

## Levels of Pollution Control\*

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### Abstract

As announced in our previous works, this paper is part of a larger research that deals with sustainable development and environment protection in extractive industry. Hence, a series of papers will deal with issues related to environmental pollution. In this respect, this paper is aiming to identify how much pollution there should be depending on the objective that is being sought. In the beginning, this paper deals with modified efficiency targets, and it will be demonstrated that sometimes is possible to achieve environmental objectives at no cost or, better still, at 'negative' cost, known as 'no regrets' policies; in doing this, the 'double dividend' hypothesis will be introduced to make a clear distinguish between a 'weak form' and a 'strong form' of it. Then the paper will deal with stock pollutants which have relatively short residence times in the environmental media into which they are dumped, as the location of the emission source of a pollutant is irrelevant as far as the spatial distribution of pollutant concentrations is concerned. As such, an econometric model will be provided to demonstrate that not only will the efficient emission level differ from firm to firm, but also the efficient ambient pollution level will differ among receptors. It will be easy to see why efficient emission levels should vary, as firms located at different sources have different pollution impacts. Finally, in the end of this paper a numerical example of efficient emissions to illustrate this finding will be given.

**Keywords:** economic efficiency, pollution damage, pollution flows, pollution stocks, efficient pollution targets.