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Greenhouse gas, increasing coastal activity and development: the equation for Martinique's ecological pressures at issue

Pascal Saffache and Yoann Pélis

Introduction

- 1 According to certain environmentalists, developmental logistics contain numerous contradictions and remarkable contrasts between ecology on the one hand and economy on the other. At a time of 'major planetary challenges' (Hulot, 2005), it is difficult to grasp what the ecological charge of Caribbean insular society is formed of. Martinique is in the heart of this debate for it is one of the richest and most developed islands in the entire Caribbean region. However, such development, based on quantitative elements is not reflected in any qualitative environmental criteria. Marked by substantial coastal development, in terms of human presence and incessant growth of activity, it is essential to identify the factors on the island which are the cause of substantial damage to the ecosystem and in particular, the coastal ecosystem.

1. Martinique's ecological pressure: endangered ecosystems

- 2 In Martinique, the discharge per capita of CO₂ into the air (the major GHG agent) has dramatically increased (approximately 1,980%) in less than fifty years, with present-day estimations at around 5,200 kg. More precisely, in 2000, Martinique has rejected 2,018 millions of tons of CO₂, against 536.6 million tons for the Wider Caribbean and approximately 21 billion tons for the entire planet. Even if discharge from the island is

less than 1% of all GHG emission for the Caribbean Basin, Martinique nevertheless constitutes a substantial emission generator. This situation is all the more alarming as the ecological pressures and their consequences are unknown to the general public. Under such conditions, can we maintain our level of development while guaranteeing the balance and sustainability of local ecosystems?

- 3 With a population of 390,000 inhabitants, for a territory covering approximately 1.100 km² and a population density of about 350 inhabitants per km², the signs of the transformation of a rich environment, in particular, along the coast, are more than ever present. In fact, it is edifying to note the many various sources of GHG emission generators: by order of importance, the following has been recorded: transportation (responsible for 95% of all CO₂ emission with 5% attributed to the cement industry alone), energy and industrial production (the source of 85% of pollutants present in the air) and finally the residential sector whose growth rate underpins a degrading lifestyle (noise, pollution, etc.) linked to the regression of diversity in plant and wildlife throughout the island. It is therefore absolutely necessary to find a balance between consumption, land occupation and spatial organization and environmental management.

2. Arms for action

- 4 Although Jacques Vernier suggests ‘six levers’ for initiating action to enhance the environment, on a local level, it is adaptation which is indeed required. Three major orientations may be identified for dealing with organizing management as regards heavy anthropogenic activity and local “ecological sources”.
- The first orientation would be an awareness campaign, which could take the form of popularizing academic research dealing with ecology and, in general, with environmental protection.
 - The second focus would be on education. Learning and spreading ‘eco-gestures’ seems to be a determining factor. Such an ecological culture must involve everyone and above all, integrate educational and associative organizations.
 - Finally, arranging for action to be taken and management tools for environmental purposes should fall within the realm of heritage protection.
- 5 Such local initiatives are shyly making way, but their effects over the mid-term can but enhance improvement and create a balance in power among local stakeholders. Such commitments are obviously cast in the mould of sustainable and defensible local development concepts and of integrated development. Also, there exists the backing of programs such as the Regional Energy Control Program ‘PRME’) and Electricity Demand Control ‘MDE’, which are veritably focused on the development, support and enhancement of the island’s potential energy alternative. They contribute to lessening GHG discharge by removing the local need for supply and usage of fossil energy resources (petroleum, oil). Today, the drop in GHG emission into Martinique’s air, and specifically CO₂ is estimated to be approximately 2% (against a rise of 8% on the world scale) and energy savings at 40 MegaWatts. We are therefore at the stage of public awareness and appropriation of such problems by the local population.

Conclusion

- 6 If Martinique, instead of turning its back on threatening world hazards, on the contrary integrated them into its local functioning, it would forcefully seize the action required for preserving the environment while alleviating its ecological pressures. Kyoto, on such a scale, is therefore not a myth; reduction commitments of -5.5 % of GHG over the period 2008-2012 with respect to the level reached in 1990, are hence also a challenge for the island to take up.
 - 7 A land of innumerable riches and quite delicate and vulnerable, it should very quickly take action in terms of management and organization of the entire scope of the local environment. Particular attention should be paid to coastal areas at present, where the concentration of anthropogenic aggression is most rampant.
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