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Economic Commission for Latin America and the Caribbean
Subregional Headquarters for the Caribbean

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**REPORT ON TRAINING WORKSHOP ON THE USE OF THE ECLAC
DAMAGE AND LOSS ASSESSMENT (DALA) METHODOLOGY FOR
THE EVALUATION OF NATURAL DISASTERS**

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BACKGROUND

Natural disasters remain an area of concern in Latin America and the Caribbean, and, more so, in the small island States of the Caribbean where the impact of a single disaster could wipe out years of progress and threaten the sustainable livelihoods of large segments of their populations. It was for this reason that the understanding of the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) Damage and Loss Assessment Methodology (DALA) forms part of meeting the ECLAC objective of strengthening the capacity of its member States to evaluate and assess the impact of natural disasters in their countries.

Under this mandate, the ECLAC Subregional Headquarters for the Caribbean conducted a three-day basic level training course for selected government officials from Barbados and Trinidad and Tobago. The opportunity was also taken to introduce the DALA methodology to staff members of the ECLAC Subregional Headquarters for the Caribbean, as well as of other Port of Spain-based United Nations agencies.

The training was conducted in collaboration with the Santiago-based ECLAC Disaster Evaluation Unit. Training was coordinated by the Regional Adviser of the ECLAC Port of Spain office, who also made presentations on the sustainable livelihood approach and on the social sectors. Presentations were also made by staff members from ECLAC Headquarters, Santiago, on the macroeconomic impact and selected productive sectors; general overview, setting the context and implications of disasters and climate change. Additional trainers included experts in the areas of vulnerabilities; infrastructure and coastal management; tourism and environment; and agriculture. In addition, presentations were made by the representative of the Caribbean Disaster Emergency Response Agency (CDERA) (now known as Caribbean Disaster Emergency Management Agency (CDEMA)) on the Comprehensive Disaster Management (CDM) framework and by a representative of the ECLAC Subregional Headquarters for the Caribbean on its ongoing project on the economics of climate change in the Caribbean.

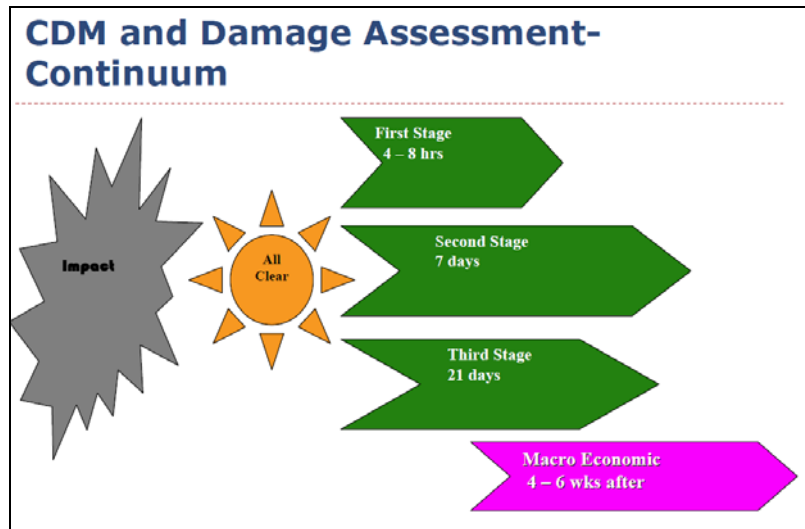
A. Training programme and presentations

The three-day workshop was opened by the Director of the ECLAC Subregional Headquarters for the Caribbean and continued as per the programme (see Annex I). The workshop itself was divided into three sections: first “setting the context”; then “the DALA methodology and its applications”; and, finally, a “case study”.

1. Setting the context

The representative of CDEMA presented an overview of the CDM framework and the link between CDM and the disaster assessment methodology. Figure 1 shows that the various stages from the initial rapid assessment to the final DALA assessment were linked and that the DALA assessment depended on the data and surveys that were collected during the previous three stages.

Figure 1: Stages of the disaster assessment procedure



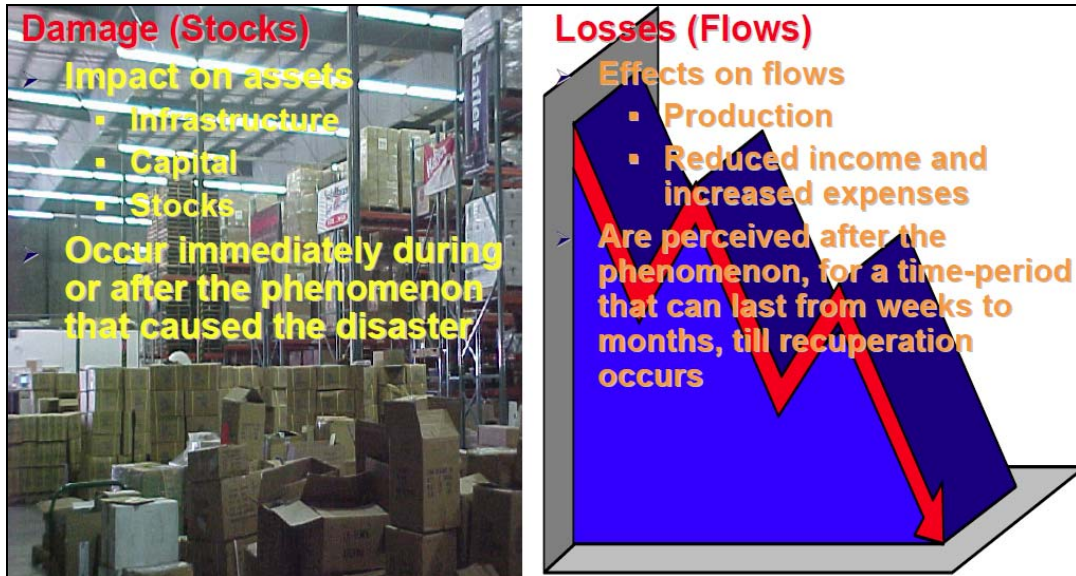
The presentation on climate change offered an overview of the ECLAC project on the Economics of Climate Change and the progress achieved to date. The impacts of climate change differed from the typical DALA impact in that damages could occur over a long period of time while those of a disaster following a tropical cyclone, earthquake or flash flood tended to be instantaneous. However, climate change formed an element of the vulnerability matrix of the Caribbean subregion and assessment of its impacts could be incorporated in the DALA methodology.

The representative from Smith Warner International Limited highlighted the vulnerabilities of Caribbean Small Island Developing States (SIDS). This presentation familiarized participants with the various meteorological and hydrological risks, hazards and vulnerabilities to which the Caribbean subregion, in general, was exposed; provided some indication of the consequences of these hazards, their frequencies of occurrence and historic patterns of impact; and set the stage for the necessary reconstruction mechanisms and for mitigation of future damage.

2. The DALA methodology and its applications

The representative of ECLAC, Santiago, focused on an introduction to the DALA methodology for disaster assessment. He showed the conceptual framework for the analysis of the impact of disasters and illustrated the co-relatedness of the cost of extreme events to the cost of the impacts of climate change. He also introduced ongoing case studies and provided some preliminary results. The presentation illustrated, as shown in figure 2, the main concepts of damages and losses and of stocks and flows, and placed the DALA within the framework of the development, poverty and disaster nexus.

Figure 2: The concepts of damage and losses and of stocks and flows



The representative of the ECLAC Subregional Headquarters for the Caribbean made a presentation on the sustainable livelihood approach (SLA) embedded in the DALA methodology and focused on vulnerability, affected population and gender issues within the context of a livelihood analysis for policy formulation (see figure 3).

Figure 3: Sustainable Livelihood Approach

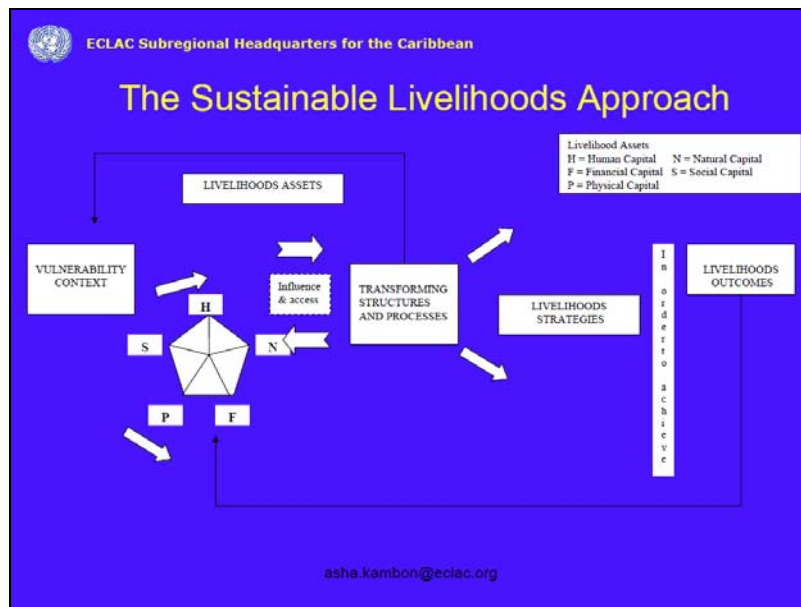
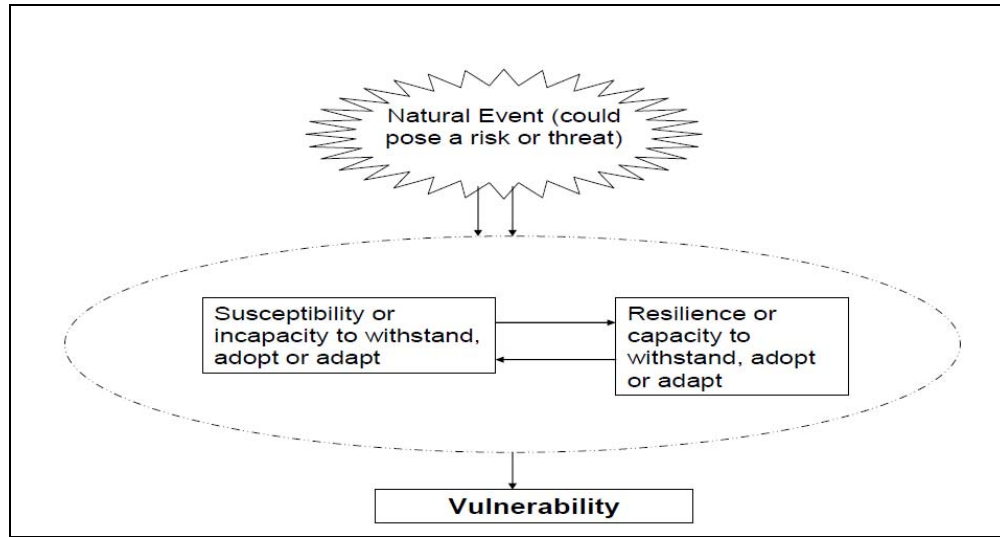
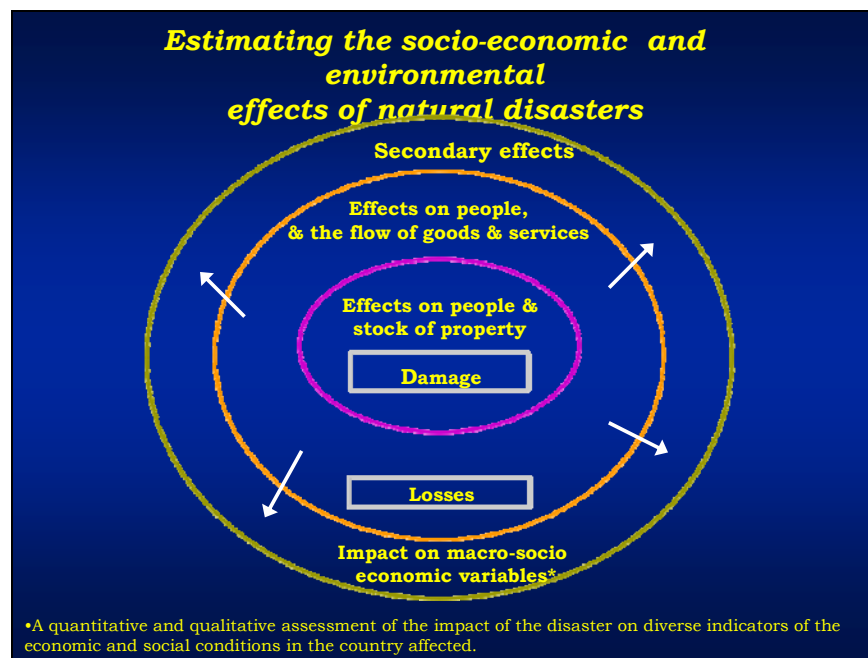


Figure 4: Susceptibility and Resilience



Within the context of an SLA, the concepts of vulnerability, susceptibility and resilience related to the analysis of the affected population, as shown in figure 5. The evaluation concentrated on the household and on the assets that a household might have at its disposal to ensure sustainable livelihoods and on how such assets were affected by a disaster. She also focused on gender differences before, during and after a disaster and highlighted how gender differences in risk tolerance resulted in different priorities, actions and responses. Figure 5 summarized the integration of the SLA with the DALA methodology.

Figure 5: The integration of the DALA and SLA concepts



Following the presentations on the two methodological building blocks, presentations were made by the sector specialists and the macroeconomist. All presenters stressed the importance of recognizing the differences between damage and losses.

A presentation on agriculture by the representative of the Inter-American Institute for Cooperation on Agriculture (IICA) highlighted the intersectoral nature of agriculture, because damage and losses could have a bearing on infrastructure, environment, trade and industry and gender specific sustainable livelihoods. He stressed the importance of close collaboration with the social sector specialist for impacts on the rural poor and small farmers. The presentation on tourism by the ECLAC consultant focused on a comparison of a pre-disaster scenario with a post-disaster scenario and on methods to estimate losses rather than damage since the data on damage were often unavailable because of insurance disputes. He also indicated that the DALA approach could be used to estimate the short- to medium-term economic impacts of adaptation to and mitigation of climate change. The consultant stressed that, in the near future, mitigation and adaptation policies instigated by developed countries could have a great bearing on the subregion's tourism.

The segment on infrastructure, roads and transport, telecommunications, water and sewerage, energy and emergency services was presented by the representative of Smith Warner International Ltd. He observed that, in many countries, infrastructure design guidelines did not seem to be influenced by a disaster risk assessment. As a result, critical infrastructure remained vulnerable. The environment presentation recognized that quantitative assessment of environmental damage remained problematic as many of the valuation methods were too time-consuming. However, significant portions of environmental losses were covered under agriculture, infrastructure and tourism, and would be accounted for under those headings. Qualitative reviews of the impacts on the environment would be included in the DALA report.

The ECLAC Subregional Headquarters for the Caribbean representative in her presentation on the social sectors of housing, health and education, focused on the differential vulnerabilities based on the quality of the housing stock and on health and education facilities. She highlighted that a natural disaster might delay the achievement of the Millennium Development Goals or other development objectives, such as universal access to primary education, health care or an adequate water supply. She also highlighted the importance of applying lessons learned from past experiences.

The macroeconomic assessment was a synthesis of the sectoral studies and the representative of ECLAC, Santiago, guided the participants through the main steps of a DALA assessment, as shown in figure 6.

Figure 6: Summarizing the assessment

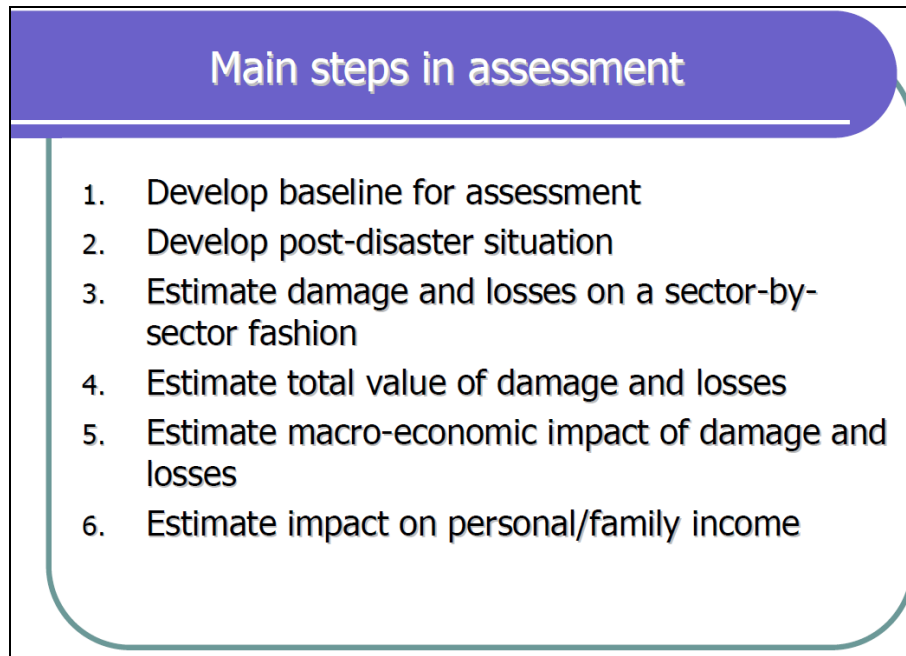
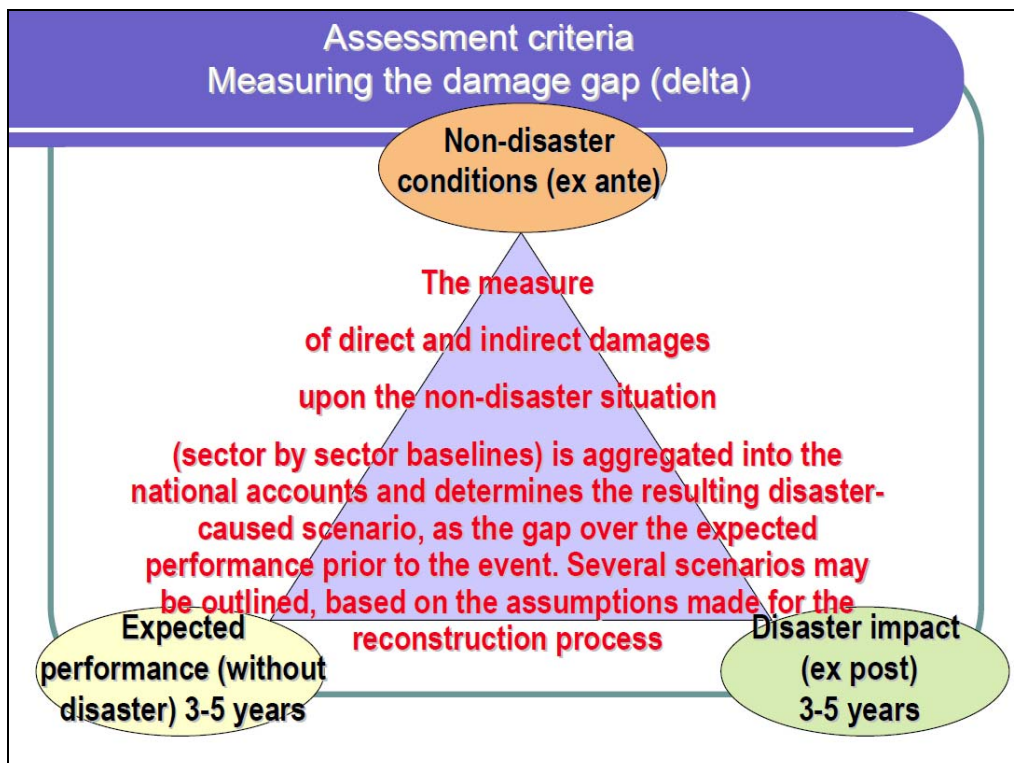


Figure 7 shows that the economic assessment of the changes in the flow of goods and services involved the comparison of the “non-disaster situation” with the “disaster situation”.

Figure 7: The macro economic assessment



3. Special presentation

The representative of the Tobago Emergency Management Agency (TEMA) presented on the reporting procedure used, which was internet and Government Information Services (GIS)-based, and provided details on damage and actions taken by TEMA, or its collaborating agencies, on a case-by-case basis. Such a reporting procedure provided data at the level of the individual household or residence and might provide a building block for a DALA assessment.

4. Case study

The case study offered a scenario of extensive floods in Nirvana, a large, fictitious island in the Western Caribbean. Participants were divided into four working groups and each working group was requested to review the consequences of the flood on agriculture, infrastructure, commerce and manufacturing and its social impact. Following this review, the groups had to establish and analyze its sectoral and summary effects and its implications on sustainable livelihoods.

B. Evaluation

1. Participants

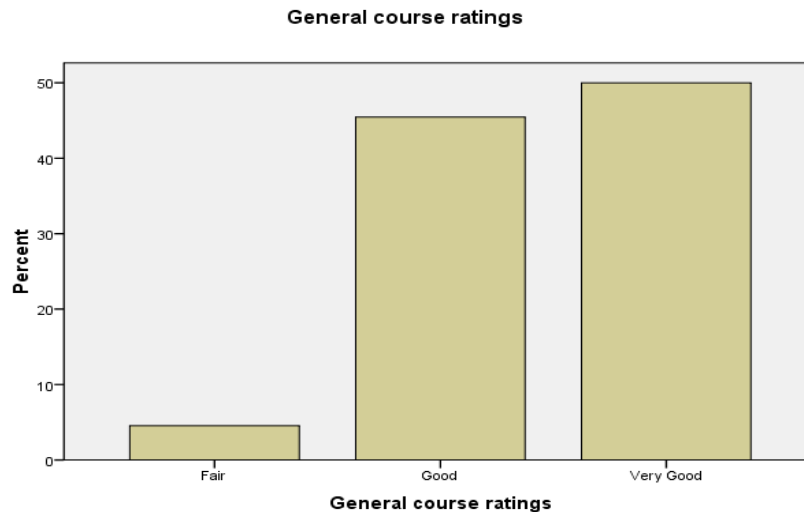
The training workshop was attended by 30 participants of whom eight were ECLAC staff members, apart from the presenters, and three were from the United Nations system (Food and Agriculture Organization of the United Nations (FAO) and the United Nations Development Programme (UNDP)). Twelve participants were from Trinidad and Tobago and seven were from Barbados. Of the non-ECLAC participants, 14 were females and eight were males. Males and females accounted for an equal share of the ECLAC participants. All participants were from government, semi- government or regional and international organizations. The focus of activity varied and ranged from planning and development and meteorological services to disaster offices and social services, housing, tourism, agriculture, infrastructure and statistics.

Respondents were asked to give their opinion of the course. When asked how they would rate the course, all the respondents gave an overall high rating, as 50% thought that the course was very good and 45.5% thought that it was just good.

Respondents were also asked if the course met their initial expectations. Of all the respondents, 54.5% of the respondents said that the course fully met their initial expectations while 36.4% stated that the course almost met their expectations. Given the fact that none of the respondents felt that the course met their expectations somewhat, it can be concluded that the course design did meet the full expectations of all participants. However, while 40.9% of the participants found the time frame for the course appropriate, 54.5% indicated that the time frame was too short.

2. Design and contents of the course

Figure 8: General course ratings



All the participants found that the sequence and integration of subjects for the course was favourable as 4.8% rated them as fair, 57.1% rated them as good, and 38.1% as very good.

With regards to the time distribution among subjects, 77.2% of the respondents had a favourable view: as 22.7% found the time distribution to be very good and 54.5% found it to be good; 22.7% found the time distribution among the subjects to be only fair. It should be noted, that of the representation that stated the time distribution was only fair, 80% comprised females.

Respondents were then asked their opinion of the depth of each subject: 27.3% thought that they were fair, while 31.8% found them to be good, and 40.9% said very good.

There were mixed responses regarding the balance between theory and practice of the course. Of all the respondents, 50% stated that the balance between theory and practice was good; while 18.2% said that it was very good; 22.7% indicated a fair balance between theory and practice; and 9.1% felt it was bad.

A small percentage (19%) found that the diversity in the teaching methods was only fair. Once again, this group comprised females. On the other hand, the rest of the participants (77.7%) gave the diversity in the teaching methods a better rating of 61.9% (good) and 14.3% (very good).

The response rate for the quality of topics was very favourable, as 45.5% of the respondents thought it was very good and similarly another 45.5% thought it was good. Most participants also felt that the length of each of the topics was also appropriate. While 19% of the respondents found the length of each topic to be only fair, 47.6% found it to be good and 23.8% found it to be very good.

With regard to the usefulness of the course to their work and country situation, 63.9% and 27.3%, respectively indicated good and very good. The relevance of the topics taught received a good rating by 31.8% while 51.9% gave a rating of very good.

Of the participants, 38.1% found that, in general, the themes were simple; 19% found them to be difficult; and 42.9% found the themes to be complex. It should be noted here that those who found the themes to be complex in nature were almost evenly balanced between male and female.

When the respondents were asked about whether they already knew some of the topics that were taught, 59.1% of the respondents answered that the work was totally new. Fewer respondents answered that what they had learned was already known, only 4.5%. 36.4% answered that what they learned was just partially known.

3. Training material

Respondents were asked to rate the usefulness of the training material. Few respondents (13.6%) found the training material to be only fair; however, 81.8% of the respondents found the training material to be helpful (54.5% accounted for good and 27.3% accounted for very good).

Most participants (95.4%) thought that the training materials were useful for their current work; 54.5% of the respondents said that the training materials were good, and 40.9% said that they were very good; 4.5% found the training material only fair.

4. Impact of the course

Respondents were asked to rate the impact of the course by looking at a number of factors, such as the applicability to their current work; the improvement in the quality of their work; as well as provision of more knowledge about methodologies and instruments and new ideas and concepts. Most of the respondents (95.4%) felt that the course could be applied to their current work and was good (54.5%), and very good (40.9%). One respondent (4.5%) stated that much of the course had only fair applicability.

Respondents were asked to rate how the course would improve the quality of their work and 90.9% of them felt that the course provided them with much information so that their work could be improved. When asked if the course provided them with more knowledge about methodologies and instruments, 13.6% stated that it did so somewhat, while 86.3% stated that it provided them with much more knowledge. Similarly, 13.6% stated that the course provided them with new ideas and concepts, while 86.3% stated that many new ideas and concepts were gained from the course.

5. Administration of the course

Respondents were asked their opinion specifically about the administration of the course. The respondents were asked to rate the support from the personnel of the course and all the respondents gave a positive answer. When the data was further disaggregated, it was found that 36.4% said very good, 59.1% said good, and 4.5% said fair. The response rate for the question pertaining to the use of equipment also generated a mainly positive response (90.5%), where 47.6% said good and 42.9% said very good. A fair rating was given by 9.5% while 4.5% gave no response. All the participants gave a positive rating for the environment in which the workshop was held; fair (4.5%), good (36.4%) and very good (59.1%).

6. Presenters

Most participants rated the presenters as very good (50.0%) and good (45.5%).

7. Environment of the course

Respondents were asked to rate the general environment of the course. Firstly, the respondents were asked about involvement of the participants and 100% rated this question positively (much). Similarly, all of the participants (100%) gave an overwhelming response (much) to the question about expressing their points of view during the course. The data were also similar for the other question where the respondents rated the environment of cooperation in the group activities. Most of the participants gave a general rating of “very much” 95.5%.

When asked whether the activities in the course were productive, 38.1% stated “much”, 57.1% stated “very much” and 4.8% stated “fair”. This was also the case for the answers relating to the question about the topics being presented in a clear manner, as those stating “much” and “very much” totalled 95.5%, and 4.5% said “fair”.

Responses to the question on the quality of topics showed that only 9.1% gave a rating of fair, while an overwhelming number (90.9%) said “much” (40.9%), and “very much” (50.0%). Similarly, 90.9% of the participants gave a rating of “much” and “very much” to the question of motivation, and 9.1% indicated “fair”. The respondents were then asked to rate the knowledge of teaching methods and 55.0% gave ratings between 8 and 10 (very much) and 40.0% rated between 6 and 8.

The respondents were also asked about the ability to maintain interpersonal relationships, empathy and the ability to listen and the overwhelming rating was of 8-10 (very much) 68.2%; 27.3% (much); and only 4.5% (fair).

8. Comments and suggestions received from open-ended questions

(i) Aspects of the course that were most liked

- (a) The relevance of the methodology to the Caribbean;
- (b) The practical experiences, technical capacity and sound knowledge base of the presenters;
- (c) The practicality of the case study;
- (d) Opportunity to share country experiences; and
- (e) The fact that discussions were encouraged and the patience of the presenters to accommodate questions and interruptions.

(ii) Aspects of the course least liked

- (a) The overall time frame was too short for such an in-depth, relevant and informative exercise;
- (b) There was not enough time for the practical aspect of the training;
- (c) The methodology was not located within part of a theoretical framework of development; and
- (d) Some presentations were too technical at times.

(iii) Suggestions for improving the course

- (a) There should be a recall session to continue actual application of the methodology;
- (b) Inclusion of an additional day to facilitate practical case studies;
- (c) Greater correlation between presenters to reduce repetitions;
- (d) Greater participation from other key sectors; and
- (f) Methodology for reconstruction should be embedded as part of a developmental and planning model.

9. Conclusions and recommendations

The training course was characterized by a high degree of participation and received a high quality rating by the participants, as such it was successful. However, three constraints remained. The first was the lack of time, particularly for the practical aspects of the training, the

second was the relevance of the training for work and the third was the limited participation of economists and other sectoral specialists.

A four-day course with the last day designated for the case study was preferable, but not always possible. To alleviate the time constraint for a three-day beginners' course, it was recommended that the case study should be simplified and focus on, perhaps, the social sector, infrastructure, agriculture (where applicable) and tourism or manufacturing. Alternatively, the sector presentations could embed an exercise that highlighted the methodology. For intermediate and advanced training courses, however, the use of a more complicated case study was recommended.

In countries with a limited exposure to natural disasters, the link between training and work was not always clear, but would crystallise when a disaster occurred. In countries with a higher exposure, such as Jamaica or Belize, the link between training and work was clearly felt. The suggestion for a recall session was supported and recall sessions had been held in Jamaica, Belize and Cayman Islands. It was further recommended that training sessions be held in any country that requested an ECLAC DALA mission.

The limited participation of economists and sector specialists was of concern as it somewhat defeated the purpose of the training in economy-wide social, economic and environmental assessment. In a national training course, those constraints tended to be alleviated, but it was recommended that ECLAC highlight the need for sector specialists and economists in its letter of invitation.

Annex 1

Programme

DAY 1: WEDNESDAY 26 AUGUST 2009

0900 hrs – 0930 hrs	Opening	<ul style="list-style-type: none"> • Welcome remarks • Purpose, objective and organization of the workshop • Introduction of trainers and participants
9:30 – 10:45	<u>Session I: The Context</u>	
	Understanding the Comprehensive Management Framework	<ul style="list-style-type: none"> • A review of the CDM Framework by CDERA
	The Challenges of Climate Change	<ul style="list-style-type: none"> • Costing the effects of Climate Change in the Caribbean
	The Vulnerabilities of Caribbean SIDS	<ul style="list-style-type: none"> • The meteorological and hydrological risks, hazards & vulnerabilities
10:45 – 11:00am		<i>COFFEE BREAK</i>
11:00 – 11:45	<u>Session II:</u>	
	Introduction to the ECLAC methodology	<ul style="list-style-type: none"> • General introduction to the ECLAC Methodology for Disaster Assessment (EMDA)
11:45 hrs – 12:30 hrs	The SLA and the ECLAC Methodology	<ul style="list-style-type: none"> • General introduction to the SLA • The SLA and the DALA: affected population, gender differentiation, loss of life, displaced population, poverty, migration, employment effects and geographic location. • Exercise
1230 hrs – 1400 hrs		<i>LUNCH</i>
1400 hrs – 1630 hrs	<u>Session III:</u>	
	Sectoral application of the methodology to productive sectors	<ul style="list-style-type: none"> • Economic sectors (tourism, agriculture, mining commerce and services) • Infrastructure (Coastal zones; Roads, transport, communications, energy, water supply) and basic services • Environment • Exercise

DAY 2: THURSDAY 27 AUGUST 2009

0900 hrs – 1030 hrs	<u>Session III (cont'd):</u> Sectoral application of the methodology to productive sectors (cont'd)	<ul style="list-style-type: none"> • Re-cap of Session II • Reporting exercise (Sessions I & II)
1030 hrs – 1045 hrs		<i>COFFEE BREAK</i>
1045 hrs – 1230 hrs	Sectoral application of the methodology to the social sectors	<ul style="list-style-type: none"> • Housing } • Education } • Health }
1230 hrs – 1330 hrs		<i>LUNCH</i>
1330 hrs – 1430 hrs	<u>Session IV:</u> Putting it all together	<ul style="list-style-type: none"> • The macroeconomic impact of natural disasters (expected patterns, incidence, macroeconomic implications, modeling through stock-flow techniques, policy choices and recommendations based on models)
1430 hrs – 1515 hrs	<u>Session V:</u> Data for Disaster Assessment	<ul style="list-style-type: none"> • IDA • PDNA • Sources for Baseline Data
1515 hrs – 1730 hrs	<u>Session VI:</u> Restoring livelihoods and 'building back better'. General conceptual framework and study cases of various disaster	<ul style="list-style-type: none"> • Planning for risk reduction • Restoring and making livelihoods sustainable and reducing social vulnerabilities • Planning for risk mitigation (coastal engineering)

DAY 3: FRIDAY 28 AUGUST 28 2009

0900 hrs – 1600 hrs	<u>Session VII:</u> Case study	<ul style="list-style-type: none"> • Presentation and organization for the case study • Breakdown sessions for group work and preparation of case study solution by groups. • Presentation of case study results by each group • Comments on results and solution to the case by case-study monitor
1600 hrs – 1700 hrs	<u>Closure of workshop</u>	<ul style="list-style-type: none"> • Closing remarks • Distribution of certificates of attendance

Annex II

List of participants

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Annex III

Evaluation tables

Table A-1
Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	9	40.9	40.9	40.9
	female	13	59.1	59.1	100.0
	Total	22	100.0	100.0	

Table A-2
How would you rate this course?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.5	4.5
	Good	10	45.5	45.5	50.0
	Very Good	11	50.0	50.0	100.0
	Total	22	100.0	100.0	

Table A-3
Did the course meet your initial expectations?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fairly	2	9.1	9.1	9.1
	Almost	8	36.4	36.4	45.5
	Fully	12	54.5	54.5	100.0
	Total	22	100.0	100.0	

Table A-4
The amount of time for the course was?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Short	12	54.5	54.5	54.5
	Appropriate	9	40.9	40.9	95.5
	Long	1	4.5	4.5	100.0
	Total	22	100.0	100.0	

Table A-5
Sequence and integration of subject

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.8	4.8
	Good	12	54.5	57.1	61.9
	Very Good	8	36.4	38.1	100.0
	Total	21	95.5	100.0	
Missing	No response	1	4.5		
Total		22	100.0		

Table A-6
Time distribution among subjects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	5	22.7	22.7	22.7
	Good	12	54.5	54.5	77.3
	Very Good	5	22.7	22.7	100.0
	Total	22	100.0	100.0	

Table A-7
Depth of each subject taught

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	6	27.3	27.3	27.3
	Good	7	31.8	31.8	59.1
	Very Good	9	40.9	40.9	100.0
	Total	22	100.0	100.0	

Table A-8
Balance between theory and practice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	2	9.1	9.1	9.1
	Fair	5	22.7	22.7	31.8
	Good	11	50.0	50.0	81.8
	Very Good	4	18.2	18.2	100.0
	Total	22	100.0	100.0	

Table A-9
Diversity in the teaching methods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	1	4.5	4.8	4.8
	Fair	4	18.2	19.0	23.8
	Good	13	59.1	61.9	85.7
	Very Good	3	13.6	14.3	100.0
	Total	21	95.5	100.0	
Missing	No Response	1	4.5		
Total		22	100.0		

Table A-10
Quality of topics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	1	4.5	4.5	4.5
	Fair	1	4.5	4.5	9.1
	Good	10	45.5	45.5	54.5
	Very Good	10	45.5	45.5	100.0
	Total	22	100.0	100.0	

Table A-11
Length of each topic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	2	9.1	9.5	9.5
	Fair	4	18.2	19.0	28.6
	Good	10	45.5	47.6	76.2
	Very Good	5	22.7	23.8	100.0
	Total	21	95.5	100.0	
Missing	No response	1	4.5		
Total		22	100.0		

Table A-12
Relevance of the topic taught

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	1	4.5	4.5	4.5
	Fair	1	4.5	4.5	9.1
	Good	7	31.8	31.8	40.9
	Very Good	13	59.1	59.1	100.0
	Total	22	100.0	100.0	

Table A-13
Themes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Simple	8	36.4	38.1	38.1
	Difficult	4	18.2	19.0	57.1
	Complex	9	40.9	42.9	100.0
	Total	21	95.5	100.0	
Missing	No response	1	4.5		
Total		22	100.0		

Table A-14
Knowledge of what was learnt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Known	1	4.5	4.5	4.5
	Partially known	8	36.4	36.4	40.9
	New	13	59.1	59.1	100.0
	Total	22	100.0	100.0	

Table A-15
The extent to which the training material helped in the lesson

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	1	4.5	4.5	4.5
	Fair	3	13.6	13.6	18.2
	Good	12	54.5	54.5	72.7
	Very Good	6	27.3	27.3	100.0
	Total	22	100.0	100.0	

Table A-16
Usefulness of the training material for current work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.5	4.5
	Good	12	54.5	54.5	59.1
	Very Good	9	40.9	40.9	100.0
	Total	22	100.0	100.0	

Table A-17
Application of your current work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Little	1	4.5	4.5	4.5
	Fair	1	4.5	4.5	9.1
	Much	14	63.6	63.6	72.7
	Very Much	6	27.3	27.3	100.0
	Total	22	100.0	100.0	

Table A-18
Extent to which the course provided the participants with more information to improve the quality of work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	2	9.1	9.1	9.1
	Much	11	50.0	50.0	59.1
	Very Much	9	40.9	40.9	100.0
	Total	22	100.0	100.0	

Table A-19
Extent to which the course provided that participants with more knowledge about methodologies and instruments to improve the quality of work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	3	13.6	13.6	13.6
	Much	5	22.7	22.7	36.4
	Very Much	14	63.6	63.6	100.0
	Total	22	100.0	100.0	

Table A-20
The course provided new ideas and concepts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	3	13.6	13.6	13.6
	Much	7	31.8	31.8	45.5
	Very Much	12	54.5	54.5	100.0
	Total	22	100.0	100.0	

Table A-21
Support from personnel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.5	4.5
	Good	13	59.1	59.1	63.6
	Very Good	8	36.4	36.4	100.0
	Total	22	100.0	100.0	

Table A-22
Use of equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	2	9.1	9.5	9.5
	Good	10	45.5	47.6	57.1
	Very Good	9	40.9	42.9	100.0
	Total	21	95.5	100.0	
Missing	No response	1	4.5		
Total		22	100.0		

Table A-23
Environment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.5	4.5
	Much	8	36.4	36.4	40.9
	Very Much	13	59.1	59.1	100.0
	Total	22	100.0	100.0	

Table A-24
Professors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	1	4.5	4.5	4.5
	Good	10	45.5	45.5	50.0
	Very Good	11	50.0	50.0	100.0
	Total	22	100.0	100.0	

Table A-25
Involvement of participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much	11	50.0	50.0	50.0
	Very Much	11	50.0	50.0	100.0
	Total	22	100.0	100.0	

Table A-26
Extent to which participants could express their points of view during the course

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much	5	22.7	22.7	22.7
	Very Much	17	77.3	77.3	100.0
	Total	22	100.0	100.0	

Table A-27
Environment of cooperation in the group activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.5	4.5
	Much	5	22.7	22.7	27.3
	Very Much	16	72.7	72.7	100.0
	Total	22	100.0	100.0	

Table A-28
Participants considered that the activities in the course were productive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.8	4.8
	Much	8	36.4	38.1	42.9
	Very Much	12	54.5	57.1	100.0
	Total	21	95.5	100.0	
Missing	No response	1	4.5		
Total		22	100.0		

Table A-29
Extent to which the topics were presented in a clear manner

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.5	4.5
	Much	11	50.0	50.0	54.5
	Very Much	10	45.5	45.5	100.0
	Total	22	100.0	100.0	

Table A-30
Quality of topics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	2	9.1	9.1	9.1
	Much	9	40.9	40.9	50.0
	Very Much	11	50.0	50.0	100.0
	Total	22	100.0	100.0	

Table A-31
Ability to motivate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	2	9.1	9.1	9.1
	Much	11	50.0	50.0	59.1
	Very Much	9	40.9	40.9	100.0
	Total	22	100.0	100.0	

Table A-32
Knowledge of teaching methods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Little	1	4.5	5.0	5.0
	Much	8	36.4	40.0	45.0
	Very Much	11	50.0	55.0	100.0
	Total	20	90.9	100.0	
Missing	No response	2	9.1		
Total		22	100.0		

Table A-33
Ability to maintain interpersonal relationships

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	1	4.5	4.5	4.5
	Much	6	27.3	27.3	31.8
	Very Much	15	68.2	68.2	100.0
	Total	22	100.0	100.0	

Table A-34
Gender * Time distribution among subjects

Count		time distribution among subjects			
		Fair	Good	Very Good	Total
Gender	male	1	4	4	9
	female	4	8	1	13
	Total	5	12	5	22

Table A-35
Gender * Diversity in the teaching methods

Count		diversity of teaching methods				
		Bad	Fair	Good	Very Good	Total
Gender	male	0	0	7	1	8
	female	1	4	6	2	13
	Total	1	4	13	3	21

Table A-36
Gender * Themes

Count						
		themes				
		Simple	Difficult	Complex	Total	
Gender	male	3	2	4	9	
	female	5	2	5	12	
	Total	8	4	9	21	

Table A-37
Gender * To what extent did the training material help you in the lesson

Count						
		Training material helpful				
		Bad	Fair	Good	Very Good	Total
Sex	male	0	0	6	3	9
	female	1	3	6	3	13
	Total	1	3	12	6	22

Table A-38
Gender * Indicate the usefulness of the training material for your current work

Count					
		Usefulness of material for work			
		Fair	Good	Very Good	Total
Sex	male	0	6	3	9
	female	1	6	6	13
	Total	1	12	9	22