

## **GREEN TECHNOLOGY AND THE ENVIRONMENT: State of the Art Directed to Green Patents**

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### **ABSTRACT**

The present work presents the 'State of the Art' scheduled for the preparation of a Master's Thesis being developed in the stricto sensu Graduate Program in Environmental Sciences at the Evangelical University of Goiás (UniEVANGÉLICA). The agenda highlights the importance of studies focused on Green Patents that serve the promotion and protection of the Environment in Brazil, serving as an effective tool for environmental sustainability. To achieve success, a deductive approach was employed, enhanced by bibliographic and documentary techniques, which allowed for the development of research of a descriptive and explanatory nature.

**Keywords:** Brazil; Green Patent; PPG STMA; Environmental Sustainability.

### **INTRODUCTION**

Green intangible assets have been gaining increasing recognition in the international scientific community as a crucial strategy to promote economic development while simultaneously protecting the environment.

In Brazil, Green Patents, also known as Green Technologies, have been identified as essential intangible instruments to stimulate research and the development of clean and environmentally sustainable technologies. This study acquires relevance in the academic field, being part of the concentration area of the Master's program in Environmental Sciences at UniEVANGÉLICA, which justifies its undertaking.

The subject of study, the Green Patent, is closely related to these themes and contributes to promoting sustainable solutions that value biodiversity, territorial development, and environmental sustainability.

Green patents play a fundamental role in promoting innovative solutions that encourage the creation of new technologies, products, and processes for a more sustainable and inclusive future.

The politicization of green patents benefits society and the environment, preserving limited natural resources and promoting the protection and preservation of biodiversity.

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In this context, this work presents the "State of the Art" which encompasses the "Research Project" and serves as a scientific basis for the preparation of the Master's Thesis, to be defended at a future date in the *stricto sensu* Graduate Program in Environmental Sciences at UniEVANGÉLICA.

## **DEVELOPMENT**

The Green Patent, also known as Green Technology, is a result of the Green Patent Pilot Program created by INPI in 2012, through Resolution No. 283/2012.

The main objective of this program is to expedite the examination of patent applications related to the environment and to identify new technologies that can promote sustainable development (TEIXEIRA, 2018). Green Technology, by its nature, can be a Patent of Invention (PI) or a Utility Model Patent (PMU) and is patentable through an administrative process with the INPI (BRAZIL, 1996).

It is essential to note that the Brazilian legislation governing Green Patents is Law No. 9,279/1996, also known as the Industrial Property Law (IPL). According to this law, patents can be granted for inventions that meet the requirements of novelty, inventive activity, and industrial application. This means that technological innovations related to the protection and preservation of the environment, such as Green Patents, can be patented as long as they meet these criteria.

According to the considerations of Weymuller et al. (2021), technology and innovation, central elements of patents, should be understood as a continuous process of developing technological means that can positively contribute, among other things, to solving economic, political, social, industrial, and especially environmental problems that affect society.

Innovation in this ecological context occurs in five distinct ways: individually, through research conducted in academic environments, in public laboratories, in incubators, and in non-profit foundations. These forms of innovation are linked to eco-innovation, a socioeconomic and environmental phenomenon organized into four different typologies: technological, organizational, social, and institutional (SOUZA, RABELO, 2016).

As Patentes Verdes abrangem e incorporam conceitos de tecnologias verdes, ou seja, tecnologias limpas com potencial para beneficiar o meio ambiente,

seja tratando, mitigando, reduzindo ou impedindo a degradação ambiental (SANTOS et al., 2014).

The INPI Program, mentioned earlier, which established Green Technology, is currently based on Resolution No. 175, dated November 5, 2016, which revoked Resolution No. 283/2012.

For the State, Green Technology or Patent represents a patent application considered eligible for prioritized examination, with the purpose of promoting environmental sustainability (BRAZIL, 2016). This Resolution (2016) includes an inventory previously published by the World Intellectual Property Organization (WIPO), covering Alternative Energies, Transportation, Energy Conservation, Waste Management, and Sustainable Agriculture (BRAZIL, 2016).

## **METHODOLOGY**

To achieve success in our research, we adopted a deductive approach, supported by bibliographic and documentary techniques, which allowed for the conduct of the study and the development of research of a descriptive and explanatory nature. Our research was primarily based on theses, dissertations, and scientific articles published in prestigious journals.

## **THANKS**

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## **RESULTS**

The work, applying the method, delivers to the academy, the faculty and students of UniEVANGÉLICA, the 'State of the Art' that encompassed the 'Research Project', a scientific basis established for the construction/elaboration of the Master's Thesis that will be defended at a future date in the stricto sensu Graduate Program in Environmental Sciences at UniEVANGÉLICA. The Dissertation will seek to establish the following hypothesis: The reuse of solid waste from the manufacturing of panels (PIR) by the

company Kingspan Isoeste, which converges in environmental sustainability, is a Green Patent.

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