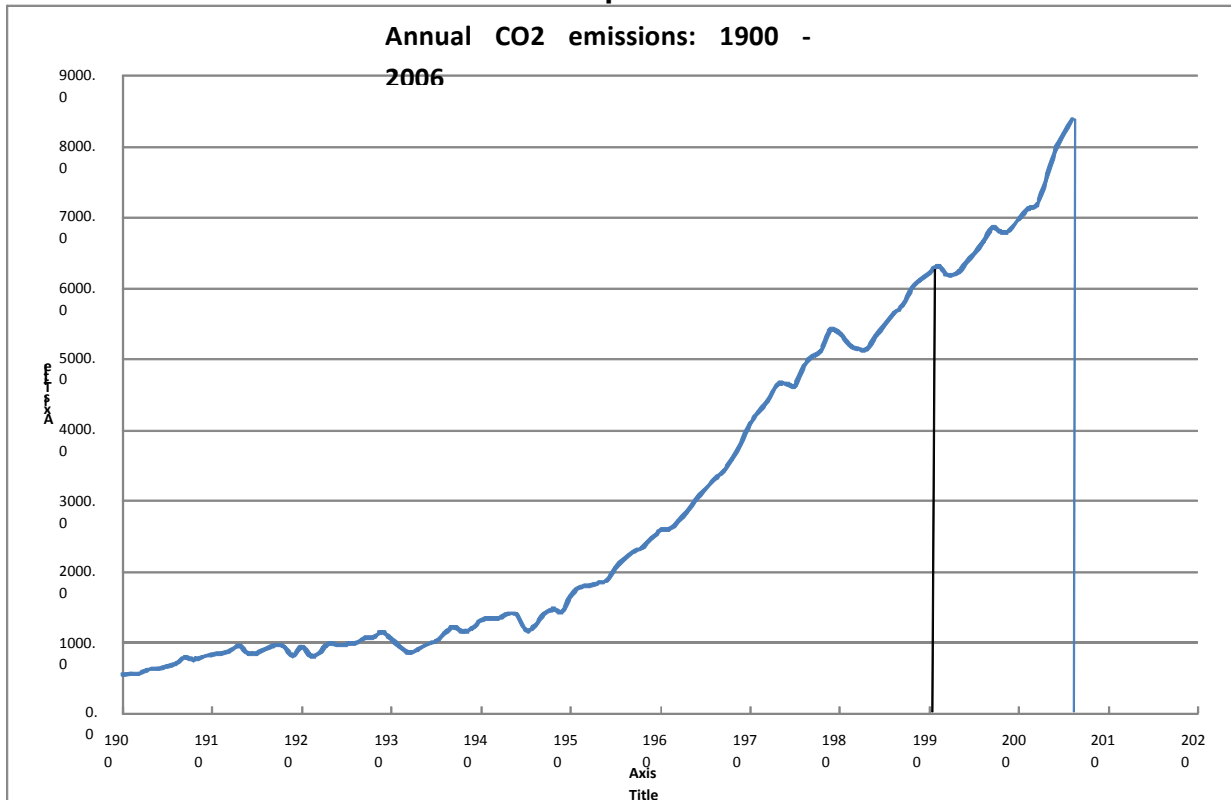
No. The Yasuni-ITT Initiative presents innovative and effective alternatives to reduce greenhouse gases, such as maintaining fossil fuel reserves underground in highly environmentally sensitive areas, and prevented deforestation, which are currently being discussed in the context of the post-Kyoto negotiations. None of these concepts are included among the Clean Development Mechanisms (CDM) that allow developing countries to participate with the Kyoto Protocol.

19. So, how will this initiative be integrated with international efforts to combat climate change?

In reality, the Kyoto Protocol has achieved limited results and it is unlikely that the goal of reducing worldwide CO₂ emissions below 1990 levels will be reached by 2012, since these emissions have increased globally since 1990, and continue to do so at the rate of 2 to 3% per year (see Graph 3). For this reason, new post-Kyoto international agreements are being prepared, including stricter mechanisms and targets, such as those proposed by the European Union to reduce its emissions by

50% by 2050 or to introduce taxes on CO₂ emissions generated by activities like transportation or agriculture. Fulfilling these goals will demand new forms of mitigation and an international effort involving the participation of all stakeholders, under the principle of shared and differentiated responsibilities. This is the context into which Ecuador's Yasuni-ITT Initiative will fit.

Graph 6



Source: Earth Policy Institute, Eco-economic Indicators.
http://www.earth-policy.org/Indicators/CO2/2008_data2.htm.

20. While the Yasuni Initiative is outside of the Kyoto Protocol mechanism, it could have a positive or negative influence on the post-Kyoto negotiations. What threat or opportunity does this initiative bring?

The Yasuni Initiative proposes a new alternative to the current Kyoto Protocol, which allows for:

- a. The active participation of countries not included in Annex I of the Kyoto Protocol, with binding commitments, before 2012; and
- b. The inclusion of emissions prevented by the non-extraction of fossil fuels in megadiverse developing countries. This initiative can be added to proposals involving prevented deforestation.

There is, therefore, no threat involved. On the contrary, new opportunities are created for all parties.

21. Clean Development Mechanisms only compensate for greenhouse gas pollution from emissions already made in other parts of the world, and in a strict sense, do not reduce them. If the Yasuni-ITT Initiative is included within this vision, it will also fail to lead to additional reductions.

Europe can accept the inclusion of CGYs in a different way than it does the CDMs. If the CGYs are included in all allowed emissions without adding new certificates, but as a fixed percentage (say 1%) of the European Allowances (EUA), in reality there will be a net reduction in emissions. The same mechanism can be applied in the future by the United States of America.

22. The compensation being requested for not emitting 407 million tonnes of CO₂ is a large amount. This figure is more than the annual emissions of France. Recognizing them in a way similar to the CERs (Certified Emission Reductions) could flood current markets and have an adverse effect on the prices of carbon credits.

Ecuador expects to receive this contribution over a period of 13 years, during which oil production has been projected at maximum levels. During this period, the recognition of CGYs would increase the supply of carbon credits by a very low amount, less than 1%.

23. The area of the ITT field is small (200,000 hectares) and the amount of compensation being requested is comparable to global biodiversity protection funds. The proposal seems disproportionate.

First of all, the proposal is not limited to conserving the ITT field, but includes 40 protected areas and other indigenous territories which total 10 million hectares, 38% of the national territory. Secondly, the proposal is not limited to biodiversity conservation, but also incorporates the mitigation of climate change and human development. Finally, the amount is related to Ecuador's opportunity cost of not extracting the oil in the ITT field.

OTHER INTERNATIONAL PROPOSALS

24. If all of the oil producing countries would apply the same logic as Ecuador, the world would be flooded with credits for untapped oil, and there wouldn't be enough buyers. What would happen if Saudi Arabia, Russia (Siberia) and the United States (Alaska) decided to apply the same concept?

The design of the project limits the beneficiaries of the mechanism to countries which have special characteristics, like:

- a. Be developing countries. One of this mechanism's main attractions is that it simultaneously fulfills three objectives: it combats climate change, maintains biodiversity and reduces poverty and inequality. The initiative also promotes sustainable development.

- b. Be megadiverse countries located between the tropics of Cancer and Capricorn, where tropical forests are concentrated. These countries host most of the planet's biodiversity.
- c. Have significant fossil fuel reserves in highly biologically and culturally sensitive areas.

Among the countries satisfying all of these conditions are Brazil, Colombia, Costa Rica, the Democratic Republic of Congo, Ecuador, India, Indonesia, Madagascar, Malaysia, Papua Nueva Guinea, Peru, Bolivia, the Philippines and Venezuela.

Therefore, it would exclude countries like those mentioned in the question and would avoid an excessive supply of similar projects.

25. What is the difference between the Yasuni-ITT Initiative and other proposed initiatives to protect tropical forests put forth by Brazil, Costa Rica, Guyana, and others?

The Yasuni-ITT Initiative is unique, because it integrates three fundamental goals: reducing emissions by refraining from the extraction of fossil fuels, protecting biodiversity and promoting social development. The proposals of the countries mentioned are focused on protecting tropical forests through REDD mechanisms (Reduced Emissions from Deforestation and Degradation), seeking compensation for reducing deforestation rates, conserving biodiversity and at the same time preventing emissions. Some of the proposals include forestation, reforestation, agro-forestry and sustainable tropical forest management, as well as the protection of indigenous peoples. The Ecuadorian proposal is the only one to incorporate all four dimensions mentioned above (the non-exploitation of fossil fuels, alternative energy development, protection of biodiversity and indigenous groups, and development with equality).

The proposals of the countries cited in the question are always channeled through existing mechanisms or aimed at CDM or REDD, or for the voluntary carbon market. The Yasuni-ITT Initiative seeks new forms of mitigation that go beyond the Kyoto Protocol.

26. What is the difference between the proposal of Saudi Arabia (and other OPEC countries) and the Yasuni-ITT Initiative?

Saudi Arabia and other oil-exporting Arab countries have proposed the need to be compensated for the negative impacts that climate change mitigation efforts can have on future demand for oil.

The Yasuni-ITT Initiative is substantially different from the Saudi position. Ecuador begins by recognizing the seriousness of the problem of global warming and the urgent need to adopt effective policies. Secondly, it seeks to contribute directly to decrease emissions by maintaining the ITT oil reserves underground, without asking for compensation for global mitigation.

The recent position of the OPEC which recognizes the need for a transition to sustainable forms of energy is shared by Ecuador.

27. Indonesia has proposed compensation for refraining from planting African palm trees which would deforest the jungle. How does this stance compare to the Yasuní-ITT Initiative?

Indonesia's proposal does not include one key component which is vital for the Yasuní-ITT Initiative: keeping fossil fuels underground. Although there are some similarities, like preventing deforestation, Indonesia's position does not share the holistic approach of Ecuador's proposal.

One must also distinguish between fossil fuels – which release the carbon stored during the planet's remote past into the atmosphere – and biofuels, which consume the carbon stored in current plantations, with different effects on the environment and climate change.

28. If the Yasuni-ITT Initiative is approved, other countries might seek compensation for not deforesting their tropical jungles. Is that fair?

A number of initiatives which are being discussed currently, like the REDD mechanism in the post-Kyoto negotiations, share the idea of compensation for conserving tropical forests. The Yasuni-ITT Initiative is only one of these proposals. In addition, the central idea of the Ecuadorian proposal is linked with the non-production of oil, and it is replicable only in developing, megadiverse countries with fossil fuel reserves, which excludes many countries.

Any potential replication of this project also depends on specific local and national factors, like the level of development of a country, its biodiversity or cultural wealth in the area of the oil deposits, and the size of the fossil fuel reserves.

ECUADOR AND ITS LAWS

29. Doesn't the plan for the construction of the new refinery in El Aromo, Manabi, which will process heavy crude, involve a supply of heavy crude from ITT?

No. The refinery project has a plan A which assumes that the Yasuní-ITT Initiative is accepted by the international community and therefore the oil in these fields will forever remain in the ground. There is a plan B, for the case where the Initiative is not accepted, and the refinery would then process ITT heavy crude. The refinery is being built to process heavy crude from Ecuador and Venezuela, and Ecuador has other untapped deposits of heavy crudes which will soon enter production, like the one in Pungarayacu.

30. How coherent is the Ecuadorian energy policy – especially in terms of oil production, with its resulting pollution and lack of respect for local communities – with a project like the Yasuni Initiative?

Oil production began in the Ecuadorian Amazon in 1967, with very little respect for nature and local indigenous groups. The Yasuni-ITT Initiative proposes a radical policy turning point that puts a priority on the use of alternative, renewable energy sources and respect for the human rights of peoples in voluntary isolation. This effort requires international support and solidarity for new options for sustainable and participatory development.

31. If the Ecuadorian Constitution mandates that non-renewable natural resources like oil cannot be extracted from protected areas, how is it that oil continues to be produced in these areas?

The new Constitution was approved in September 2008. Therefore, all previous exploitation was not subject to this limitation. In the future, new oil production projects can only be carried out with the express authorization from Congress. This is a sign of the new conservationist path that Ecuador is taking, of which the Yasuni-ITT initiative is a part.

32. Why is Ecuador asking for compensation for avoiding the extraction of oil in a national park recognized by UNESCO for its value, when its duty should be to protect it without receiving compensation?

Ecuador, like other developing countries in Latin America, has had traditionally very limited economic resources to stimulate development in the country. In light of the scarcity of resources available, it has opted to extract the petroleum reserves, including those located in National Parks. The weak institutional framework and the high profitability of the oil industry have led to the extraction of hydrocarbons within the Yasuni National Park.

Ecuador is committed to changing this policy, and Article 407 of the new Constitution prohibits extractive activities in protected areas, except for exceptional cases. The Yasuni-ITT initiative is intended to build a solid financial and institutional foundation in order to achieve the effective and permanent conservation of these areas. In addition, it is not asking for compensation but rather a contribution made in solidarity with common international objectives, like mitigating climate change, preserving biodiversity and sustainable human development.