

ECLAC/CDCC Ad Hoc Expert Group Meeting  
on a Methodological Approach for a  
Social Vulnerability Index (SVI) for Small  
Island Developing States (SIDS)  
Port of Spain, Trinidad and Tobago  
24 July 2003

GENERAL  
LC/CAR/G.751  
24 September 2003  
ORIGINAL: ENGLISH

**REPORT ON THE AD HOC EXPERT GROUP MEETING  
ON A METHODOLOGICAL APPROACH FOR A  
SOCIAL VULNERABILITY INDEX (SVI) FOR  
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### **REPORT ON THE AD HOC EXPERT GROUP MEETING ON A METHODOLOGICAL APPROACH FOR A SOCIAL VULNERABILITY INDEX (SVI ) FOR SMALL ISLAND DEVELOPING STATES (SIDS)**

## **Introduction**

The Economic Commission for Latin America and the Caribbean/Caribbean Development and Cooperation Committee (ECLAC/CDCC) secretariat convened a one-day meeting of experts to review and comment on a methodological approach to the creation of a Social Vulnerability Index (SVI) for Small Island Developing States (SIDS). The meeting was held on 24 July 2003 at the conference facility of the United Nations Information Centre (UNIC), Port of Spain, Trinidad and Tobago.

Attending the meeting were experts from the University of Liverpool, University of Malta, University of the West Indies (UWI), the Caribbean Community (CARICOM) Secretariat, the Caribbean Development Bank (CDB), the Permanent Mission of Guyana to the United Nations, the Ministry of Foreign Affairs, Trinidad and Tobago and the Central Statistical Office (CSO), Trinidad and Tobago.

The meeting was held to provide a forum for discussion on the methodology for the construction of an SVI and to allow participants engaged in work on the development of other vulnerability indices to update colleagues on the status of their work.

### **Agenda item 1 Opening of the meeting**

The meeting was called to order by the representative of the ECLAC/CDCC secretariat who welcomed participants and highlighted the fact that this was the fourth meeting convened by the ECLAC/CDCC secretariat which sought to address the issue of the social vulnerability of SIDS. She

explained that this meeting formed part of a larger project of which the other component was the development of Social Statistical Databases. In providing a context for the meeting, the ECLAC/CDCC representative clarified the aim of the project which was to assist governments in the Caribbean to meet their need for an improved quality of social statistics and data analysis in order to better address the social conditions of their citizens. In addition, the project sought to ensure that reliable statistics and statistical indicators were used to develop and assess social policies and programmes so that economic and social resources were more efficiently and effectively utilized.

The support of the Government of the Kingdom of the Netherlands, for making this project possible was acknowledged. Participants were also informed that at the time of the meeting the project had met two of its main objectives, which were to establish fully searchable databases of social statistics at the ECLAC/CDCC secretariat, and to provide training in evidence-based social policy formulation to social planners and statisticians from the subregion. She further stated that the web interface for the databases was currently under development and, with its completion, access to the data would be facilitated. In addition, with this meeting the second major component of the project, which involved the elaboration of a methodological approach for an SVI for SIDS, had come into being.

The representative of the ECLAC/CDCC secretariat identified two main sources as constituting the mandate to engage in this discourse. The first being the Global Conference on the Sustainable Development of Small Island Developing States, Programme of Action, paragraph 113 and 114, which was agreed upon in Bridgetown, Barbados, 26 April – 6 May 1994, and the second and more recent, being found in the Singapore Declaration of the Alliance of Small Island States Inter-regional Preparatory Meeting for the World Summit on Sustainable Development, held from 7-11 January 2002.

While acknowledging that vulnerability was not a new concept and that familiarity with the concept already existed in the economic and environmental field, the ECLAC/CDCC representative pointed out that application of the concept of vulnerability to issues of social development proved to be complex both conceptually and operationally. She expressed her pleasure at being able to bring together experts who had an interest in work on the construction of a social vulnerability index and the issue of vulnerability and took the opportunity to express appreciation, on behalf of the ECLAC/CDCC secretariat, for the services of Dr. Godfrey St. Bernard, Research Fellow at the Sir Arthur Lewis Institute for Social and Economic Research, as lead consultant in this exciting endeavor.

The representative of the ECLAC/CDCC secretariat introduced Mr. Raul Garcia, Acting Deputy Director of the ECLAC/CDCC secretariat, to participants and thanked him for taking time from a hectic schedule to be present at the

meeting. A special welcome was given to Professor Lino Briguglio who had travelled a long distance from the University of Malta to attend the meeting.

**Agenda items 2 and 3**  
**Adoption of agenda and organization of work**

The agenda of the meeting was discussed and adopted as follows:

1. Opening of the meeting
2. Adoption of the agenda
3. Organization of work
4. Presentation of the background document
5. Recommendations of the Expert Group
6. Other business

The background documents for the meeting were presented and noted as follows:

1. A methodological framework for a social vulnerability index in the Caribbean subregion – Dr Godfrey St Bernard;
2. Some conceptual and mythological considerations relating to the construction of an index of social vulnerability with special reference to Small Island Developing States – Professor Lino Briguglio;
3. Socio demographic vulnerability in the Caribbean: An examination of the social and demographic impediments to equitable development with participatory citizenship in the Caribbean at the dawn of the twenty-first century – Dr Dennis A. V. Brown; and
4. Socio-demographic vulnerability: Old and new risks for communities, households and individuals (LC/W.3).

**Agenda item 4**  
**Presentation of the Consultant's paper**

Dr. St. Bernard applauded the efforts of the ECLAC/CDCC secretariat to develop an SVI. He explained that the identification and development of indicators for the SVI was very much in its nascent stages, unlike the areas of economic and environmental vulnerability, in which indicators had already been developed and the index implemented, in the case of economic vulnerability. Dr. St. Bernard pointed to the impact of difficulties of reliability and availability of data in the area of social vulnerability and explained that this might result in the development of an SVI that was very basic. This, he

assured participants, was legitimate and should be seen as one stage in the process of developing a more sophisticated SVI in the future.

Conceptually, Dr. St. Bernard explained, social vulnerability was the flipside of social sustainability, which was economically viable, environmentally responsible, and politically, socially and culturally acceptable. To the extent that these virtues were being threatened and were at risk, then the process could be said to be vulnerable. Dr. St. Bernard also utilized the principles of 'SWOT' analysis to expand on his definition of social vulnerability. In this regard, the important question was whether the strengths and opportunities inherent in a system, together with its weaknesses, were sufficient to overcome any threats that might come its way. He suggested that to the extent that these strengths and opportunities, mitigated by the weaknesses of the system, were not sufficient to overcome the threats, then the system was becoming vulnerable. This conceptualization of social vulnerability, Dr. St. Bernard explained, was consistent with ECLAC's own conceptualization of social vulnerability as the net effect of the competition between social risk and social resilience, with resilience being a critical factor in enabling units to withstand internal and external shocks.

Identifying the unit of analysis to be used in this methodological framework for the Caribbean was one of the main concerns in his conceptualization of the Social Vulnerability Index. According to Dr. St. Bernard, the SVI could be developed using the following units of analysis: (a) the nation; (b) sub-institutions within a country e.g. community; (c) households; or (d) individuals. His proposal, however, was to focus on social vulnerability at the level of the nation. This would identify a logical and systemic approach within which indicators would be developed, starting with the nation as the largest social entity. It was also the level, according to Dr. St. Bernard, that was likely to yield the most reliable estimates of the required input data.

In this context, Dr. Bernard also identified the following five main domains from which indicators for an SVI would be developed: (a) education; (b) health; (c) the economy; (d) communications infrastructure – including the media and information technology; and (e) security systems – including governance. These were the domains that he deemed to be important in the discussion of social vulnerability in SIDS. Within these domains, Dr. St. Bernard presented a total of 13 indicators for discussion (see Table 1).

**Table 1:**  
**Recommended domains and indices to a Social Vulnerability Index**

<b>Domain</b>	<b>Indicator</b>
<b>Health</b>	1. Life expectancy at birth
<b>Security</b>	2. Index of rule of law 3. Measure of minority groups' participation in the economy 4. Measure of new/present government's respect for the commitments of previous governments. 5. Indictable crimes per x population
<b>Resource Allocation</b>	6. Proportion of children under 15 belonging to the two poorest quintiles 7. Proportion of the population 15-64 belonging to the two poorest quintiles 8. Proportion of the population 15-64 belonging to the two poorest quintiles which have no medical insurance 9. Proportion of the population belonging to the two poorest quintiles in which the head is unemployed
<b>Education</b>	10. The proportion of the population 20 years and over with exposure to tertiary level education 11. The proportion of the population 20 years and over that has successfully completed secondary education with a minimum of 5 GCE/CXC passes or equivalent secondary school leaving qualifications. 12. Adult literacy rate of population aged 15 years and over
<b>Communications Architecture</b>	13. Computer literacy rate of population aged 15 years and over

With regard to the collection of the requisite data for the computation of the proposed indicators, Dr. St. Bernard pointed to the variability in the availability of data in countries across the subregion and called for the strengthening of the CSOs to conduct the necessary surveys to elicit the data. He also called for greater efforts at institutional strengthening in areas such as the collection of crime data.

In terms of measurement, Dr. St. Bernard proposed a linear combination of the indicators, which are weighted equally. For each input indicator, a deprivation index was to be computed by transforming scores on the indicators into a standard format.

Dr. St. Bernard concluded his presentation with the observation that the proposed measurement model should be deemed as a precursor to subsequent models that should be superior to this one in terms of satisfying the criteria of simplicity, feasibility and parsimony. He also warned that in spite of the quest for simplicity and feasibility, the availability of official statistics and trained personnel would place limitations on the ability to generate the proposed indicators. In this regard, he proposed that the next phase of ECLAC's efforts

to establish a methodology for measuring social vulnerability should consist of two major objectives. The first would be diagnostic in nature, to determine, based on the proposed indicators, the readiness and/or handicaps of each of the 23 member and associate member countries of the CDCC to participate in this project. The second objective of the next phase of activities ought to be a pilot test of the methodology focusing on countries that have reasonable, well-developed systems of official statistics. These initiatives would yield insights that could be instrumental in replicating and testing measurement models targeting social vulnerability in regions beyond the Caribbean.

## **Discussion**

Dr. St. Bernard was highly commended by all participants for his presentation, as was ECLAC for what was considered a path-breaking endeavour.

Although agreeing with the recommendation of keeping indicators simple and feasible, participants felt moved to recommend a few more in the interest of identifying those areas that were considered important for the measurement of social vulnerability. These included:

- (a) Percentage of children orphaned by HIV/AIDS;
- (b) Proportion of skilled health-care professionals to total population;
- (c) Proportion of skilled personnel in the education sector to school aged population;
- (d) Expenditure in health and education – as one aspect of resource allocation; and
- (e) Indicator that speaks to housing conditions. This was identified by one participant as an area that has been ignored for too long, but which was of importance in understanding social vulnerability.

In addition to the call for additional indicators within the framework outlined by Dr. St. Bernard, a number of participants expressed concern at what they felt would be an insufficiency on the part of the SVI to capture the full range of social deprivation and vulnerabilities that existed within a country if other indicators were not added or if the definition was not expanded. Participants were also concerned that a purely quantitative approach to the collection of data would result in a loss of understanding of the issues of vulnerability that affected countries in the Caribbean.

In this regard the following concerns were expressed.

- (a) The need to include in the definition of social vulnerability, issues of quality, capacity and capability;
- (b) The need to disaggregate data below the national level in order to identify vulnerable groups and to better formulate policy;
- (c) The need to add to the domain of education, indicators that spoke to technical and vocational skills; and
- (d) The importance of including the issue of the drug trade in order to measure the impact of this activity on the economy, the judiciary and the social and political environment.

The latter point was made by one participant in the context of an exhortation to identify indicators that best spoke to the qualitative impact of specific issues on the society, and to point to the capacity of indicators to highlight qualitative issues. In addition to the importance of constructing an indicator that captured the drug trade activity, the participant pointed to the usefulness of the indicator of life expectancy, for example, which pointed to the adequacy of health care in the society. An indicator pointing to the scourge of HIV/AIDS would be able to tell of the impact of this disease on the economy as well as on society.

The level of analysis and the use to which the resulting index would be put was also an issue that was discussed by participants. Some participants argued that the data should be collected at the level of the individual, household and community and not at the national level, since these would allow for more meaningful analysis of vulnerability. Others agreed that data should be collected at the national level, but argued for disaggregation of the data at levels lower than nationally aggregated data since it was preferable that the index be used for national monitoring rather than regional comparability.

Professor Lino Briguglio urged participants to view the SVI as a tool with a specific purpose arising out of an awareness that countries that appeared to be strong could indeed be very fragile. This he referred to as the 'Singapore contradiction'. In this regard, he made an argument for the nation as the unit of analysis and comparison across nations as the main purpose of the Vulnerability Index. He further pointed to tools other than the Vulnerability Index that had as their objectives, the disaggregation of data for the purpose of policy formulation as well as the internal monitoring and management of the socio-economic and environmental situation of countries.

The question of the type of risks, internal or external, to be considered when constructing a social vulnerability index was also raised in the meeting.

It was posited that if, as in the case of the Economic Vulnerability Index and the Environmental Vulnerability Index, social vulnerability was seen as exposure to outside forces, then issues of governance should not be included since this was seen as an internal threat to the stability of a country. On the other hand, it was suggested that the Social Vulnerability Index, unlike the Economic Vulnerability Index and the Environmental Vulnerability Index, should be more directly concerned with issues of resilience (ability to adapt or cope) and should therefore also be concerned with internal threats to social stability, which affect a country's ability to withstand external shocks. In this context it was suggested that social vulnerability could be examined using the asset vulnerability approach developed by ECLAC, Santiago.

A call was made to link the Economic Vulnerability Index, the Environmental Vulnerability Index and the Social Vulnerability Index to create one index of vulnerability. It was felt that each index presented a different aspect of the condition of vulnerability that was not necessarily captured by the other.

Dr. St. Bernard thanked participants for their contribution to the work-in-progress and expressed his desire to respond in particular to the issues of: (i) the units of analysis to be used; (ii) the use of quantitative vs. qualitative data; (iii) the issue of quality; and (iv) linking of the three indices of vulnerability. Dr. St. Bernard said that conceptually, the idea of addressing vulnerability at all levels – individual, household, community, sectors and nation – was a good one. Nonetheless, he felt that collecting indicators at the level of communities could result in unreliable data given the present state of data collection in the region. In order to satisfy the need for understanding vulnerable groups, however, he felt that it would be important to conduct special cluster and sample surveys based on the institutional capacity of central statistical offices.

Mr. Peter Pariag, Director, Central Statistical Office, Trinidad and Tobago, agreed that given the capacity of the CSOs, it would be better to start the exercise using the nation as the unit of analysis, until the methodology had been tried and tested.

With regard to the inclusion of issues of quality into indicators and the use of qualitative versus quantitative data, Dr. St. Bernard admitted that the exercise was primarily a quantitative one. He recognized the importance of qualitative data and explained that quantitative exercises emphasized reliability while qualitative exercises emphasized validity. However, given that the notion of constructing an index was a quantitative one, even qualitative indicators would have to be eventually quantified for the purpose of this exercise.

In agreeing with this perspective, Dr. Briguglio reminded the meeting that even though numbers were important in the construction of a

vulnerability index, qualitative data was always important for providing profiles to accompany these indices, as a way of ‘unpacking’ the numbers.

Finally, in addressing the issue of linking all of the indices of vulnerability, Dr. St. Bernard cautioned that while this was a laudable endeavour, a number of questions would emerge around such an exercise. The first question highlighted the issue of the extent of independence that might characterize the relationship between economic and environmental vulnerabilities. The second should consider the independent and shared effects of the economic and environmental dimensions upon the social dimension, and finally, it was necessary to determine reciprocity in the relationships linking the three dimensions.

### **Agenda item 5** **Recommendations of the expert group**

The following recommendations were made in order to advance the process of addressing social vulnerability:

- (a) The unit of analysis would be at the level of the nation, but would also be disaggregated at the sectoral levels;
- (b) The Social Vulnerability Index should include an index of risk as well as an index of resilience; and
- (c) The methodology for the construction of a Social Vulnerability Index should be tested in a number of countries.

### **Agenda item 6:** **Other business**

Dr. Mark Pelling of the University of Liverpool shared with participants, initial findings from a study in which he was currently engaged. The study examined the relative vulnerability of small island States to wind storms using the average annual deaths from 1980 to 2000 and the average population exposed to wind storms. He indicated that the initial findings from the research pointed to conclusions which suggested that countries with a lower HDI (Human Development Index) were associated with higher vulnerability. He indicated that the final report would be available in October 2003 via a United Nations Development Programme (UNDP) publication. The ECLAC/CDCC secretariat shared with the meeting similar work which it was undertaking in the area of social assessment of natural disasters. In that regard, it sought to measure the vulnerability of Caribbean SIDS to exposure to hurricanes and the extent of damage to the housing sector (as it surmised that death due to hurricanes was relatively low in the Caribbean SIDS and that damage to housing was a better proxy indicator for social disrepair). In its findings, the

secretariat concluded that countries with higher poverty head counts proved to be more vulnerable.

The meeting was then brought to closure with participants being thanked for taking the time to contribute their expertise to the meeting and the usual courtesies were exchanged.

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