

**Environmental Law and the Challenges of the Decades
Ahead: Promoting Transformative and Recovery
Responses to the Planetary Emergency**

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PANEL 3. Imagining alternative pathways and taking action

**THE ENVIRONMENTAL LAW EFFECTIVENESS AND
TECHNOLOGY AT THE SERVICE OF THE ENVIRONMENT**

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If, on the one hand, the evolution of scientific knowledge and the arising of new technologies come as allies to economic development, on the other, they highlight the ecological crisis installed in the Anthropocene, which devastates the global reality, triggered by the negative impacts of human actions interference in the planetary environment. In an interconnected world, in which we are experiencing the planetary boundaries exceeding and the human existence fragility, it is expected that technological advances will strive for a development based on the sustainability pillars, pursue protocols and methodologies aimed at preserving the environment and life as a whole, and intend to achieve means to reduce the negative impacts on ecosystems and also the rational and sustainable use of nature's resources. From this perspective, the transformations triggered by technological innovations are of unparalleled importance for the construction of a more ecologically sensitive and environmentally committed Environmental Rule of Law. Nowadays, technology at the service of the environment is an essential tool to enforce environmental legislation, not only for the monitoring and enforcement of environmental violations but also for the development of adaptation and mitigation strategies, as well as for the construction of a more informed and aware society regarding the environmental problems linked to the ecological crisis. In this context, based on bibliographic and documentary research, this study aims to assess whether the existing Environmental Law has been effective, and how the use of new technologies can ensure the environmental laws' enforcement and the climate international commitments' compliance. Technologies such as satellite monitoring and geospatial data analysis may bring a great contribution to monitoring the compliance and effectiveness of Nationally Determined Contributions. Therefore, it is expected to build a critical approach to the use of new technologies for the promotion of a sustainable environment at a global level.