

Assess and review socio-environmental mitigation in the oil & gas industry.

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Abstract: PARMIS¹ is a research Project which analyzes the socio-environmental mitigation of the offshore oil and gas industry in Brazil, with the intention of improving public environmental management. The action research method is conducted by academic researchers allied to IBAMA (the Brazilian government agency responsible for the environmental licensing of petroleum activities) analysts, establishing a dialogic process between subjects and researchers and whose results have as commitment to answer their questions. Therefore, moments of dialogue were defined with/between research participants (IBAMA; Oil Companies; technical teams of social-environmental mitigation projects and PARMIS researchers) in workshops, seminars, meetings, and interviews. In addition, pedagogical strategies were defined aiming at the training of undergraduate and graduate students who integrate PARMIS's team, in the most diverse themes that are related to the research. It also includes the production of content associated with the results of projects intended for teaching at undergraduate and graduate levels. PARMIS started in 2020 with a period of 3 years for completion and is in the phase of systematization and data analysis. This paper presents partial results, specifically the result of a workshop that established relations and complementarities between programs and projects aimed at socio-environmental mitigation of the oil and gas industry impacts.

Keywords: mitigation; public environmental management; social impact assessment

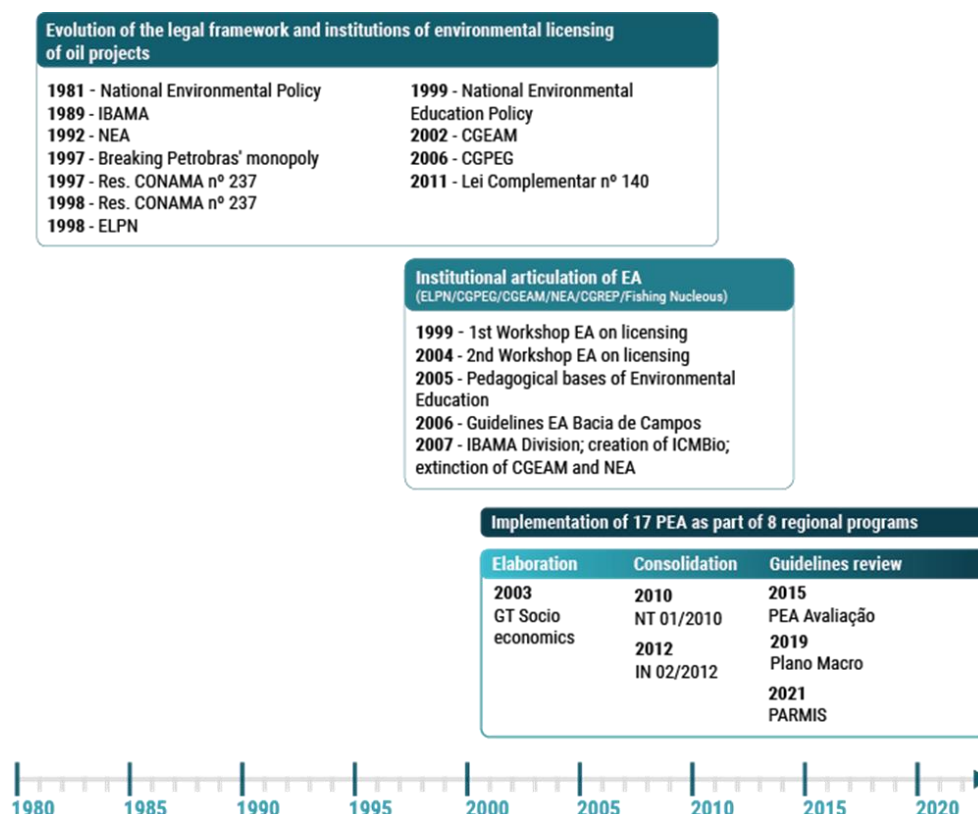
Introduction

The granting of operating licenses for the offshore oil and gas industry in Brazil have been conditioned to the execution of environmental education projects (PEA). These projects have the function of mitigating socio-environmental impacts arising from the offshore oil and gas industry and

¹ The research project “**Social-environmental mitigation assessment and review plan (PARMIS)**” was required as a condition of the Operating License nº 1572/2020, granted to the Company **Trident Energy do Brasil Ltda.** for the system of production, collection and flow of oil and natural gas from the poles *Pampo and Enchova, the fields of Badejo, Bonito, Bicudo, Enchova, West Enchova, Linguado, Marimbá, Pampo, Piraúna and Trilha, in Bacia de Campos.*

are monitored by socioeconomic analysts from IBAMA. Considering the historical process since the creation of the legal framework (shown in Figure 1), we highlight the publication of the technical note 10 in 2010 (NT 10/2010) which determines guidelines for the PEA.

Figure 1 – Legal framework of environmental licensing of oil and gas projects



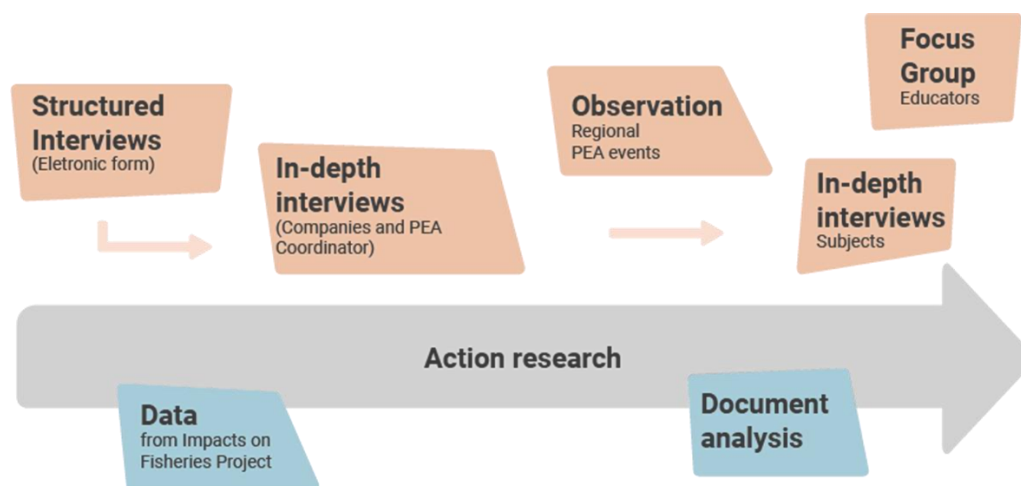
After more than ten years of conducting and monitoring projects, issuing environmental licenses (post-license), in view of the various political-institutional changes that occurred in the period, the team of analysts from the *Coordenação de Licenciamento Ambiental de Produção de Petróleo e Gás Offshore*² (COPROD/IBAMA) identified the need to reorganize the set of measures for monitoring and mitigating socio-environmental impacts in order to promote greater integration and effectiveness. At the same time there was a need to revise NT 01/2010 - a process that aims to improve the guidelines for implementing projects to mitigate socio-environmental impacts and advance in the construction of methodologies to mitigate synergistic and cumulative impacts. In this context begins the discussion of the Plano Macro - a master plan aimed at programs to mitigate and monitor socio-environmental impacts arising from the production and flow activities of oil and gas, which are in the contiguous production basins of

² Coordination of Environmental Licensing for Offshore Oil and Gas Production of IBAMA

Santos, Campos, and Espírito Santo. Plano Macro was designed from 4 axes - characterization, evaluation, publicize, and intervention. The partial result of the research presented here is the construction of proposal for intervention programs. PARMIS aims to understand how the mitigation process has been taking place - what potentialities and results it presents and what the weaknesses of the process are. To do so, we follow the premises of action research, an empirically based social research that is conceived and carried out in association with an action or with the resolution of a collective problem and in which researchers and participants representative of the situation or problem are involved in a cooperative or participatory manner" (Thiollent, 2007).

Since the beginning, PARMIS has been carried out jointly with socioeconomic analysts from IBAMA using various social research techniques - presented in Figure 2.

Figure 2 – Research design



The data were collected, organized in maps and other visual tools, and taken for discussion with the socioeconomic IBAMA team in 3 workshops (2 in 2022 and 1 in 2023). To support the analyses, we consider the theoretical and analytical perspectives of environmental impact assessment; environmental licensing; critical environmental education, political ecology, and public policies. We also consider IAIA mitigation hierarchy: enhance positive impacts, avoid negative impacts to the greatest extent possible, minimize (or reduce) what cannot be avoided. remedy (or restore) what cannot be reduced; and compensate for what cannot be remedied (IAIA, 2013).

Discussion

The research revealed important potentialities and results of the PEA, especially regarding community organization for social participation. Regarding weaknesses, those associated with the licensing process stand out. The proposal of intervention programs for the Plano Macro considers the guideline of establishing relationships between the different axes foreseen in the Plan.

Following the premise of integration and standardization of the Plano Macro, the programs built must relate to the other axes. The results of Axes 2 should (i) subsidize the delimitation of scope, scope and identification of participants in the programs' action; (ii) contribute to the monitoring of results and impacts; (iii) identify weaknesses and demands for training actions. In turn, Axis 4, through the Continuing Education Program, should contribute to the other axes.

The proposal

The programs were designed with the aim of mitigating a set of socio-environmental impacts that interlink with each other, providing opportunities for the delimitation of these programs around specific actions, participants, and temporalities, in dialogue with the results arising from the implementation of NT 01/2010. The theoretical-methodological foundation for the formulation and execution of the programs comes from the Critical Environmental Education. In the following, we briefly present the proposal.

1 - MACROREGIONAL PROGRAM FOR SOCIAL CONTROL OF OIL INCOME

This program focuses on two sets of socio-environmental impacts: i) those associated with the dependence of the public budget on oil revenues and; ii) those related to the overload of public services and equipment in view of the industry's attractiveness in generating work and income.

Goal: Expand social control over the use of oil revenues in relation to the public budget, encouraging popular participation in decision-making spaces.

Subjects - Diverse popular groups at municipal level.

Priorities (hierarchy mitigation) – Enhance; Reduce; Compensate.

2 – TERRITORIAL SECURITY OF FISHING COMMUNITIES

This program aims at mitigating the various impacts that fall on fishing communities, whether in relation to the disruption of their production

processes, or due to the loss of their cultural identity as members of traditional peoples and communities, given the fragility of the instruments of protection of their territories and socio-biodiversity.

Goal: Contribute to the permanence of fishing communities in their territories.

Subjects – fishing communities.

Priorities (hierarchy mitigation) – Avoid; Reduce.

3 OIL INDUSTRY DYNAMICS OBSERVATORY

The Program aims to act on socio-environmental impacts considering: the implementation of new undertakings in the maritime, coastal zone or in adjacent municipalities; the decommissioning of developments, considering that the retraction also changes the dynamics of territories; environmental policies and regulatory changes; in addition to enabling the temporal record of changes in industry dynamics in the territories.

Goal: Monitor the dynamics of the oil and gas production chain emphasizing the implementation of new ventures located upstream or downstream of the production chain, aiming at promoting social control.

Subjects - Members of popular groups impacted by the oil and gas production chain; social movements (local, regional and national action); networks of researchers who work with social movements or popular groups impacted.

Priorities (hierarchy mitigation) – Avoid; Reduce.

4 CONTINUING EDUCATION

This program intends to overcome identified weaknesses regarding the institutional limits of licensing and the relationships between the environmental agency, consultants and participants contemplated by the Macro Plan. It is noteworthy that such weaknesses result from: i) the limitations of the environmental analysts, given the lack of institutional directives on issues that integrate the necessary knowledge to mitigate impacts; ii) the difficulty of the technical staff of companies and institutions contracted for execution, which participate in the projects and programs required under the licensing, to understand the environmental licensing and its institutional limits; iii) the lack of integration between projects and measures that can be enhanced by the coordination and articulation of actions.

Goal: Expand federal environmental licensing institutionality to strengthen the coordination of macro-regional programs and the governance of IBAMA,

ensuring the relationship of programs with the management of cumulative and synergistic impacts of the oil and gas production chain.

Subjects -Technical teams involved with Plano Macro, including teams from oil companies and community agents; environmental analysts from IBAMA.

Priorities (hierarchy mitigation) – Avoid, restore.

Remarks

This paper presents partial results, specifically the result of a workshop that established relations and complementarities between programs and projects aimed at socio-environmental mitigation of the oil and gas industry impacts. The programs are in discussion and there will be moments of exchange of experiences until the ideas are refined and implemented.

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