

Chapter 33

Collective Action in Ecuadorian Amazonia



Fander Falconí and Julio Oleas

This chapter aims to examine the contribution of ecological economics (EE) to the understanding of the issues of Amazonia, a key eco-region for the planet and its inhabitants, as it faces a point of no return (Lovejoy & Nobre, 2018) due to the accumulation of historical problems. The Amazon region is experiencing accelerated changes in land use, fragmentation of its ecosystems, extractive pressure (from oil and minerals), and social dispossession. Understanding all of this requires broad disciplinary approaches, consideration of uncertainties, and stakeholder participation in decision-making. The first section defines the scope of EE and its evolution toward political ecology. Next, EE is linked to the debate on sustainability and extractivism. The third section describes the contributions of the Barcelona School to the defense of Amazonia. The next section examines the connotations of the Yasuní-ITT Initiative as an opportunity for a true socio-environmental transition. Finally, several conclusions are presented.

33.1 From Ecological Economics to Political Ecology

Although not as a formal discipline, ecological economics (EE) began in the nineteenth century, studying energy and the environment in the economy (Martínez-Alier, 1990). Among its leading precursors were F. Soddy (1933) and S. Podolinsky, with their pioneering contributions on energy (Martínez-Alier & Naredo, 1982;

F. Falconí (✉)

Department of Development, Environment and Territory, Facultad Latinoamericana de Ciencias Sociales – Sede Ecuador, Quito, Ecuador
e-mail: ffalconi@flacso.edu.ec

J. Oleas

Independent Researcher, Lima, Perú

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Martínez-Alier, 1998). Nowadays, EE has, as its primary research objectives, the concerns regarding the physical limits of economic growth, based on the seminal work of Georgescu-Roegen (1971), the Report to the Club of Rome by Meadows et al. (1972), and the study of energy and material flows. Another objective of EE is the revision of externalities, based on Kapp's theory of social costs (1950, 1976).

EE suggests that the economic system is part of a much wider ecological system. This basic idea – a fundamental ontological presupposition of EE – implies that reality is present at different levels that interact and coevolve in a complex way, requiring a systemic study based on an organicist ontology capable of harboring several epistemologies (Lizarazo, 2018).

Since the renaissance, Western science has advanced toward the certainty of knowledge, aspiring to control Nature, and driving technological and industrial development. However, for EE, knowledge of the interactions of biophysical reality with social reality is full of uncertainties, and it is not possible to prove absolute truths. In the post-truth era, normal science faces a good deal of uncertainty, especially in relation to the environment and to public policies (Funtowicz & Ravetz, 1993, 2000).

It is possible to understand and interpret this reality in an atmosphere of methodological pluralism, broad enough to foster open and creative dialogue between the wisdom of different bodies of knowledge and between the academy and its social surroundings. This process becomes a reality through interdisciplinary research conducted on a democratic basis, so as to include all of the interests at stake, in a scenario of multidimensional evaluation where it is understood that scientific ethics are not neutral; that consumerism and individualism are not the only human aspirations (equity, democracy in decision-making and social justice also matter); and that it is essential to make clear the interests at stake.

EE transcends the dichotomies that characterize positivism (facts versus values, knowledge versus ignorance, positive economics versus normative economics, ... academic knowledge versus common knowledge) and assumes that human beings (the *homo economicus* of neoclassical economics) cannot control Nature, that there is more than one legitimate perspective, and that complex systems are unpredictable.

The ontological extension of EE – from market equilibrium toward a wider system that encompasses the former and is ruled by the laws of entropy – leads to the need to regard the understanding and interpretation of that reality as a social process, subject to reasoned criticisms based on multiform empirical research (Lizarazo, 2018). EE proposes an epistemological renewal that transcends the idea of scientific revolution (Kuhn, 2004), such that the change that it inspires would not sanction the passage from one state of normal science to another, but – consistent with its ontological model – evolves toward the state of post-normal science anticipated by Funtowicz and Ravetz (1993).

Presently, the EE research agenda includes the destruction of biodiversity, the sources and uses of energy, the use of land, evaluative incommensurability, the development of new methodologies for measuring and evaluating environmental goods and services, the analysis of social metabolisms and material flows, and degrowth. Martínez-Alier has focused his attention toward ecological-distributive

conflicts, ecological debt, environmental justice, and poverty and its relationship to the deterioration in ecological systems.

Economic and population growth require the use of increasing amounts of natural resources and yield greater waste. This occurs in certain institutional frameworks, social relations, and power relations. This results in diverse impacts that provoke environmental justice conflicts, expressed in different valuation languages. EE rejects the possibility of reducing these languages down to a single dimension – the monetary one – and appeals to the incommensurability of values.

When studying environmental justice conflicts from the EE perspective, a question arises similar to the matrix question of political economy (*cui bono?*), but in a negative sense: who is harmed by the environmental, distributive, and financial liabilities, as well as the injustices caused by those conflicts? The likely answers are to be found in the realm of political ecology. If EE studies the relationship between the environment and the economy, political ecology studies ecological-distributive conflicts (Martínez-Alier, 2006).

These conflicts are increasingly diverse, in keeping with advances in the extraction of resources, the generation of waste, or the abusive imposition of property rights. Their broader classification takes into account not only their geographical sphere (local or global) but also more specific subjects such as bio-piracy, conflicts related to energy and materials extraction, transportation, waste generation, and contamination.

Measuring the impacts of ecological-distributive conflicts requires the use of conventional and nonconventional indicators expressed in physical and/or monetary units (Martínez-Alier, 2006). Based on the concept of social metabolism (the economy as a system that takes up useful energy and discharges waste and dissipated heat), physical indicators are necessary.

The discrepancies arising from different value systems must be added to the complexities posed by the measurement of the conflicts' impacts. The claims of those most affected can be expressed in monetary terms, but they can also begin with an argument over the valuation system to be used (Ibid.) The loss of biodiversity or cultural heritage, the damage to human livelihoods, the violations of human rights, the sanctity of the land, and the territorial rights of the Indigenous population or environmental safety are expressions of immeasurable values.

However, "who assumes the power to determine the relevant languages of valuation?" (Ibid.) This problem, which is central for EE and for political ecology, arises first, when determining the capacity to impose a decision upon others, and second, when resolving the capacity to impose a method for making decisions on ecological-distributive conflicts.

The environmentalism of the poor, another concept coined by Martínez-Alier (1994), provides an understanding of ecological-distributive conflicts and social resistance caused by productive and extractive processes, as in Amazonia. Joan Martínez-Alier has maintained a constant commitment toward Amazonia and has even put forward courses of action that would lead to a post-oil country through the NGO *Acción Ecológica*.

33.2 Ecological Economics, Sustainability, and Extractivism

EE also serves to deepen the debate on extractivism and sustainability. Orthodoxy means that public policy decisions are the result of technical processes in which models (functional expressions of a theory) are contrasted with realities or phenomena that one seeks to change. Results are drawn from these processes based on relationships of causality – generally linear. Political authorities assimilate these results, establishing objectives, targets, and instruments, for implementation in society. This method of devising public policies – economic, social, health, educational, environmental, security, etc. – is developed in a quasi-mechanical way in which it is possible to clearly distinguish the roles of political authorities, experts, and citizens in scenarios legitimized by more or less efficient democratic practices.¹

However, if, as EE suggests, human beings cannot control Nature (although we can and do exploit it, modify it, and influence it); if other views of what is desirable (different from those of Western capitalist culture and the ideology of extractivism) are considered legitimate and therefore value incommensurability is accepted (despite the ideal of the political homogeneity of people); if it is acknowledged that complex systems are unpredictable and scientific certainty is contingent, public policy is one among several collective action options. Moreover, it is a broad area of disagreement that covers methodological topics such as national accounting, the viability of sustainable development or, in the area of social, economic, and environmental regulations, proposals such as “good living” (*buen vivir*) from the 2008 Ecuadorian Constitution.

These debates are synthesized in the way Nature is valued, the role of human-made capital, and the distribution of extractive income, which is a key aspect in the countries that comprise the Amazon region.

At the heart of these disagreements lies the discussion over the sustainability of the Amazon region and the economic growth model that exploits it. EE has extended the concept of sustainability and has contributed to the definition of the conceptual and practical limits of economic growth and development. If we accept that Nature has biophysical limits, economic growth *ad infinitum*, as a necessary condition for human well-being, is a myth that is leading to the collapse of humanity.

The idea of *buen vivir*, the central concept of the 2008 Constitution of the Republic of Ecuador (Asamblea Constituyente, 2008), is an alternative to the teleology of economic growth as the only possible path toward development. The regime of *buen vivir* is an integrated system of social inclusion and well-being, together with recognition of the Rights of Nature.

This political declaration, formalized as a constitutional model, is one of the challenges humanity facing in the twenty-first century. Its application would have enabled social and economic relationships to be organized in a truly sustainable

¹The “recommendations” of monetary, fiscal or developmental policies coming from multilateral bodies like the International Monetary Fund or the Organization for Economic Cooperation and Development are examples of this kind of process.

manner. In addition, it would have fostered a different relationship between human beings and Nature. This is exactly what Amazonia requires to survive into the future and continue to be the home for other cultures, providing its invaluable environmental services to the entire planet. It requires aligning, without ambiguity, objectives of preservation of all forms of life, regeneration processes, development of local productive capacities, active participation of people and nationalities in decision-making, and the gradual abandonment of rentism and extractivism.

33.3 Amazonia and the Contributions of the Barcelona School

Capitalism supports its accumulation process on continuous expansion that intensifies the exploitation of Nature's goods and services. Amazonia, a region rich in biodiversity and culture, is integrated into this process on a planetary scale as a link in the chains of international trade.

It has been connected to world markets since the nineteenth century as a provider of raw materials. First came the exploitation of natural rubber in harsh conditions, then the extraction of minerals, oil, and the aggressive expansion of monoculture and livestock production. The Ecuadorian Amazonia remained almost on the margin of global trade chains until much later. With oil exploration in the 1960s and the start of oil extraction in 1972, colonization intensified, new roads were built, and a disorderly change of land use began to expand agricultural activities, such as palm oil cultivation and extensive livestock production.

Today it is at the center of worldwide discussions because of forest fires, problems generated by extractive and productive activities, and global warming and climate change. EE has played a leading role in these discussions, with its theoretical principles, analysis of socio-environmental reality, and promotion of public policies.

Many consider the involvement of Amazonia in world markets to be pernicious, in the sense of a "curse of abundance," a reference to the plentiful availability of natural resources. These are neither a necessary nor sufficient condition for development, but in the African experience during the colonial period – especially the English and Belgian colonies – natural resources were associated with ethnic cleansing, pillage, and social exclusion. The relationship between the abundance of natural resources and the so-called bad development can also be called into question. The former does not necessarily cause the latter (Acosta, 2009, examines this situation). An objective balance of the use and control of natural resources should consider the social and environmental costs of extractive processes, the distribution and redistribution of income, the quantity of stocks and environmental-distributive conflicts, and the alteration of the lives of millenary people and nationalities.

No one challenges the ideal of getting beyond extractivism. However, presently the argument against it is that, given the urgent needs of the people in poor countries or those impoverished by their governments, by their domestic public policies and

by asymmetrical international relations, it is not possible for them to manage without what would be their main – if not only – source of income.

The paradoxes of extractivism are much criticized, without any viable solutions being proposed. In practice, in order to get beyond it, other sources of income need to be available. In the final analysis, given the budgetary structures of these countries, they could not maintain the social programs nor the public investment in the formation of human capabilities, without the income generated by their primary exports. Any realistic alternative proposal would need to contemplate far-reaching fiscal reforms.

The extractivism of Amazonia was intensified from the 1980s, producing several adverse outcomes:

- *Social and environmental deprivation.* Especially because of the effect on cultures and people, including those in voluntary isolation. The social indicators of this region – particularly poverty and inequality – are worse than the national averages of the Amazonian countries. The change in land use due to deforestation, the intensification of extractive activities, monoculture expansion and livestock production have resulted in permanent losses in biodiversity.
- *Unequal exchanges.* The main economic consequence of the way Amazonia has been incorporated into world trade circuits has been the growing intensity in the exploitation of its natural resources. South American countries have a structural need to constantly increase their production of raw materials in order to acquire greater income, or to maintain the income they received when there is a fall in international prices for raw materials.
- In addition to this unequal economic exchange observed by Prebisch (1950, 1959), the raw materials markets conceal an ecologically unequal exchange: a mounting extractivist intensity to export more – in physical units – with the consequent increase in the cost to the environment and to ecological-distributive conflicts, as explored by Bunker (1984, 1985) and Muradian and Martínez-Alier (2001). Exports of natural resources and primary products are undervalued, since they do not include the social and environmental damage inherent in their extractive processes.
- These exchanges are also unequal when measured in calories (Falconí et al., 2017). The deterioration in terms of trade for food (in calories) causes a loss of self-sufficiency in food and damages the quality of diets (higher rated calories in nutritional terms – such as fruit – are exported and poorly rated calories – such as oils and fats – are imported). This exchange inequality constrains product diversification and generates deficient domestic consumption as well as loss of food self-sufficiency and sovereignty.
- *Dutch disease and vulnerability in the face of crises.* Extractivism usually provokes Dutch disease: an appreciation in the exchange rate, with a loss of competitiveness in domestic sectors not connected to the global market, and little or no product diversification, due to the influx of foreign currency arising from the increase in exports of one or several primary products. This macroeconomic distortion feeds back into recurrent economic crises.

- *Little diversification.* According to ECLAC, South America has an intensive export basket in primary products (55% of the total value of exports) and manufacturing based on natural resources (23%). Latin America and the Caribbean demonstrate an “emphasis on primary export specialization in the region” and a growing tendency to specialize in the provision of minerals and raw materials, which is reflected in their minor participation in the global value chains and their physical mineral trade balance (the difference between imports and exports measured in tons).
- *Deindustrialization.* An outcome linked to the previous one, shown as an important loss in industry in total value added.

This form of insertion generates diverse environmental conflicts documented in the Environmental Justice Atlas (EJAtlas; Temper et al., 2015). In Amazonia, the possibility of leaving oil underground challenges the conventional way of approaching the debate on sustainability and the use of natural resources, and poses other options for valuing Nature and the life it harbors.

33.4 The Yasuní-ITT Initiative

The Yasuní-ITT Initiative warned the world about a reality: it is not possible to continue extracting fossil fuels at the current rate because critical thresholds of planetary stability will be exceeded. Today, it continues to be a reference for confronting the climate crisis with the logic of degrowth of rich and industrialized economies, and the need to pay ecological and environmental debts accumulated in the North at the expense of the Global South.

In 2007, the Government of Ecuador proposed not to extract oil from the Yasuní National Park fields (in Ecuadorian Amazonia), a place of extraordinary biological diversity, in exchange for financial compensation, equal to half the net income that would have been generated from the extraction of 850 million barrels of heavy crude oil, from the international community.² Yasuní also provides benefits through ecosystem services for the conservation and preservation of life, including of people in voluntary isolation (Vallejo et al., 2015). The multi-criteria analysis (MCA) applied to Yasuní offers alternatives with different levels of evaluation, with a broader scope than the usual monetary cost–benefit analysis. It also demonstrated the viability of the Initiative when the definition of value is expanded.³

²In 2016, a technical increase of 920 million barrels was declared, which fixed the reserves of the Ishpingo-Tambococha-Tiputini (ITT) fields at 1672 million (El Comercio, 2016). This increase was certified by the North American Company, Ryder Scott. However, Espinoza et al. (2019) maintain that only 8.2% of the certified reserves were proven and probable. The remainder were possible reserves (28.5%) and contingent resources (63.2%).

³Burbano et al. (2017) applied an MCA to find alternative scenarios to the development being followed in Ecuadorian Amazonia.

If weak comparability of values – which implies incommensurability – is essential for EE, the tool to operationalize it is multi-criteria evaluation (Martínez-Alier et al., 1998). It is not that the unparalleled biodiversity of the Yasuní, the emissions of carbon dioxide averted and the rights of the people in voluntary isolation, are worth more or less than the 850 or 1672 million barrels of heavy crude oil; they just have a “different value” (Martínez-Alier, 2010).

Rafael Correa, the former president of Ecuador, announced the withdrawal of the Initiative on August 15, 2013. The government refused to hold a referendum that would have represented an important opportunity to have a democratic debate on extractivism.

The Initiative, as well as its official abandonment, provoked strong criticisms and several assessments (Acosta et al., 2009; Martínez, 2009; Narváez et al., 2013; Pelegrini et al., 2014; Pelegrini & Arsel, 2018). The reasons for this failure have yet to be fully explored, but several facts can be mentioned that led to this outcome. “Correa [...] has never been an environmentalist, he is a typical left-wing Latin American economist, he is a classical *cepalino*,”⁴ said Martínez-Alier (2010). Correa’s final decision had several consequences. The most obvious was that there was no way of avoiding the “production of 410 million tons of carbon dioxide which correspond to 850 million barrels from the ITT...” (Ibid.). Now we know that it would have avoided much more.

The most important consequence of the triumph of extractivism was the curtailment of what would have been an exemplary public policy decision for Latin America and for the entire world. This initiative would have marked a decisive turning point in the struggle against climate change. “The success of the Yasuní-ITT Initiative [...] could lead to imitation, in other words, to more and more fossil fuels being left below ground in places that are environmentally and/or socially sensitive,” wrote Martínez-Alier (Ibid.).

An initial assessment of this episode might conclude that the internal factors and the limited international commitment combined to shut down a unique project for Ecuador and the whole world. It is ironic that in the same year, the Intergovernmental Panel on Climate Change (IPCC) report opened the way for the majority of fossil fuels to be kept underground (Le Page, 2013).

Fossil fuel emissions are intensifying global warming. The effects on the climate are multiple and complex: heat waves, droughts and fires, loss of ice mass. Meanwhile, national economies are slowly reducing their carbon emissions. The capitalist economy is addicted to fossil fuels.

The Amazon region is fundamental to the planet’s climate equilibrium because of its high degree of biodiversity. Its forests absorb carbon, promote water cycle, and deliver global ecosystem services. Changes in land use due to productive and extractive activities (legal and illegal) affect human cultures, including people in voluntary isolation; they reduce forests size and cause irreversible biodiversity loss.

⁴The gentilic for an economist of the United Nations Economic Commission for Latin America and the Caribbean, ECLAC (in Spanish, Comisión Económica para América Latina y el Caribe, CEPAL).

The idea of leaving oil underground and avoiding burning it in the atmosphere needs to be discussed in world fora, including in the context of Covid-19. According to Carbon Tracker (2015), by 2025, fossil fuel extraction companies will be investing 2 billion dollars in carbon, oil, and gas projects. These investments pose a high environmental risk, since burning these fuels would exceed the climate irreversibility threshold of 2 °C, as advised by the scientific community. If we really want to face up to climate change and promote renewable energy, these investments would be counterproductive.

Martínez-Alier asks: “Where should these fossil fuels, the product of photosynthesis from times in the distant past, be left underground?” and he answers: “It makes sense for them to be in places like Yasuní-ITT and other similar locations on account of their environmental value and the social risks” (2010). Presently, with the crisis of global capitalism made worse by the Covid-19 pandemic, the prices of oil and other raw materials have fallen (UNCTAD, 2020). This makes several oil and mining projects unviable, given their economic cost structures, not to mention environmental costs. This reinforces the idea of leaving oil underground and hastening the passage toward a post-oil economy.

An adequate assessment of the Yasuní-ITT Initiative recognizes its relevance for the mechanisms of socio-environmental transition, the need for degrowth, and social and environmental justice from a Latin American perspective. However, it also recognizes the error of proposals focused solely on financial options. Ultimately, it is necessary to broaden the universe of values implicit in the analysis.

33.5 Conclusions

Human ecology is subsumed in social and political institutions. Therefore, “the conflicts between rich and poor cannot be hidden behind the screen of an ecological pseudo-rationality,” warned Joan Martínez-Alier 27 years ago. It was not possible, he said, to base human decisions on a “new technocratic ecologism” (1994), thus foreshadowing the path down which EE and environmentalism of the poor would evolve over the past quarter century.

This has been a journey toward a radical epistemic rupture, different from previous moments of paradigmatic crisis. It has not been a passage from a moment of normal science toward another such normal moment, but rather a path toward an unprecedented moment of postnormal science based on an organicist ontology, more real than that of orthodox economics and capable of harboring different epistemologies and methodologies. This blurs the boundaries between science and non-science; it opens the doors to a broader dialogue; and it reduces the distance between the academy and society.

EE assumes that scientific ethics are not neutral. Strengthened by interdisciplinary research, it is capable of drawing attention to the heterogeneous conflicting interests that are expressions of incommensurable but equally valid values. This enables it to carry out broader analyses that include an increasing number of

ecological-distributive conflicts, as economic growth requires increasing levels of resources and generates increasing amounts of wastes.

The attention given to Amazonia by EE has not happened by chance. This region is the scene of conflicts of values and interests that are both local and global in scope. It is subject to a serious process of social and environmental deterioration, which has been accelerating since the 1980s.

EE actively supported the Ecuadorian government's proposal not to extract oil from the fields under the Yasuní National Park, an area of extraordinary biological diversity occupied by communities in voluntary isolation. The initiative's failure cut short what would have been an exemplary public policy decision that would have marked a turning point in the struggle against climate crisis. The crisis of globalized capitalism, made worse by the current Covid-19 pandemic, has made several extractivist projects nonviable – including from a financial perspective.

Based on the premise of the human impossibility of controlling Nature, of value incommensurability, and uncertainty that characterizes complex systems, EE has been the main subject of several discussions concerning Amazonia. The contributions of these and other debates found their historical synthesis in the notion of *buen vivir* (*sumac kawsay*), sanctioned by Ecuadorians in the 2008 Constitution of the Republic of Ecuador. This political, cultural, and social proposal recognizes the Rights of Nature and seeks to apply an integrated system of inclusive social well-being. Its origins lie with Andean cultural traditions, not with EE. However, as this chapter has shown, *buen vivir* is an option for the achievement of prosperity, without being dependent on economic growth.

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