

Petroleum Engineering industries is the most powerful and sustainable tool for reduction of global poverty and hunger in the world

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Abstract

The title of presentation consist of petroleum engineering industries, sustainability and poverty were studied to find out the role of petroleum engineering industries which is the most powerful and sustainable tool for the reduction of global poverty and hunger in the world. Petroleum means rock oil, inflammable liquid found in the earth. Petroleum is made into paraffin, petrol, oil, gasoline and a great many other products. Sustainability is the ability or capacity of something to be maintained or sustain itself. If any activity is said to be sustainable, it should be able to continue forever. In other words, petroleum engineering is the study of how to locate and extract energy resources, such as oil and natural gas, from the earth. Similarly Petroleum engineers divide themselves into several types: Reservoir engineers work to optimize production of oil and gas via proper placement, production rates, and enhanced oil recovery techniques. Drilling engineers manage the technical aspects of drilling exploratory, production and injection wells. Production engineers, including subsurface engineers, manage the interface between the reservoir and the well, including perforations, sand control, downhole flow control, and downhole monitoring equipment; evaluate artificial lift methods; and also select surface equipment that separates the produced fluids (oil, natural gas, and water). Similarly, the different industries of petroleum engineering absorbing millions of technical and nontechnical people, create employment, generate income which consequently reduced poverty and hunger in the world. Keeping in view the importance of petroleum engineering, it is proposed to commercialize the industries of petroleum engineering of the world as it is the most powerful and sustainable tool for reducing global poverty and hunger in the world.

While the number of people living in extreme poverty has halved since 1990, there are still more than one billion people in the world who struggle to meet their most basic needs. Addressing poverty means also addressing issues of food security, health, education, safety, the environment and access to affordable, reliable, sustainable and modern energy sources and other types of services. Poverty is also unevenly distributed between regions, within countries and among groups such as women and indigenous peoples. SDG1 is a commitment to ending poverty by 2030, which will entail an integrated approach to addressing its causes. Businesses (including the oil

and gas industry) can play an important role, as private sector investment far exceeds foreign aid in many developing countries. As well as their principle role supplying reliable affordable energy, oil and gas companies also contribute social investments and make substantial tax and other types of revenue payment to host governments. The industry, therefore, has an important role to play in addressing a variety of environmental, social and health challenges (including those related to climate change) and this can have significant implications for poverty reduction. Access to basic services including reliable, affordable, sustainable and modern energy is essential to ending poverty. There is a strong correlation between increased energy use and the type of economic growth that reduces income poverty. The poor consume less energy, but spend a higher proportion of their income on it. They also typically rely on inefficient and unsustainable use of traditional fuels such as wood, charcoal and animal waste. Improved access to energy can provide indispensable support to the goal of poverty eradication by increasing productivity and encouraging business enterprise.

Direct local employment in developing countries can be more challenging due to the level of specialization required and the limited availability of suitably skilled workers. However, oil and gas ventures can still be leveraged to provide meaningful indirect employment opportunities and economic growth by integrating local businesses into their supply chains. Inclusive recruitment and hiring practices, and investments in skills development, with attention paid to respecting human rights in communities, can help reduce poverty. In addition, oil and gas companies can further support poverty eradication through well-planned social investment activities.

Community development agreements (CDAs) can be an opportunity to support the self-determined economic development of local communities near oil and gas projects. By engaging in a collaborative process with communities to develop CDAs tailored to their specific local contexts and by then entering into formal agreements, companies can ensure local communities benefit from oil and gas projects. In this way, CDAs can help provide the enhanced development cooperation needed to implement anti-poverty programmes.

Petrobras launched its Petrobras Social and Environmental Program in November 2013, with the objective to contribute to sustainable development and to promote rights by investing in social and environmental initiatives that will generate results for both society and the company. The program integrates social and environmental dimensions and has seven action lines: Inclusive and Sustainable Production, Education, Rights of Children and Adolescents, Sport, Biodiversity and Social Diversity, Forests and Climate, and Water. The program addresses crosscutting issues, including gender and racial equity, people with disabilities, indigenous peoples and traditional communities. Petrobras evaluates and measures the programmed results by assessing the number of beneficiaries, the number of job opportunities created by the project's activities, the extent of recovered and protected areas with ecological importance, the number of species studied and protected, and technical and scientific publications. It also stimulates and assesses the partnerships established. Since 2007, the program has benefitted around six million people, generated over 20,000 job opportunities, restored and protected about 700,000 hectares of forest or degraded areas, and contributed to the conservation of more than 700 species of fauna.