

ЭКОЛОГИЧЕСКАЯ И СОЦИАЛЬНАЯ ЛИЦЕНЗИЯ ГИДРОЭЛЕКТРОСТАНЦИИ ИТАОКАРА НА ЮГО-ВОСТОКЕ БРАЗИЛИИ

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Environmental and Social License of Itaocara Hydroelectric Power Plant, Southeast of Brasil

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In search of sustainability, companies develop programs for Social Responsibility (SR). Formerly forms of citizenship performed by companies, the SR programs are now largely focused on reducing social risks. On the example of Itaocara Hydroelectric Power Plant (HPP) it is shown in the paper the large initiatives that can change the economy of a region should be compelled to give priority to recruit local manpower needed for construction and operation of the venture. Training programs should be made to fit the needs of the project. Health care units and schools shall be supported to face the new demands. New economic use of the new lake shall be planned. These measures will avoid the exclusion of the less privileged in these great events. *Keywords:* social and environmental licensing, hydroelectric power plant affected communities.

В поисках путей устойчивого развития регионов многие компании развивают программы социальной ответственности (СО). Такие программы СО теперь в значительной степени сосредотачиваются сокращении социальных рисков. На примере планирования и строительства Гидроэлектростанции Итаосара авторы показывают удачный пример эколого-социальной экспертизы и лицензирования индустриального проекта. Показано, что такие глобальные проекты, меняющие экономику региона, должны учитывать комплекс факторов: прием на работу местных трудовых ресурсов, необходимых для строительства и управления предприятием, программы обучения, соответствующие потребностям проекта, поддержка органов здравоохранения и школ и пр. *Ключевые слова:* социальное и экологическое лицензирование, сообщества, подверженные воздействиям гидроэлектростанции.

Introduction

In the search of a location for highest return on invested capital, companies are, along with the regular methods of assessing economic and market risks, bargaining with local governments to get the lowest rates and best benefits for their business, seeking for less regulated sites, with lower wages and low social rights application [1]. They use the threat of relocation to convince governments about the benefits they would lose in terms of jobs and income for the population if their demands are denied, which are far from being ethical. They stimulate the «fiscal war» among the counties and states, even among countries of the third world and they manage to promote law changes in order to enable the activities of the enterprise, often unable to operate in countries with more restricted regulation [7].

Some businesses do not have this kind of argument because they are locational dependent, such as mining ventures: the mineral deposits occur in certain areas of the planet only, narrowing the possibilities where mining can happen. On a smaller scale, with a minimum of locational flexibility, hydroelectric plants also fall into this category.

For these kinds of enterprises, the ongoing negotiation with the community and government is essential for their success. They seek the social license at all costs.

While technical and economic feasibility are business responsibilities, the environmental feasibility is a public decision taken by the competent environmental agency to the scope of the project, which can be achieved through the Environmental Permit, an administrative act. Differently, the Social License is granted by the affected communities and can be achieved with the intervention of the Public Prosecutor through a Conduct Adjustment Term.

The preservation of biodiversity, the efficient use of natural resources, the reduction of emissions, effluents and waste, the mitigation of environmental impacts left by the company's operations and surveillance of areas with potential impact all lead to Environmental Licensing, while Social Responsibility programs and communication programs and strengthening relationships between organizations and communities where they operate lead to Social License.

Social Responsibility and Social Risk

Reinforcing the role of Social Responsibility as part of sustainable development, the first Principle of the Rio Declaration on Environment and Development states: «Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature» [5]. In the context of companies, this implies to consider the needs of stakeholders.

Henri Acselrad (1999) makes important reflection of this term: the verification of sustainability can only be made by comparing a given current situation (seen as unsustainable) to a future situation, with the aim to achieve more appropriate levels of sustainability. As an example, there is a region devoid of wealth, where the population is found on the edge of survival — the current unsustainable situation, with a prediction that a great enterprise would settle there, generating income for this population, the desired future situation. The actions of development, installation and operation of the business are then considered sustainable in the social and economic aspects.

Ignacy Sachs proposed the idea of eco-development in the 1970s. In 1993 he broadened his vision of sustainability presenting its five dimensions: social, economic, ecological, and cultural. He later added the ethical and politics aspects [3].

In the social aspects, Sachs emphasized the social homogeneity, the fair distribution of income and equal access to resources and social services. In economics, he cites the food security, modernization of production capacity, among others. In ecology, the preservation of natural capital and the limitation of non-renewable natural resources usage. In the territorial or spatial aspects, Sachs discusses the issue of improving the urban environment and land use. Cultural aspects are highlighted in the balance between tradition and innovation combined with openness and confidence to the world. Ethics must be the basis for the harmonization of social and ecological goals, according to Sachs, and political aspects of governance and leadership are in the process of reconciling development and conservation of biodiversity.

In search of sustainability, companies develop programs for Social Responsibility (SR). Formerly forms of citizenship performed by companies, the SR programs are now largely focused on reducing social risks. According to Acselrad (2009), they form a very effective tool used by companies to nullify the social risk.

The so-called social risks are characterized by the potential pressure of organized social groups that can be targeted against a project, or worse, if is already in operation, against the activities of an enterprise, managing to convince public officers, especially prosecutors, to join their protest, which sometimes causes the complete stoppage of the project.

Getting to know the local reality and use participatory methods to form social groups to be their partners are strategies that big companies use to ensure social peace. Searching the chances of local development with these players, they manage to control the social movements ensuring that their presence in the community is protected by the population.

Examples of conflicts can be found in the construction of hydroelectric power plants.

Social License of Itaocara Hydroelectric Power Plant

Brazil is a country of continental dimensions, which holds 20% of freshwater of the planet. This power generation natural resource accounts for more than 80% of the national energy matrix for electric power generation.

The formation of lakes for electric power generation affects not only people living in areas to be flooded, but also the infrastructure of the counties in its area of influence with impacts on the physical, social and cultural media. Water consumption, sewerage generation, increase of wastes, health care, real state costs rise, vacancies in public schools, transportation, restaurants, tourism and leisure are some of the not planned expenses of their municipal budgets.

The health departments of the affected counties are always very concerned about the increase in sexually transmitted diseases, a consequence of the large number of workers needed for the construction of the project on their leisure time.

Operation of displacement of the affected communities considers only the material aspects for the purpose of financial compensation. The intangibles are never taken into account, like the knowledge of the environment, places for fishing, healing herbs — the traditional knowledge of the population is lost in exchange for electricity.

On the other hand, the ventures bring some positive aspects to the region, especially the progress and dynamism of local economy during construction, when hundreds and sometimes thousands of workers coming from all over the country take part of this operation that may last for few years. This influx of people has a counterpart in slum problems: some of them will not be used by the construction companies and they will develop informal activities in the region as street vendors and even prostitution, settling in makeshift housing without sanitation infrastructure often located in risk areas.

The Itaocara Hydroelectric Power Plant (HPP) is located in Para?ba do Sul River which is the natural frontier between the states of Rio de Janeiro and Minas Gerais. The project will affect, in different ways, five counties in the state

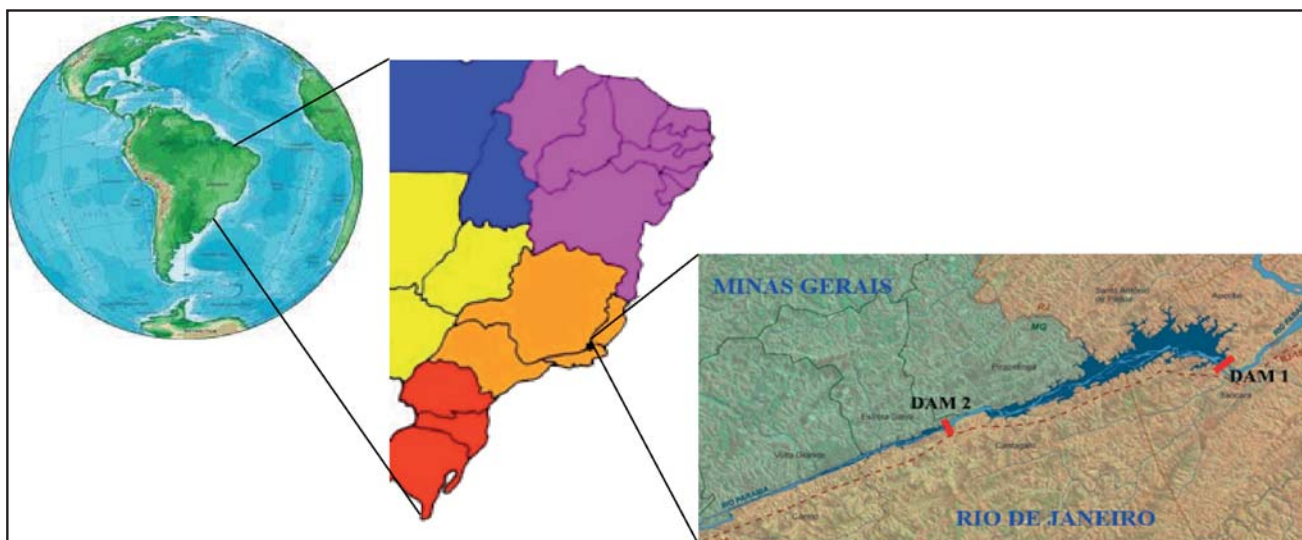


Fig. 1. HPP Itaocara location, Southeast Region, Brazil, with two dams and lakes

of Rio de Janeiro and three counties in Minas Gerais. It is responsible for the future addition of 195 MW to the national electrical system.

The first feasibility study was done in 1989. The plant was originally designed with one dam forming a lake of 76.6 km² which completely flooded two county districts, forcing about 1,500 families to be displaced. This project, presented in 2000, generated much opposition from the population. With the help from the Movement of People Affected by Dams (MPAD) they organized several events, including parades in Rio de Janeiro to protest against the construction of the dam. Engineers from Technical Associations and researchers from Universities criticized the Environmental Impact Assessment / Environmental Impact Report (EIS / EIR) prepared, pointing out the many gaps found. That would be main cause of project rejection by IBAMA, the federal environmental agency, in late 2006 [6].

A new licensing process was opened in 2008. The entrepreneur, now a different one, presented a new alternative for the plant and prioritized the relationship with the population of the affected communities by hiring a social communication company which visited each family living in the area to be flooded.

The new project, with the same power of 195 MW and estimated cost 30% higher than the previous one, replaced the original single dam by two others, 26 km distant from each other, which decreased to 59% the former area of the lake, leaving intact the two districts that would be flooded before. The number of displaced families dropped to about 700, less than half of the original design.

The area to be flooded, approximately 38 km², will impact mostly on the region's agricultural production, some cattle farms and a small county district with a church, school and cemetery that shall be displaced to a nearby area.

Fishing activities will also change, especially in its forms, caused by the replacement of the lotic characteristic of a river by the lentic ambience of a lake, influencing ecosystems with possible colonization by new species of aquatic fauna.

On the other hand the project opens up the prospects for economic use of the new lake and its surroundings, such as water sports, tourism, fishing and fish farming among others.

With few exceptions, the people came to see with good eyes the new venture. After all, the threat of being flooded by hydroelectric plant's lake had already lasted for 30 years.

Along with new kind of relationship with local communities, a special effort was made to support the affected counties in establishing the infrastructure needed to accommodate the new venture during planning, implementation and finally the operation of the power plant.

This particular approach, suggested by IBAMA and conducted by independent consultants, consisted of two basic activities:

1 — Study the possibilities of removal or mitigation of all negative interference in all phases of HPP Itaocara in the affected counties;

2 — Conduct workshops with city hall staff of each of these counties to establish goals and define the basic needs to adapt the current infrastructure facilities and county services to the new demands resulting from the planning, installation and operation of HPP Itaocara.

The methodology used in the workshops was the participatory strategic analysis to study future scenarios with and without the construction and operation of the HPP.

The interference analysis was based on the list of impacts found on the Environmental Impact Assessment (EIA) and were discussed in all its consequences. Some new points as prostitution and the spread of sexually transmitted diseases, which were not explained in the EIA were also discussed.

Each town listed a series of actions needed to adapt the existing infrastructure and prepare them to live with the construction and operation of the plant, including the fear of breaking dams by downstream communities.

Results

The city hall staffs listed many actions that the HPP Itaocara agreed to hold. Some of them are:

- Implementation of waste recycling in all counties;
- Training of local manpower to meet the needs of HPP Itaocara implementation;
- Reforestation;
- Monitoring of environmental parameters;
- Monitoring of endangered species;
- Create garden nursery for reforestation;
- Design of project for the economic use of future lake, including fishing, tourism etc.;
- Implement a communication program in all counties;
- Monitoring of epidemic and diseases parameters;
- Build sewage systems in areas near the lake;
- Create Environmental Conservation Units;
- Support increase in school demands from new comers;
- Support increase of health care demands from new comers;
- Establish environmental and health education programs;
- Create leisure options to newcomer workers.

Conclusion

When an enterprise is seeking to establish a venture in a particular region, it promotes important expectations of employability and income generation for local dispossessed. As it is happening all over Brazil, most of the time the company does not hire local workers because of the lack of specialization.

The installation in the area of workers from other regions causes the rise of housing costs, food and others and establishes a new social caste, «the employees of Company X» with many advantages such as school places, credit facilities etc. increasing the social exclusion and creating a typical situation of social risk in its most cruel way of being, the vicious circle.

Large initiatives that can change the economy of a region should be compelled to give priority to recruit local manpower needed for construction and operation of the venture. Training programs should be made to fit the needs of technical knowledge to the processes which are performed by the project. Health care units and schools shall be supported to face the new demands. New economic use of the new lake shall be well planned. These measures will avoid the exclusion of the less privileged in these great events.

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