

Subnational Indicators

Although the development of subnational indicators was not originally part of this study, it does serve a useful demonstration purpose. Depending on the country, subnational divisions (department, states or provinces) have different degrees of political, financial and administrative autonomy. Nevertheless, the system of indicators that was developed allows for the individual or collective evaluation of subnational areas and was developed using the same concepts and approaches outlined for the nation as a whole. The pilot project was carried out in Colombia.¹¹

While the variables and indicators for the subnational analysis are similar to those used at the national level, some modifications may be necessary to take into account scale differences. For example, in calculating the Maximum Considered Event, the national analysis takes the single most catastrophic event conceivable. However, this event is only the most critical of a series of events that could affect different areas of the country. Maximum probable impacts in these areas will not necessarily be associated with the same type of hazard event identified for the national level. This makes the subnational analysis even more difficult. On the other hand, these events would not occur simultaneously at the subnational level.

Subnational analysis allows national decisionmakers to evaluate and compare risks in different areas of the country. It is likely that other critical events will be identified that, while not reaching the levels implied by the MCE at the national level, could approach it and demand resources that have to be provided by the national government. Subnational analysis is also useful for local decisionmakers because it helps

them to identify key risks as well as the actions that they must take to mitigate or avoid them, whether on their own or in coordination with national authorities. Subnational analysis requires greater effort and more detailed information. Nevertheless, it offers national and subnational decisionmakers a useful tool for defining public policies and planning needs in order to reduce risk.

An analysis of the Disaster Deficit Index (DDI) at the subnational level is likely to show that state, municipal or local governments have the resources required to finance response and reconstruction needs. However, if fiscal decentralization is broad enough and the MCE is smaller than at the national level, the responsibility assumed by subnational governments could be much greater. This likelihood makes this sort of evaluation of great importance to decisionmakers because it allows them to predict and plan for the social and economic implications of disasters (including reaching agreements with national authorities to address these problems in a coordinated manner).

An index such as the Local Disaster Index (LDI) can be of use at the subnational level because it measures how susceptible an area is to lower level disasters, as well as their likely impacts on local and municipal development. The LDI provides a measure of the spatial variability and dispersion of risk in a subnational unit resulting from smaller and recurrent events. From a risk management perspective, this type of information could target advisory and support services to municipalities in line with past events and impacts. In many cases, a municipality has not recovered from a disaster when another one strikes. Although this may not be considered relevant at the national or even subnational levels, it implies a constant erosion of local development gains and opportunities. It is important to identify recurrent small-scale dis-

¹¹ See Barbat and Carreño (2004a) for a comprehensive report on the results for all the indicators and different time periods.

asters not only because of their significant impact on local development, but also because they usually affect the livelihoods of poor populations.

Figure 20 shows the DDI for the year 2000 and for an MCE of 500 year of return period in Colombia's 32 departments. This example only takes into account the economic resilience of

each department, and does not take into consideration resources available from the national government.

Figure 21 shows the aggregate Local Disaster Index for 1986-1990. Figure 22 shows the Prevalent Vulnerability Index (PVI) for each department in 2000.

Figure 20. DDI₅₀₀ for Colombia, by Department (2000)

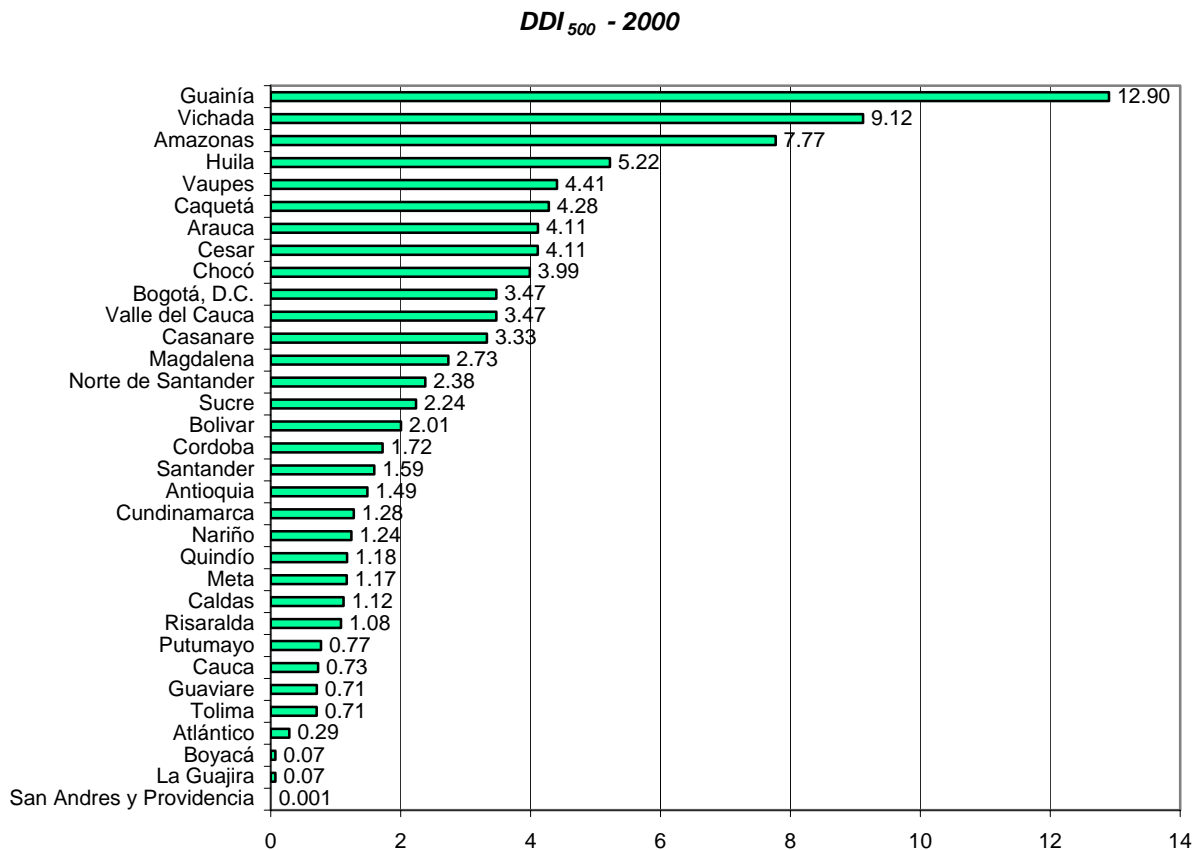


Figure 21. Aggregate LDI for Colombia, by Department (1986-1990)

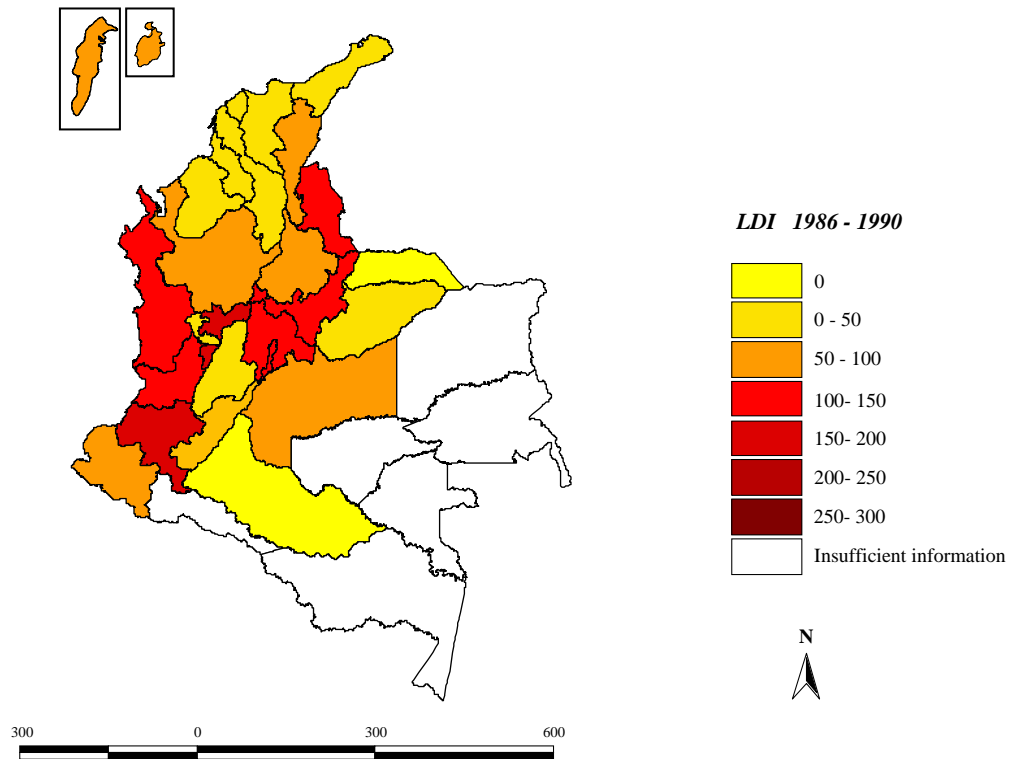
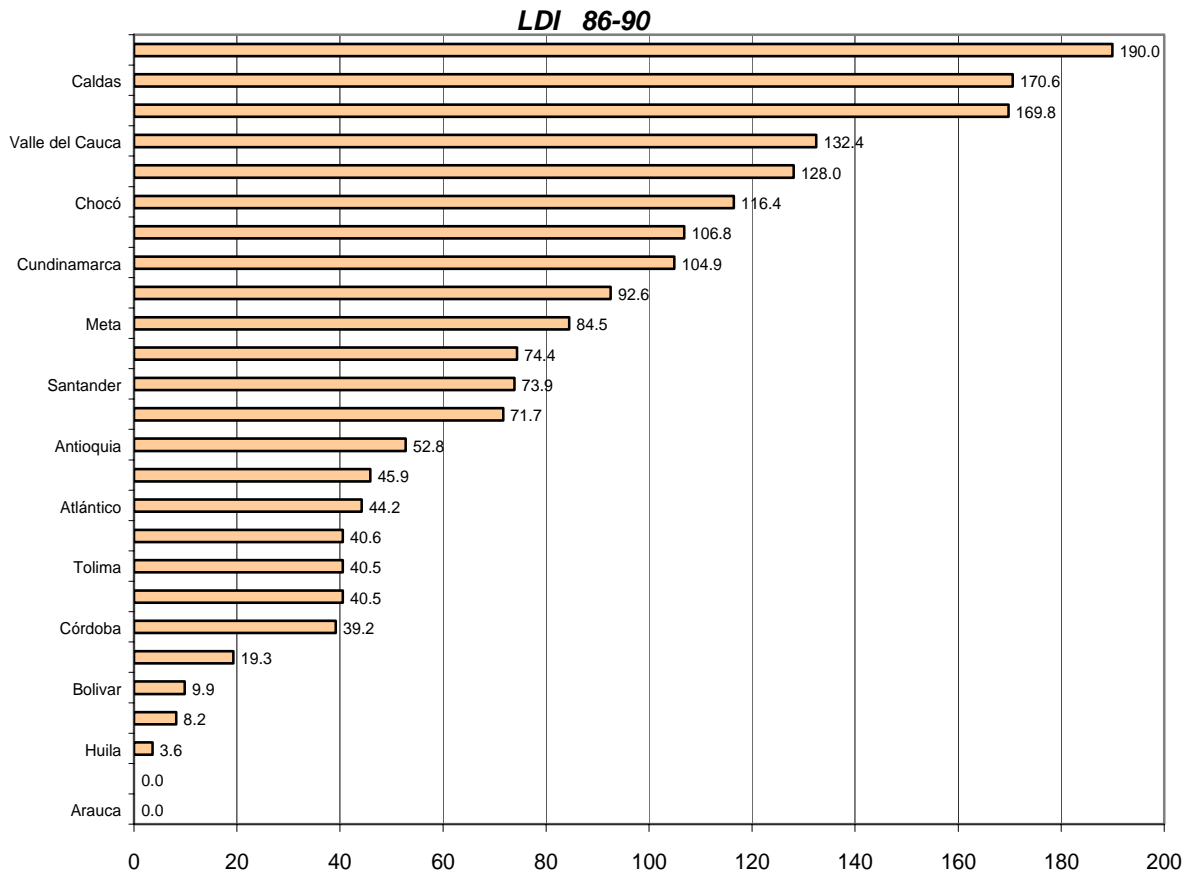


Figure 22. Aggregate PVI for Colombia, by Department (2000)

