

SECTION 1

Introduction: Drought as a Policy and Planning Issue in Northeast Brazil

The Nordeste or Northeast Brazil (NEB) has been a focus of major concern for governments, planners, social scientists and other experts over the last century, principally because of recurrent droughts and the poverty that affects the majority of the population in its semi-arid zone.

The 1983 drought was one of the most serious in this century. This was the fifth successive year of below-average rainfall, which greatly reduced food and livestock production and adversely affected the living conditions of about 12 million people. Droughts are a persistent, recurring problem in NEB, but the population has not yet learned how to cope with them, in spite of government efforts to increase drought resilience. The present need is to design new response strategies to reduce the scale of impact on the regional economy and society.

The purpose of this case study is to assess the agricultural and social impacts of droughts, and to suggest decision making strategies to increase the capacity of society to cope with this problem.

1.1. Regional Background

NEB comprises an area of approximately 1.5 million km², equivalent to about 18% of Brazil's total surface area (*see Figure 1.1 and Table 1.1*). This area is larger than the combined area of France, Spain and Portugal. Its geographical situation lies between latitudes 4°–16° S and longitudes 33°–46° W. Its population is about 38.1 million (1985), and an increasing proportion is in urban areas: 51% of the population now, as against 42% in 1970, 34% in 1960, and 26% in 1950 (IBGE AEB, 1981). The labor force of 12.5 million people has a very low income level, 73% of them earning less than US\$1400 annually. Half the population is illiterate, and infant mortality rate is 93 per 1000, as compared to 66 for

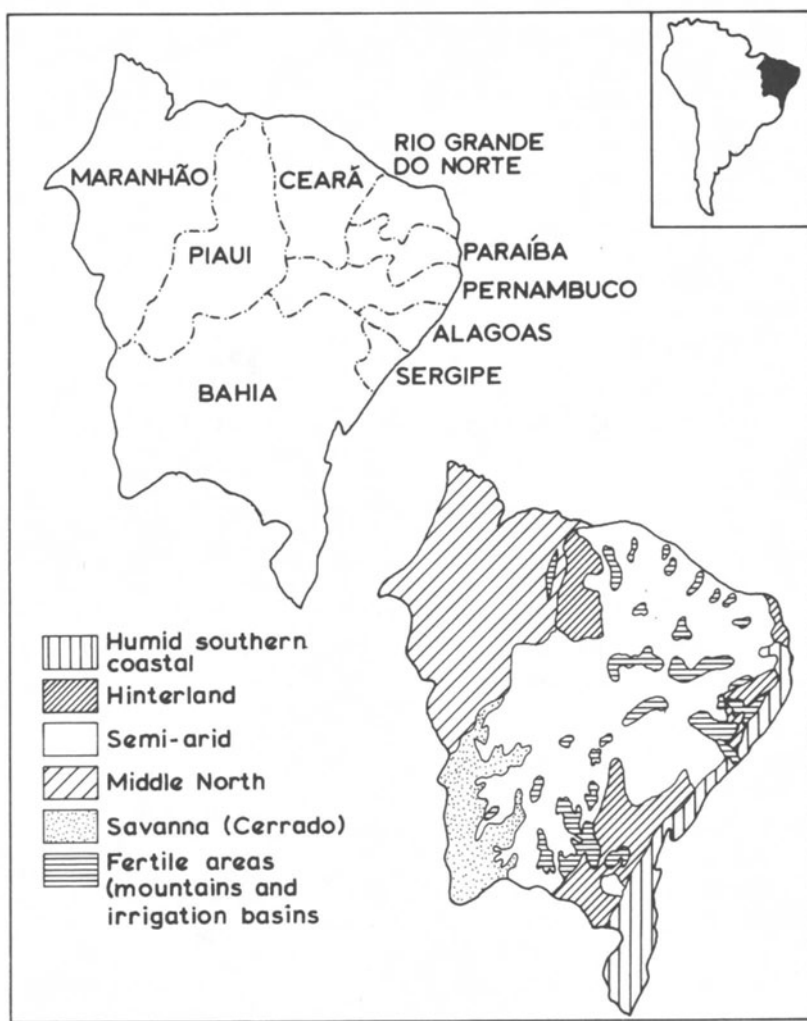


Figure 1.1. Northeast Brazil, with geographic zones. The boundary of the area follows that defined by SUDENE (Superintendência do Desenvolvimento do Nordeste).

Brazil as a whole. Life expectancy is around 53 years, while for the whole country it is 60 years. The region contains 29% of the Brazilian population, living in 9 of the 23 states of the country, but generates only 15% of the gross national product. In 1983, regional annual per capita income was US\$828, compared with US\$1639 for Brazil as a whole. In 1975 (a normal rainfall year), 27% of the regional GNP was generated by agriculture, 29% by manufacturing and 44% by services. In drought periods agriculture's share declines – for example, it was 20% in 1979, as compared with 30% for manufacturing and 50% for services.