ELLA
Evidence and lessons from Latin America

How have Latin American countries been using Environmental Impact Assessments in order to build more sustainable extractive industries? A focus on Peru provides some interesting lessons.

IMPROVING ENVIRONMENTAL MANAGEMENT OF EXTRACTIVES THROUGH ENVIRONMENTAL IMPACT ASSESSMENTS

SUMMARY

Is it possible to develop extractive industries while preserving the environment? Several Latin American countries have been attempting to improve the environmental sustainability of their extractive industry sectors by developing their legal frameworks, in particular through the use and adaptation of the Environmental Impact Assessment (EIA) tool. This Brief focuses primarily on experiences in Peru, where integration of the EIA into extractive industry policy has been extensive. The Brief focuses on three particularly noteworthy innovations implemented in Peru: mine closure plans; regulation and approval mechanisms; and citizen participation. Overall, the Brief aims to offer an understanding of the advances, challenges and debates around the implementation of EIAs when seeking a balance between environmental sustainability and extractive sector development. The lessons drawn from Peru and other Latin American countries may be useful for other regions struggling to balance extractive industry development with environmentally sustainable approaches to land use.

ENVIRONMENTAL MANAGEMENT IN THE EXTRACTIVE SECTOR

One of the main criticisms of extractive industry development is that it produces negative impacts on the environment. A major cyanide spill from a Canadian gold mine in Guyana and the environmental disaster caused by the Chevron (formerly Texaco) oil company in Ecuador are just two examples from the Latin American region. This poor record has fuelled local opposition to such projects, which in some cases has obstructed access by mining operators to essential local resources such as water and land. In response, governments across the Latin America region have been taking measures to incorporate and adapt international standards and tools for environmental protection and regulation into national frameworks for extractive sector development.

KEY LESSONS LEARNED

Incorporating the EIA into environmental management policies can help countries to build more sustainable extractive industry sectors.

Closure plans represent one mechanism being used to strengthen environmental management by committing private investors to mitigate the long-term environmental impacts that typically undermined the sustainability of extractive projects.

EIA processes should be closely regulated by the state, but independently evaluated, in order to improve transparency and legitimacy.

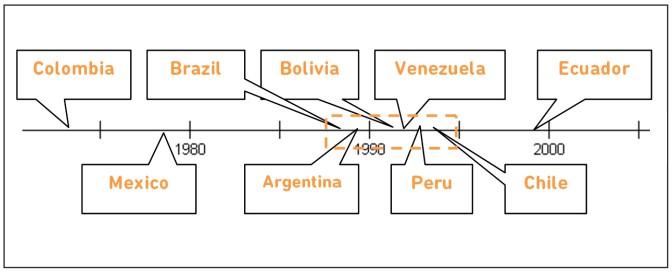
BOX 1: KEY COMPONENTS OF EIAs IN THE EXTRACTIVE SECTOR

- Description of the proposed project and the background of the area of influence
- Identification and characterisation of the environmental impacts throughout the entire project cycle
- Strategy for environmental management, which includes the management plan, contingency plan, compensation plan, and closure plan
- Proposed plan for citizen participation
- Monitoring and control plans

The most common tool used by Latin American governments to evaluate the viability of an extractive industry project is the Environmental Impact Assessment (EIA). The EIA is a tool used to analyse the potential social, economic and environmental impacts of a proposed project (see Box 1). This information is enabling Latin American governments to identify strategies to prevent, mitigate and control environmental damages and negative social impacts.

Governments in Latin America began using the EIA in the late 1980s and early 1990s. Nowadays, every country in the region has a law stating that the EIA is a mandatory prerequisite to any extractive project. This means that every approved extractive project must establish air, water and soil emission limits, environmental protection and contingency plans, and comply with national environmental quality standards.

Figure 1: History of EIAs in Latin America



Elaboration: Author's own
Sources: Data sources from: Argentinean Secretary of Environment and Sustainable Development, Bolivian Secretary of Environment, Brazilian Ministry of Environment, Chilean Service of Environmental Evaluation, Colombian Ministry of Environment and Sustainable Development, Ecuadorian Ministry of Environment, Mexican Secretary of Environment and Natural Resources, Peruvian Ministry of Environment and Venezuelan Ministry of Popular Power for Environment. Accessed 20th June 2013.

The design and implementation of EIAs differs between countries in terms of scope, quality, methods, public participation, citizen oversight and impact assessment.[1] As a consequence, the implementation of EIAs in the Latin America region has produced varied results.[2] In some cases, EIA procedures are not well defined or adjusted to particular environmental or social contexts. In others, political bias or a lack of transparency hinder the effectiveness of the EIA tool. Thus, experiences from Latin America provide a range of lessons for other regions interested in improving the sustainability of extractive industry development (see Box 2).

BOX 2: EIA BEST PRACTICE IN BOLIVIA AND BRAZIL

The Bolivia-Brazil Gas Pipeline Project (GASBOL) is widely recognised as an example of best practice in mainstreaming environmental management into an extractive project. GASBOL is one of the largest gas pipelines in South America, covering some 3,000km between Bolivia and Brazil. The EIA was a challenging undertaking given that the pipeline crosses several environmentally and socially sensitive areas in two different countries. Despite the difficulties, the EIA was well conducted and achieved international recognition. It was subsequently used by the Brazilian government as a basis for improving national EIA standards and won the Association of Impact Assessment's Environmental Award in 2001. This success was due to several good practices, including:

- The environmental management structure provided continuous monitoring and follow-up of environmental issues, including rapid response to conflict situations
- Engineering resources were maximised via a system to classify ecosystems according to their need for special construction works
- Innovative strategies for protecting fragile ecosystems were crucial throughout design and construction of the pipelines. These strategies considered both the upstream impacts of oil and gas extraction in Bolivia and the downstream impact of fuel replacement in Brazil
- Open dialogue was maintained with indigenous communities, including frequent consultations and negotiation of compensation packages

That being said, these sound practices have not yet been seen in Brazil's new EIAs, though should have been already incorporated into its national EIA standards. In the case of Bolivia, it is not clear whether these best practices have been incorporated into the government's guidelines for new EIAs.

Source: Goodland, R. (ed.) 2005. *Oil and Gas Pipelines: Social and Environmental Impact Assessment State of the Art*. International Association of Impact Assessment, Fargo.

[1] Li, J. 2008. *Environmental Impact Assessments in Developing Countries: An Opportunity for Greater Environmental Security?* FESS Working Paper No. 4. Foundation for Environmental Security and Sustainability, Fall Church.
[2] See, for example: Wood, C. 2003. *Environmental Impact Assessment in Developing Countries: An Overview*. Paper prepared for the Conference on New Directions in Impact Assessment for Development: Methods and Practice 24-25 November 2003.; Sánchez-Triana, E., Enríquez, S. 2007. *A Comparative Analysis of Environmental Impact Analysis Systems in Latin America*. Paper prepared for the Annual Conference of the International Association for Impact Assessment.

This Brief focuses on Peru in particular because the country has made sound advances in improving EIA design and implementation. Peru has been the first country in the region to incorporate mining closure regulations into EIA requirements. And the Peruvian government has steadily tried to improve its EIA implementation by creating new institutional bodies. This effort is especially noteworthy in this case since the government has had to come to terms with the country's powerful private extractive sector in order to legitimise such changes that would be more easily made in a country with a stronger state extractive sector, such as Brazil. In addition, government data and other research on the Peruvian experience are readily available online.

STRENGTHENING ENVIRONMENTAL IMPACT ASSESSMENTS FOR EXTRACTIVE PROJECTS IN PERU

The EIA was first implemented in Peru in 1990 under the Environment and Natural Resources Law which declared the tool as a mandatory prerequisite for any project or public work that could potentially cause environmental damage. Between 1993 and 1994, specific regulations for EIAs were established for the energy, mining and electricity sectors. The 2005 General Environment Law and the creation of the Ministry of Environment in 2008 further strengthened environmental management in the country and led to the approval of general EIA procedures in 2009, helping to standardise EIAs across all sectors.[3]

In Peru, the design and implementation of EIAs for the extractive sector in particular have been improved via three particularly noteworthy innovations relating to: mine closure plans; regulation and approval mechanisms; and public participation.

1. Mine Closure Plans

Closure plans are gaining importance as an effective mechanism for minimising the economic and social problems related to the closing down of an extractive project. Along with measures to restore ecosystems, closure plans typically include strategies to create livelihood opportunities for local people.

In Peru, the principal environmental regulation for mining - the 1992 Single Revised Text of the General Law of Mining - stipulates that all EIAs must have closure plans. In 2003, the Law Regulating the Closure of Mines was passed, and in 2006 the Ministry of Energy and Mines formulated a set of National Guidelines for the Elaboration of Mine Closure Plans.[4] The 2003 law stipulates the commitments that a mining company must set out in its closure plan, including environmental guarantees and a social rehabilitation strategy. It was the first law in the Latin America region that required companies to make financial provisions for mine closures.[5]

Since it is a relatively new regulation and extractive projects may last for decades, so far there are only a few examples of mining closure plan implementation (see Box 3).

BOX 3: BARRICK CLOSURE PLANS IN PERU

The first large-scale mine closure under the 2003 Peruvian law is going to be that of Pierina mine owned by Barrick. Located in the Department of Ancash in the Peruvian Andes, the Pierina mine began operations in 1998 and is set to close in 2016. The Barrick closure plan has been approved by the Ministry of Energy and Mines and includes a US$120 million dollar budget for activities to support employees, efforts to deal with complaints, environmental stewardship and greater focus on social objectives. It is divided into US$50 million for rehabilitation activities that are ongoing throughout the life of the project, US$40 million for the final rehabilitation and US$30 million for maintenance, monitoring and oversight after the mine closes (all approximate). The collaboration between communities and governments in the design of the closure plan has been essential. Given that the mine was originally expected to close in 2013, some activities from the closure plan are already going ahead. To date, the closure plan has complied with all government regulations.

Sources: Zhang, G. *et al.* 2008. Cover System Design and Testing For Pierina Mine, Ancash, Peru. 16th Annual Mine Design Operations and Closure, Fairmont MT.

2. Regulation and Approval Mechanisms

Until 2012, the state agency responsible for EIA approval was the Ministry of Energy and Mines (MEM). This generated controversy and a perceived conflict of interest, since MEM was in charge of both promoting foreign investments and approving the EIAs prepared by the companies offering these investments.

After an intense period of socio-environmental conflict that

[3] Law on the National System of Environmental Impact Assessment - SEIA (Law no. 27446)
[4] See Ministry of Energy and Mines Guidelines for the Elaboration of Mine Closure Plans (in Spanish)
[5] Bastida, E., Sanford, T. 2006. *Mine Closure In Latin America: A Review of Recent Developments In Argentina, Bolivia, Chile and Peru*. Unpublished paper.

involved extractive projects in two regions of Peru - Cajamarca and Cusco - which resulted in the death of six people, the government set about reforming existing environmental legislation in order to "build a new way of interrelating with extractive industries, one where the state assumes the role of guarantor of collective welfare," as Peru's President Ollanta Humala announced in July 2012. A multi-sectoral commission was set up and proposed two reforms in particular. First, the creation of a centralised autonomous agency in charge of environmental regulation and second the implementation of a national land use plan to determine suitable areas for extractive activity.[6]

The National Service for Environmental Certification of Environmental Investments (*Servicio Nacional de Certificación Ambiental* - SENACE) is the Peruvian government's attempt to implement this first proposal and is programmed to start functioning in 2014.[7] The main role of the SENACE will be to evaluate and approve EIAs for public or private investment projects.

It is still not clear how the power-share between government ministries and the SENACE will work in practice. For example, ministries will supervise the elaboration of EIAs that will subsequently be subject to approval from the SENACE, which may be seen as an unnecessary duplication of roles. Furthermore, the Council of Ministers has the authority to transfer responsibility for EIA approval directly to the ministries. This leaves the door open to political interference on technical issues.

EIA compliance is the responsibility of a separate agency, the Environmental Assessment and Enforcement Agency (*Organismo de Evaluación y Fiscalización Ambiental* - OEFA) which is part of the Ministry of the Environment. OEFA monitors the performance of private companies and of government agencies responsible for environmental protection at the national, regional and local levels. In 2010, OEFA was granted the authority to carry out enforcement actions related to medium- and large-scale mining activities, as well as hydrocarbon, gas and electricity projects (see Box 4).

Box 4: High Profile OEFA Sanctions

Since 2010, OEFA has issued sanctions against some of the largest investors in the Peruvian extractive industry for violations of environmental regulations. These include a US$13 million fine in 2010 issued to the Caudalosa Mining Company for discharging waste into the Escalera River in the Andean region of Huancavelica.

In 2011, the OEFA monitored the Camisea Natural Gas Project and issued 46 sanctions, 34 of which were related to non-compliance with EIA obligations or to implementation of activities without previous EIA approval. The largest sanction imposed - US$1.2 million - was related, in part, to Camisea exceeding the maximum length for pipeline construction.

At the other end of the scale, in 2013, the zinc mining company, Antamina, was fined US$77,000 by the OEFA for copper and zinc leakages produced by a pipeline explosion in July 2012 in the region of Huaraz. This incident led to the poisoning of 54 farmers and the contamination of farming lands and irrigation channels. Due to the severity of the consequences, the low amount of the fine has been strongly critised by the public.

In conclusion, these examples show actual advances in trying to regulate environmental disasters and enforce sanctions. However, it is clear that more needs to be done in order to ensure better environmental security plans and disaster control in the sector.

Sources: New York Times. 24 June 2009. *In the Andes a toxic site also provides a livelihood*. Online publication.; Clack, K. 9 March 2012. *Facing Death Threats to Fight a New Lead Poisoning Threat in Peru*. Oxfam America Online.; El Comercio. 4 June 2013. Antamina Fue Notificada de Multa por Derrame de Cobre en Áncash (*Antamina Issued with Fine for Copper Leak in Ancash*). Online publication.

[6] To learn more about this and other examples of land use planning in the region, see the ELLA Brief: Land Use Planning for Extractive Industries.
[7] Ugaz, P. 30 August 2012. *El Nacimiento del SENACE o de Cómo Pasaron los EIA a Ser Revisados por el MINAM (The Birth of SENACE or How the EIAs Came to be Revised by MINAM)*. La República newspaper, published online.; Gamboa, C. 7 September 2012. *Perú: Estudios de Impacto Ambiental (EIA): ¿Nace el Senace? (Peru: Environmental Impact Assessments (EIA): Has the SENACE Been Born?)*. Servindi, online publication.

3. Participatory Mechanisms

Peru's 2003 law requires consultation and public participation in the approval procedure of EIAs in the Energy and Mines Sector.[8] This includes specific actions for the Ministry of Energy and Mines (MEM) and private mining companies.[9]

The mine operators, for example, must publish mine closure plans and submit copies to regional, provincial and district authorities within the ambit of the project. Likewise, the mine operator must hold workshops to provide information on the project, including the EIA.

For its part, MEM has developed guidelines for public participation in mining activities[10] and is responsible for holding workshops with local populations in order to provide information about environmental legislation and citizen rights. Besides providing information, these workshops must be used to collect observations and questions from the local population.

Once the EIA is presented to MEM, the Department for Environmental Issues (*Dirección General de Asuntos Ambientales* – DGAA) is in charge of convening a public hearing in order to present the results. The public hearing must be announced at least 40 days in advance via press and radio and open access to EIA documents must also be provided. Within 30 days of the hearing, the public is able to present observations and recommendations to MEM. After the approval or rejection of the EIA, any party may appeal against the decision.

On-going Challenges

The Latin American region faces four key on-going challenges related to EIAs:

- Estimating the cumulative impacts of a proposed extractive project is a challenging task facing countries across the region and beyond. Better guidelines are therefore needed to improve the design and implementation of impact assessments. This is vital for the elaboration of adequate mitigation and closure plans.
- In terms of monitoring and enforcement, independently financed agencies are vital for transparency and legitimacy. It is also crucial that the responsibility for promoting and approving extractive industry investments be held by two separate institutions. In Chile, for example, EIAs not only have to be approved by the Ministry of Mining, but also by agricultural and water authorities. This has helped to increase transparency and reduce the possibility for political influence and corruption.
- There is also the issue of establishing satisfactory participatory processes in order to improve project legitimacy and sustainability, as well as government enforcement capacity. In Peru, the effectiveness of participatory mechanisms, and in particular public hearings, has been called into question given that they have often failed to encourage adequate citizen participation and their outcomes are not legally binding. Existing mechanisms therefore require further improvements based on lessons drawn from on-going experiences.
- Finally, one of the most challenging tasks facing Latin American countries is developing more effective enforcement mechanisms.[11] Governments must develop appropriate regulations and strengthen the legitimacy of independent oversight authorities. In fact, these challenges exist in many countries worldwide where higher national dependence on extractive industries seems to go hand-in-hand with lower government regulatory capacity.[12]

[8] See full text of this component of the law (Spanish only).
[9] In relation to this, but not as part of the EIA, the state has recently enacted a Prior Consultation Law for indigenous people that applies to extractive projects. To learn more, see the ELLA Brief: Managing Conflict through Consultation: Latin America's Experience. For a broader discussion of indigenous peoples' consultation rights in relation to development and extractive projects, see the ELLA Brief: Defending Latin America's Indigenous and Tribal Peoples' Rights through Laws and the Courts.
[10] MINEM. Guía de Participación Ciudadana en el Sub Sector Minero (Guide to Citizen Participation in the Mining Sub-sector). MINEM, Lima.
[11] Smith, E., Rosenblum, P. 2011. *Enforcing the Rules*. Revenue Watch Institute, New York.
[12] McMahon, G. 2010. *The World Bank's Evolutionary Approach to the Mining Sector*. Extractive Industries for Development Series #19. World Bank, Washington, DC.

CONTEXTUAL FACTORS

ENABLING SUCCESSFUL LATIN AMERICAN APPROACHES

Four principal enabling factors have supported the improvement of EIAs in Peru and across the region.

First, the gradual incorporation of environmental standards, and in particular the adoption of EIAs into national legislation, was part of the liberalisation agenda for government reform promoted by multilateral agencies such as the World Bank. The aim was to standardise environmental legal frameworks across the region in order to improve regulation of multinational investments in extractive activities and create the necessary conditions for more sustainable projects in the extractive sector. In Peru, the environmental laws and regulations paved the way for the privatisation and expansion of the extractive sector that has been occurring since the 1990s.

The second is the development of state institutions to implement the new environmental legislation and process the increasing numbers of EIAs. In Peru, the government has created new public bodies, such as the Ministry of the Environment, OEFA and SENACE, to increase regulatory capacity. The state has also increased the budgets of these bodies in order to improve personnel and technical capacities.

Third, civil society groups have been especially effective in pressuring governments to improve environmental laws and enforcement. International groups like Revenue Watch, national NGOs, such as the Peruvian NGO *CooperAcción*, and local communities have joined efforts to make public denunciations of environmental damage and call for stricter regulations. In Peru, public pressure has had positive effects, in particular since the shift to more democratic governance in 2000.

Finally, socio-environmental conflicts have raised the public profile of EIAs in Latin America. This public interest has opened up debates about the responsibilities of governments and private companies and led to the emergence of new mechanisms for public participation and oversight. In Peru, for example, in 2013 the government requested a reassessment of the *Minas Conga* project by an international committee in the face of an advancing tide of social conflict.

LESSONS LEARNED

1. The incorporation of the EIA into environmental management policies has helped Latin American countries to develop more socially and environmentally sustainable extractive industry sectors. Despite this, EIA implementation faces a wide range of context-specific and more common challenges, including how to estimate impacts accurately, strengthen monitoring and enforcement mechanisms, and increase public participation and oversight.

2. Environmental management policy can be strengthened by incorporating requirements for closure plans into EIAs. In Peru, the government has led this process in an attempt to mitigate long-term environmental impacts that have typically undermined the sustainability of extractive projects. Along with including measures to restore ecosystems, closure plans should also include strategies to create local livelihood opportunities, as well as other social objectives.

3. EIA processes need to be closely regulated by the state but independently evaluated. Peru has made significant improvements in this area with the creation and strengthening of new regulatory bodies. In particular, the creation of the SENACE in Peru can be seen as a step forward in improving both state regulatory capacity and social legitimacy with regard to the entire EIA cycle.

4. It is fundamental to develop mechanisms for public participation in the EIA processes. Peruvian law requires consultation and public participation in the EIA approval procedure, though it seems that the law in itself is only the first step, as the country still faces challenges in engendering effective participation.

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