

## Costa Rica

The Republic of Costa Rica (República de Costa Rica) with its capital city San Jose (329.154 inhabitants, 1997) comprises an area of 50.900 km<sup>2</sup> and 4,023 million inhabitants. The population density is 79 inhabitants per km<sup>2</sup> with a sharp concentration in urban areas like San Jose (263,2 inhabitants per km<sup>2</sup>) or Cartago (129,8 inhabitants per km<sup>2</sup>).<sup>1</sup> The current urban population is 51 percent with increasing tendency.

The direct translation of Costa Rica is 'rich coast' which exactly characterises this country in environmental perspectives. Adjoined by Nicaragua in the North, Panama in the south and the Caribbean Sea as well as the Pacific Ocean to the east and the west the country is endowed with long beaches, volcanoes, and huge areas of rainforest with its incredible diversity of fauna and flora. The living standard is relatively high when compare to other agricultural countries in the region. The development of democracy and respect for human rights always was emphasised. Several factors have contributed to this tendency, including enlightened government leaders, comparative prosperity, flexible class lines, educational opportunities that have created a stable middle class, and high social indicators. Also, because Costa Rica has no armed forces, it has avoided the possibility of political intrusiveness by the military that some neighbouring countries have experienced.

Even though Costa Rica's economy showed strong aggregate growth in 1998-1999, the strength in the non-traditional export and tourism sector is masking a relatively lacklustre performance by traditional sectors, including agriculture. Inflation, as measured by the Consumer Price Index (CPI), was 11 percent in 2000, up from 10 percent the year before.

Nevertheless, Costa Rica has huge potentials. It's location in Central America provides easy access to North and South American markets and direct ocean access to the European and Asian Continents. Mainly, Costa Rica's land is dedicated to national forests as well as banana and coffee plantations. In recent years, Costa Rica has successfully attracted important investments by companies like Intel Corporation, which employs nearly 2.000 people at its 300 million U.S. dollar microprocessor plant. Tourism is booming, with the number of visitors up from 780.000 in 1996 to more than 1,1 million in 2001 and became the country's largest foreign exchange source.

The country has not discovered sources of fossil fuels apart from minor coal deposits. However the mountainous terrain and abundant rainfall have permitted the construction of a dozen hydroelectric power plants, making it largely self-sufficient in most energy needs, except oil for transportation. The electricity consumption of 5,75 million MWh was generated with the following contributions: 83,3 percent hydropower, 2,4 percent oil-fired plants and the remainder of 14,3 percent, which mostly consists of large-scale geothermal power plants.<sup>2</sup> Costa Rica exports hydro-electricity to Nicaragua and has the potential to become a major electricity exporter if plans for new generating plants and a regional distribution grid are realised.

Mild climate and warm winds make neither heating nor cooling necessary, particularly in the highland cities and towns where some 90 percent of the population lives. This causes a

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<sup>1</sup> INEC 2000.

<sup>2</sup> EIA SIEE 2000.

reduced energy consumption in the 'heating-period'. The total oil consumption in 2000 was 12,6 million barrels, while about 33.000 tons of coal were combusted.

Due to the agricultural products of Costa Rica, the biomass potential could be found in residues from the coffee and sugar production, bananas, rice, grain and corn. Furthermore, the cattle manure and residues of the large-scale fishing industry are potential residues for the generation of biogas. The overall sugar cane production in 2000 was 378 thousand tonnes while the available bagasse potential was estimated at 1.231 tonnes.<sup>3</sup> Regarding the high population density in cities like San Jose (263,2 inhabitants per km<sup>2</sup>), Cartago (129,8 inh./km<sup>2</sup>) or Heredia (109,7 inh./km<sup>2</sup>) there is a great potential in using the municipality wastes and food residues for the production of biogas.

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<sup>3</sup> WEC 2002.