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Abstract

The western Amazon continues to be an active and controversial zone of hydrocarbon exploration and production. We argue for the urgent need to implement best practices to reduce the negative environmental and social impacts associated with the sector. Here, we present a three-part study aimed at resolving the major obstacles impeding the advancement of best practice in the region. Our focus is on Loreto, Peru, one of the largest and most dynamic hydrocarbon zones in the Amazon. First, we develop a set of specific best practice guidelines to address the lack of clarity surrounding the issue. These guidelines incorporate both engineering-based criteria and key ecological and social factors. Second, we provide a detailed analysis of existing and planned hydrocarbon activities and infrastructure, overcoming the lack of information that typically hampers large-scale impact analysis. Third, we evaluate the planned activities and infrastructure with respect to the best practice guidelines. We show that Loreto is an extremely active hydrocarbon front, highlighted by a number of recent oil and gas discoveries and a sustained government push for increased exploration.

Our analyses reveal that the use of technical best practice could minimize future impacts by greatly reducing the amount of required infrastructure such as drilling platforms and access roads. We also document a critical need to consider more fully the ecological and social factors, as the vast majority of planned infrastructure overlaps sensitive areas such as protected areas, indigenous territories, and key ecosystems and watersheds. Lastly, our cost analysis indicates that following best practice does not impose substantially greater costs than conventional practice, and may in fact reduce overall costs. Barriers to the widespread implementation of best practice in the Amazon clearly exist, but our findings show that there can be great benefits to its implementation.

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