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Economic Analysis of Feral Pig Invasion Following Volcanic Eruption in Montserrat

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Abstract

The major objective of this paper is to trace the economic causes of the invasion by feral pigs into the North of Montserrat during the current period of the volcanic eruption. These pigs are now a threat to the integrity of the ecosystems and the agricultural sector. The paper will attempt to set out a research framework to answer the following research questions:

What has been the impact of the invasion of these pigs on agriculture?

What relationships exist between economy-wide policies and the invasion of the pigs?

Can changes in economic policies help in addressing the problem that currently exists?

After the volcanic eruption of 1995, the numbers of feral pigs have increased markedly in the inhabited North. This followed the escape of domesticated stock, from the forced abandonment of the relatively more productive areas in the South of Montserrat.

The paper proposes an Action Impact Matrix model to examine the linkages between: economic policies; the behavioural responses of resource users in the agrarian sectors; the feral pig invasion; and environmental sustainability. The paper also proposes a cost/benefit analysis of the invasion and a more conventional Policy Analysis Matrix of pig production on the island. Finally simulation analysis is proposed to determine the effect of the risk of further volcanic activity on the relationships and matrices developed in the study.

Keywords: feral pigs, ecosystems, economic policies, cost/benefit analysis, behavioural policies