

Integrated approach to refine stakeholder analysis

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1. ABSTRACT

The most preeminent oil and gas production and exploration activities in Brazil are developed at the Campos Basin area, which is located on the North coast of Rio de Janeiro State. Since 2006, AECOM has been providing integrated environmental services for the licensing and permitting stages to this economic sector. In this context, the stakeholder analysis consists in a fundamental process to turn the several oil exploration and production projects environmentally and socially sustainable because it allows the development of mitigation and compensation plans which would be more suitable to reach their objectives. This work aims to present how AECOM's long experience at the oil and gas exploration and production licensing and permitting process provides opportunities for a more precise and effective stakeholder analysis. It will be demonstrated how AECOM integrates the information vertically (different stages of the same oil and gas project) and horizontally (different oil and gas projects). The information generated and managed by AECOM is obtained from the pre-license diagnosis stage and the after-license follow up stage. The article will also show the impact of the stakeholder analysis, provided by AECOM, to the development of more efficient and optimized managerial and operational costs of the mitigation and compensation plans.

2. SUMMARY

How integrated information from different stages of several oil and gas licensing and permitting has been allowing improvements for stakeholder analysis in Brazil with positive impacts at social communication projects?

3. INTRODUCTION

The Campos Basin is the most preeminent maritime region in Brazil for offshore oil and gas exploration and production. At this region the conflicts between the fishermen and oil and gas companies are frequent and it is considerably related with the establishment of 'safety zones'. The safety zones are areas where the fishery activity cannot be carried out. They comprise an area of 500m around each emerging structure (e.g platforms, FPSO). The designation of safety zones is established in order to prevent, avoid or reduce the probability of accidents caused by the interaction of fishing boats and gears and oil rigs (Jablonski, 2008).

The conflict emerges because the fishermen attests that some areas where the oils and gas facilities are installed were traditional fishing spots, and the institution of restrictions to use these areas imposes big losses to their activity (Bronz, 2009; Walter, 2004).

In order to help to mitigate the impact outlined above it is recommended the implementation of social communication projects – SCP. Accordingly with Walter (2004), a SCP is an important tool to create awareness between fishermen about the risks related with the oil and gas activities and to create awareness about the meaning and relevance of the existence of the "safety zone".

It is at this point where the stakeholder identification appears as a fundamental process at the offshore oil and gas licensing and permitting process. The definition of who must be engaged is behind the efficiency of the SCP as it can guarantee that the right information will be addressed at the right time and it will create the right impact over the right people (Moura *et al.* 2010).

Since Freeman (1984) defined stakeholder and its relevance for management, the stakeholder identification became an important issue related with business sustainability both in a financial and an environmental dimension. But precise who and what really counts, as attest Mitchell *at al.* (1997), is not an agreed issue.

At the licensing and permitting process of offshore oil and gas exploration and production in Brazil¹ the stakeholder identification consists in a fundamental part of the environmental impact assessment and the posterior follow up stages.

The Brazilian Environmental Agency – IBAMA – defines that the traditional and artisanal fishery communities are potentially impacted by the offshore oil and gas exploration and production activities – OG/EP – and they must be considered at the stakeholder identification process. The stakeholder identification which take into consideration impacted communities as a criteria was defined by Carrol (1989) and Evan and Freeman (1988) as an important step to find out who really cares for the sustainable development of a project.

AECOM Brasil has been developing Environmental Impact Assessment studies (EIA) and implementing environmental management plans (EMP) for the offshore OG/EP sector since 2003. The company stakeholder identification process is based in a system where the entire data collect is gathered in order to promote an integrated view about the interactions of the oil and gas projects at the Campos Basin and fishermen.

This paper will show how the integrated system works and will exemplify how the environment efficiency of a specific oil and gas production project had benefited from AECOM Brasil stakeholder identification process.

4. THE CAMPOS BASIN, THE OIL AND GAS INDUSTRY AND THE FISHERY ACTIVITY

The Campos Basin is a sedimentary basin located along the Brazilian southeast coast. It extends through 100.000 Km² bordering two states – Espírito Santo and Rio de Janeiro – and 19 municipalities (**Frame 1**).

The exploration of oil and gas started at the Campos basin during the decade of 1960 and the first oil and gas was achieved at the beginning of the following decade. Thirty years later this basin became the most important area for oil and gas production. Accordingly in with ANP (2013) most of the oil (83,35%) and the gas (37,51%) produced in Brazil derived from the Campos basin. In the beginning of 2013 there were more than 40 platforms and FPSOs operating at the Campos basin.

On the other hand, the maritime area of the Campos basin is also populated by a great number of fishermen. All the municipalities bordering the Campos basin have representative fishery communities. The fishery is mostly small scale coastal artisanal fishery, but there is also a

¹ Federal Act nº 6.938, de 31 de agosto de 1981 and CONAMA Resolution 01, de 1986.

representative group of fishermen operating an expressive median scale oceanic fleet and some fish industries. The fishery is important in this area not only for its role providing food security and jobs, but it has a profoundly root at the constitution of the identity of the people habits of several cities.



Frame 1: Campos basin location (Bacia de Campos).

5. DEFINING THE SOURCE OF INFORMATION

The stakeholder identification is based in two main sources of qualitative information: (1) interviews with fishermen at the main landing ports and (2) observation and picture registration of the fishing boats which invade the safety zone.

Interviews are made during field works with the objective to fundament the environment impact assessment or to validate EIA results later at the follow-up stage. This research is carried out by fishery science specialized consultants and they collect data about the fishery characteristics (e.g., fleet size, types of gears, seasonality, main exploited resources, fishing areas) and social, economic and cultural aspects (e.g., social organization, mean income, heritage). To obtain this information it is used a wide set of techniques like interviews, mind maps, participatory observation, transect walks, fishing landing monitors and others.

The safety zone monitoring occurs when the oils and gas facility is already installed. This monitoring is made to warn the fishermen about the risk of their proximity of the oil and gas facilities. It is made by a trained technician located at the facility or at a supply boat. There is a radio contact protocol established by the Brazilian environment agency which includes the realization of an interview based on a questionnaire. But the fishermen realized that they can be punished once identified and they started to avoid the radio contacts. Conducting interviews are anymore possible like it was in the past (Jablonsky, 2008). This situation made the data collection based on observational methods necessary to be implemented.

6. INFORMATION CONSISTENCY

The information gathered by field work and safety zone monitoring face few problems that could bring great uncertainties for stakeholder identification process if they were used separated.

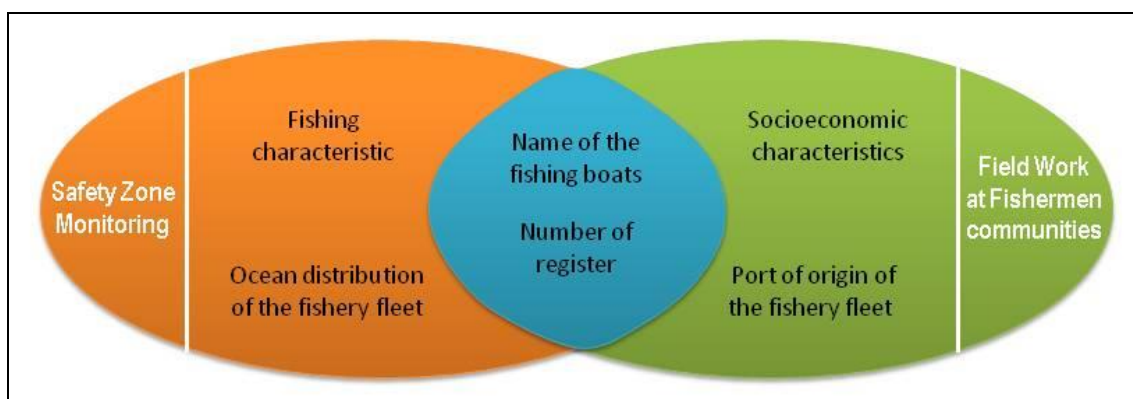
In relation with the information obtained through the field works it could be observed that some fishermen and key informants had biased answers about their fishing areas. This fact was formed after the acquaintance of the fishermen about how the licensing and permitting process works. They realized that to be included in compensation projects they need to be considered stakeholders, and they started to forge their fishing areas making it wider than it really is. This situation created an uncertainty about this important information used for stakeholder identification.

The second problem is related with another fishermen changing of attitude. As they realized that could be punished once they are identified fishing inside the safety zone they started to avoid answering the radio contacts. This made the information about their origin imprecise as it is only possible to identify by observation, where they are not masked, the name of the city where the boat was registered (which is not necessarily related with the city where the fishermen are from).

A third difficulty related with the data gathered by the two methods is time related. The field work research are generally carried out only by demand and usually it doesn't cover one year of data collection. It is the same related with the safety zone monitoring of drilling activities which is usually of a short duration. The absence of data for a certain period could bring uncertainties related with the fishery dynamic as it is an activity characterized to be seasonal (Rodrigues, 2009).

7. INTEGRATING INFORMATION

To deal with the information gaps presented above the first step was identifying one way to link the two source of information. AECOM Brasil realized that one way of doing this integration consisted on the collection of the name of the fishing boat during the interviews and how long the interviewed fisherman was working on that boat. This was made doing a simple adjustment at the questionnaire applied during the field work. The AECOM's database was changed to synchronize the information obtained from the two sources using the information they have in common (**Frame 2**).

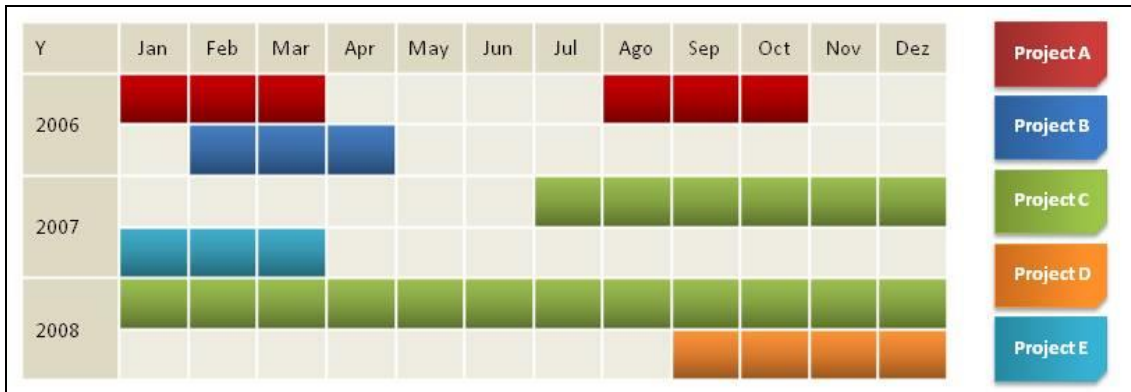


Frame 2: Vertical integration of information.

The scheme shown in the Frame 2 is defined as vertical integration as it creates an opportunity to link the information acquired during the pre-licensing and the follow-up stages of one particular oil and gas project. With this integration it was possible to clearly identify the distribution of the fishing

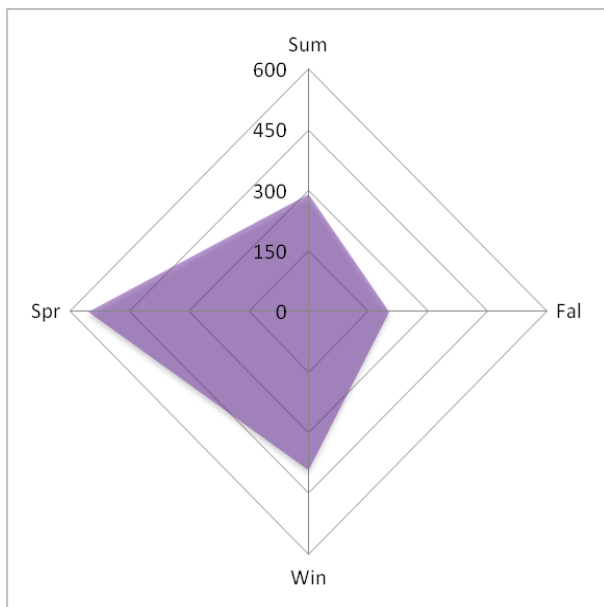
boat on the sea as the data obtained from the safety zone monitoring was completed by the field work research data.

The second step was diminishing the temporal gaps of the acquired data. AECOM Brasil realized that as the nature of the data is similar and the methods are equivalent over different oil and gas projects the data could be compared over time. The **Frame 3** gives a scheme of how projects with different chronograms contribute to create a unique database and temporal series. This is defined by AECOM Brasil as horizontal integration.



Frame 3: Horizontal integration of information.

Building the time series allowed AECOM Brasil to identify tendencies related with the fishery activities. It became evident the increase of fishing boats during the spring, showing a possible correlation with the dolphin fish (*Coryphaena hippurus*) season (**Frame 4**). An integrated time series also allowed a better field work planning both for data acquisition and for communication actions.



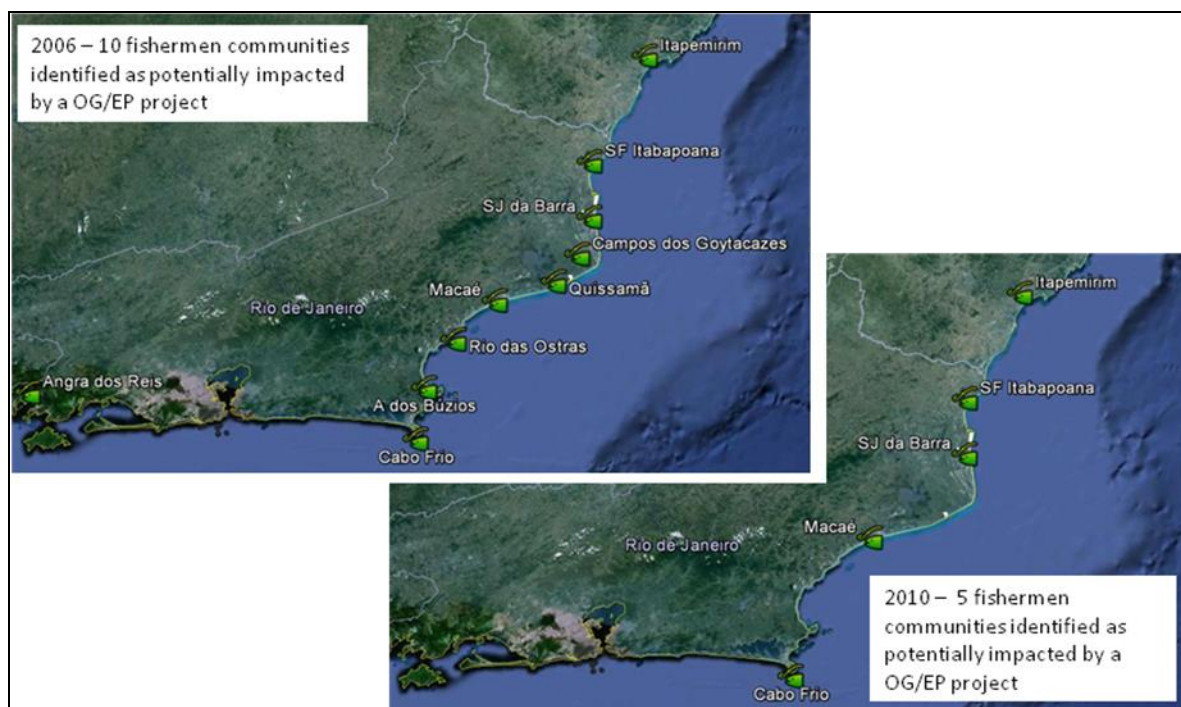
Frame 4: Seasonality of boat views frequencies at the safety zones from 2008 to 2013.

8. REFINING STAKEHOLDER ANALYSIS TO ENHANCE ENVIRONMENTAL PERFORMANCE

A better comprehension of the fishery activity was achieved after the data integration. This allowed AECOM Brasil to provide a more precise stakeholder analysis enhancing the environmental performance of oil and gas exploration and production projects at the Campos basin. The following paragraphs bring a description of a concrete example of how the information integration proportionate a more precise definition of the stakeholders impacted by an particular oil and gas production project installed at the south region of the Campos basin.

At 2006, AECOM Brasil² was hired to do the EIA of a particular oil and gas project – “Project St”. The environment assessment study took into account the minimum criteria set by IBAMA and the data acquired by the field work research. The result was the identification of several fishery community potentially impacted by the “Project P”. They were spread through 10 different municipalities.

At 2010, AECOM Brasil was contracted to evaluate the consistency of the first stakeholder analysis made to “Project P”. It was submitted to IBAMA a review based on integrated data. New interviews were made and there was already some information from the safety zone monitoring of the Project P installation period. Besides that, it was integrated data from previous oil and gas activities developed in proximity of the area where the Project P was installed. The result identified that only 5 from the previous 10 communities could be impacted by the oil and gas project (**Frame 5**).



Frame 5: Location of the fishermen communities identified as potentially impacted by the same OG/EP project in two different years.

The reduction of the number of the municipalities impacted by the oil production activity was followed by the establishment of a more focused mitigation and compensation projects which embrace the fishermen who were in fact impacted. At the same time, the other communities were

² At that time, the company didn't have established its integrated database.

not exposed to information that could bring uncertainties and an unnecessary negative expectation about the oil production project.

9. CONCLUSION

As the stakeholder analysis consists in an important tool for the licensing and permitting process for oil and gas exploration and production activities in Brazil, it is important to evolve on better approaches to address the identification of who are the groups really affected. The integration of information from several sources in a central database can help this process as it can manage information gaps and check biased data.

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