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Title: Social Dynamics Prevent 400 MW Hydropower-Porce IV

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•Summary statement (30-word limit) This text will be included in the final program to summarize your presentation for attendees.

High expectations create special social dynamics, migration and settlement at projects sites, in some cases preventing its development. The emblematic case of the Porce IV 400 MW hydropower project.

•Presenting author bio (30-word limit) Your session chair will use this information to introduce you to attendees.

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Social Dynamics Prevent 400 MW Hydropower-Porce IV

Paper Abstract (as submitted and approved):

Over the Porce River (rural region of Amalfi-Anorí in Colombia), a 400 MW hydropower project was to be constructed. During the EIA development, 2007, 110 families in the direct influence area were to be participants of the proposed resettlement and compensation program. Prior to construction, thousands of families migrated to the Project area, rented few square meters and built huts in order to receive compensation. An uncontrollable regional speculation chain developed, resulting in a wide range of social and public problems, detriment of living conditions for locals and ultimately in the decision by the Project developer to halt the construction phase of the Project. Social dynamics and movement indirectly prevented the project´s development.

General Discussion

The mere expectation caused by the initial phases of the environmental and social impact evaluation can lead to unforeseen and uncontrollable impacts at local and regional levels. Expectation, coupled with uninformed stakeholders lead to speculation and uncertainty, which can hinder the normal development of an infrastructure or capital investment Project. In some cases, it can even prevent the project from developing while generating impacts that can trespass the regional level and affect national development and expansion projects.

Managing expectations generated during the Project definition and preconstruction stages is highly important in order to successfully develop study, construction and operation´s phases. Good understanding of the project´s regional dynamics and socio-environmental aspects is key to anticipating rapid changes at local and regional levels generated by uncontrolled expectations and actions. Stakeholder identification, mapping and understanding as well as designing and implementing communication strategy at various levels has proven to be the best strategy to strengthen relationships, understand social forces and control expectations.

The impacts generated during the study and preconstruction phase normally lack consideration nor have a specific action plan for prevention, mitigation or management. This is because the study, Project definition, engineering and preconstruction phases do not require environmental licensing (Ministry of Environment and Sustainable Development, 2015). However, the impacts generated during this phase of the Project can be harmful to the baseline social dynamics, livelihood costs, land costs, migration, public services capacity, not to mention changes in cultural aspects as well as planning for individuals and authorities.

The most critical situations have been observed in rural or undeveloped areas where the sole idea of a major Project and investment generates speculation while for some creates the possibility of a brighter future. Unfortunately, not all projects reach the construction phase, by either Project developer decisions, environmental licensing not reached or changing environmental or social conditions the make the Project unviable.

Study, Project definition and engineering phases need to be handled responsibly by consultants, Project developers, authorities and leaders, aiming at managing expectations, strengthening relationships and credibility and understanding social and environmental dynamics in order to predict and prepare to manage these impacts.

In Colombia expectations develop highly around major infrastructure and investment projects, both for public and private sectors (probably not different from any other country or region).

In rural areas where historically government presence is poor, social and public services are lacking, basic needs are not satisfied and where armed forces, illegal groups and individual and political interests influence strong social dynamics, higher expectation levels can be expected. Generally, and understandably given baseline conditions, at pre-licensing and pre-construction phases local stakeholders position themselves in order to obtain benefits (directly or indirectly) at a later construction phase; most foresee an opportunity for direct or indirect negotiation with project developers.

INGETEC´s (Colombian engineering, environmental and social consultant company with over 1800 employees) environmental and social specialist's team has participated in environmental studies and Project development for over 40 years. Over time, the Company and team have participated directly and indirectly in a wide range of development and Project areas and different Project stages (conceptual development stages all the way to construction and operation).

Case Studies

Various territories in Colombia have experienced interesting social dynamics during the preconstruction phase of the project (exploration, studies and environmental impact assessment stages). As an example, La Guajira Department, known for its wealth of natural oil, gas and coal resources has catapulted as one of the biggest coal reserves in the world. Unfortunately, the region has high poverty levels, unsatisfied basic needs, and poor health and education programs, among others. During the last decade, and promoted by the higher coal, oil and gas market prices, various project developers implemented vast exploration campaigns and large engineering and geological research activities. Lower market values and environmental licensing issues, among other conditions, led project developers to stop investment, companies closed activities and the "dream" of considerable capital investment scenario vanished. Authorities, leaders and locals hopped on the prospect, made life changing plans and committed investments (hotels, office and commerce space, fleet vehicles, public infrastructure, land and even tourist attractions). Today, locals keep waiting for private investment, while return of their own investments is null, there are no projects at near site.

The Porce IV hydroelectric Project case is worth highlighting. Over the Porce River (rural region of Amalfi-Anorí in Antioquia, Colombia), a 190 m dam was to be constructed in order to generate more than 400 MW of hydropower (EPM 2010). With over 230 km in length, the Porce River basin has one of Colombia´s highest hydropower potential (studies determining its potential started in the year 1990). Upstream of the Porce IV Hydropower project site the other hydropower projects, Porce II and Porce III, have more than 1.000 MW installed capacity; Porce III started operating in the year 2011m.

Although the hydropower projects are relatively close to Medellín, less than 200 km, access to the Porce IV site is not easy, the river canyon offers a hostile environment, where a complex mix of natural and socio-political conditions have historically prevented colonization and social development. The river at the project site has intense rapids and steep slopes, water levels vary rapidly and currents limit navigation. Prior to the start of the Porce IV engineering and environmental studies, few adventurers had been able to conquer these lands risking their lives and that of their families.

Picture 1. Access through river rapids to the Porce River

In the early 2000´s most migration to the area was promoted by a sense of opportunity however at a high stake. The possibility of quick improvement of economic conditions through illegal plantations as well as illegal gold mining was the only way to improve substandard conditions for several migrants and locals.

The area has been historically known for being a drug trafficking corridor, managed by illegal armed groups who controlled not only access but all movement within the area, at least two different armed groups controlled the territory. On the other hand the production from illegal gold mining generated other type of stakeholders and other type of control. Gold miners, in precarious conditions risked their lives in a gold rush frenzy while the gold commercial chain was controlled by armed groups. Even though risky for some, the profit could often be substantial.

In rural remote areas in Colombia, the institutional capacity is limited and often influenced by political maneuvers as well as individual interest. Governance and institutional presence is lacking in many areas while control of such areas is handled by armed groups and local leaders responding to larger influential groups. The Porce River basin was not an exception during the first decade of the century, even to date.

Yet another important condition for the Porce River basin was the construction and operation of other hydropower projects (Porce II under operation since the year 1999 and Porce III which entered operation in late 2011). Reality, stories and myths around compensations offered by these project developers to affected peasants, miners and land owners generated speculation. For some the construction of a new project represented yet another attractive reason to migrate to the Porce IV project.

In the year 2007 the engineering and environmental studies were developed for the Porce IV hydropower project. By 2010, environmental license was granted to build the project (Colombian Ministry of Environment, Housing and Territory Development, 2010). For more than 2 years detailed environmental and social studies were developed and numerous activities were carefully designed and undertaken to carry out the study. One of the first activities was the socio-economic census to determine the social and economic characteristics of the population that lived in the projects area of influence. Families and communities were identified, as well as their conditions, economic activities, land ownership status, social dynamics among others. Initially, it was determined that 110 affected families by the Project and reservoir were to be part of an ambitious resettlement and compensation program (economic activities, housing, livelihood, etc.). During the next months, a massive migration towards the area was observed.

Over the next few years, while the environmental, social and engineering studies were finished and the environmental licensing process carried on the territory lived on uncertainty and speculation. Thousands of families migrated to the Project area, in some cases rented few square meters and built huts for which they though would be compensated. In the Chispero area, where initially a single family lived and managed a local goods shop, thousands established some sort of residence. Along with the migration, side businesses also arrived, these provided all sorts of goods and services, thus a town was developed on the cliffs of the river canyon. There was a mix of interests for migrating, some had migrated due to the gold rush, some migrated attracted by activities connected with illegal plantations and trafficking while most were attracted by the expectation of being included in the census and ultimately receiving some type of compensation.

Picture 2. Migration to the Chispero territory

Individuals and leaders also saw an opportunity. In some cases, mobilized people were grouped by local leaders who promised compensation in exchange for a monthly fee; leaders intended negotiations with the project developer increasing speculation to higher rates. Some leaders provided information, speculating that up to fourteen thousand people were to be affected by the project and should eventually receive some type of compensation (El Colombiano, 2011).

Hundreds of miners had migrated as well; dredges and excavators were a more common site on the river. Miners risked their lives constantly in a competition for a spot on the river. Miners also claimed compensation for the loss of mining activities or even mining rights over the resources that would be impounded by the reservoir.

An uncontrollable regional speculation chain developed, over ten thousand people migrated and invaded Project areas, resulting in a wide range of social and public problems along with detriment of living conditions for locals. Despite these conditions a clear opposition to the project was not perceived, most likely due to the fact that most stakeholders were expecting a high compensation when the project started construction.

Picture 2. Pontoons and dredges mining alluvial gold

In late 2010, the Project developer decided to halt the construction phase of the Project mainly because the costs related to the compensation of over 14.000 people were not manageable (EPM, 2010); neither costs related to land acquisition of mining rights.

Conclusions

While conditions vary along the development phases of a Project, there is an implicit responsibility of understanding the territory, social dynamics, and cultural, economic and environmental conditions in order to manage expectations.

Among other several projects where INGETEC has provided environmental and social consultancy in Colombian territory, most in complex contexts, lessons learned have been accumulated and documented.

Actions plans have been and implemented specifically focused on managing expectations of local forces and stakeholder at early project phases prefeasibility and feasibility studies). It has been proven that those projects that have implemented assertive communications program, interinstitutional collaboration, community engagement and a continuous reality check have been more successful in managing stakeholders than those that don´t.

It has been recognized that a first and important effort is needed in order to understand local social, political, economic and environmental characteristics, as well as an effort to establish stakeholder mapping and strategic relationships which will eventually help monitor social dynamics. This effort will provide the basis for the design of a strategic “project entry plan” which should involve stakeholder engagement as well a robust communications and relationship strengthening strategy. Another long term and sustained effort is needed to implement such plan. A considerable effort is needed at the preconstruction phase in order to manage expectations at a local and regional level aiming at both preventing preconstruction phase impacts as well as preparing the road for the project´s construction phase. An equilibrium needs to be reached where expectations are kept low, however enough to motivate stakeholders and groups of interest.

Expectations are result of human nature and will happen, it is a matter of how well a project can anticipate the unforeseen and quantify the unknown to better control the outcome its own promotion and actions.

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