

Chapter 6

SDG 7 as a tool to improve population access to energy services

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Introduction

The Sustainable Development Goals (SDG) are an effective way of directing the efforts of nations towards reducing social differences in Brazil and in the world while seeking ways to contribute to environmental sustainability.

SDG 7 – Affordable and clean energy: “ensure access to affordable, reliable, sustainable and modern energy for all” – and its three targets: “7.1 By 2030, ensure universal access to affordable, reliable and modern energy services 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency” (United Nations, 2017) – help direct actions regarding the relationship between energy production and its sources considering different societies.

Brazil, considering its continental dimensions and the social inequality of the population, needs to look for different solutions that better serve its different realities. Embrapa, thanks to its presence throughout the national territory, is a lead actor creating solutions for the problems found in the different regions of the country.

Perspectives and challenges

It should be noted that there is a need to increase alternatives and access to renewable energy. Federal public policies should be expanded and strengthened to reverse this situation. Embrapa has been working on the development of several cultivable biomasses, not only for human consumption but also for use in the production of energy and liquid fuels. The research tends to be related to more productive varieties, alternatives to traditional crops and alternatives for extreme climate or degraded soils regions, adding new productive areas throughout Brazil.

As agribusiness in Brazil develops, so does the production of waste in the countryside and in the cities. This waste can go through transformation processes in which clean energy is generated, offering as a bonus the treatment and disposal of waste that would otherwise be improperly disposed of in the environment, increasing the size of sanitary landfills.

Another important point is to guarantee the access to energy, preferably renewable, to the populations in regions of difficult access, mainly in the North region of the country, where 6.32% of households do not have access to energy (IBGE, 2010). There is a strong correlation between energy availability and consumption and important social indicators, such as life expectancy, infant mortality, illiteracy, and fertility rate, i.e., it is essential to bring energy to populations that do not have access to it. In addition, access to energy can enable the industrial and service sectors to settle and prosper, generating more income and employment locally.

Embrapa develops and uses tools such as the Life Cycle Assessment (LCA), contributing to evaluating the energy efficiency of various production chains products and the key points in which we can act to obtain greater efficiency gains in these chains. The development of more efficient processes applied to agribusiness also contributes to this component.

Finally, Embrapa, thanks to its vocation and presence in rural areas, is in contact with and knows the needs of the different productive chains in our country. Several technologies being developed or reported by the corporation have been helping solve problems of access to energy.

Fossil fuels continue to be available in quantities and values low enough that already known technologies cannot find a place in the consumer market. Thus, research to make agribusiness raw materials cheaper and to make processes more efficient and cheaper is necessary. With the viability of these technologies, it will be possible to provide clean (when compared to fossil fuels), renewable and distributed energy to the population.

References

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