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SATELLITE OBSERVATION TECHNIQUES AS PART OF AN EMISSION TRADING SCHEME:
REVIEW OF THE AUSTRALIAN CARBON CREDITS SCHEME AND EMERGING GOVERNANCE
TECHNIQUES

Abstract

As part of the 2007 Rudd Government mandate, the Australian Federal Government introduced what is today known as the *Australian Carbon Credit Units* (ACCU) scheme. Since its inception, proposals to optimise the methods used for assessing emission monitoring and effective regulation of carbon credits via the ACCU scheme continue to be explored.

Presently, emission monitoring is based on national auditing and self-reporting by industry in many jurisdictions including Australia. However, with the advent of emission monitoring satellite network infrastructure such as the *Sentinel* satellite network launched by the European Space Agency throughout 2014-2020 and previous emission monitoring satellites such as China's *CarbonSat* and Japan's *GoSat*, global independent emission monitoring may provide more accurate information on the volume of emissions released, and provide an effective means of establishing and monitoring emissions trading schemes by national actors.

This paper will explore how emission trading schemes and international treaties may be supported by space-based surveillance of atmospheric emission release. This paper will provide recommendations for the interoperability of such a scheme within the scope of both international treaties and national legislative instruments.

In addition, this paper will consider how emission monitoring satellite networks may operate as regulatory watchdogs to support international treaty and domestic legislative mechanisms in ensuring that parties obliged under existing or future emission treaties or similar global warming treaties, operate within set guidelines. Such a regulatory watchdog may also ensure that private sector operators are correctly audited and are not breaching their emission undertakings.

This paper will offer recommendations on how the UNOOSA and similar inter governmental agencies may provide a third party auditing and regulatory regime to assist with the management of emissions within geographic boundaries of nation states; and assist in the reporting of emission use by private actors.