CPACC

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Back-to-the-office report
CPACC/Component 6: Sub-Regional Workshop
Grenada, March 27-April 3, 1999.

1. The first Sub-Regional workshop under CPACC's Component 6, *Coastal Vulnerability and Risk Assessment* was held at the Public Works Conference Center, St. George's, March 29-31, 1999. About 20 participants attended the workshop representing the three countries participating in this component: Barbados, Guyana and Grenada (see Attachment 1 for the list of participants). Two coastal vulnerability assessment experts were contracted to provide technical assistance during the workshop: Dr. Leonard Nurse (Barbados) and Dr. Robert Nicholls (UK).

2. The OAS office in Grenada and the government of Grenada, through the CPACC Focal Point, Ms. Jocelyn Paul, provided excellent support before and during the workshop with preparation and logistics. The overall assessment is that the workshop was successful and it achieved its goals. The participants coincide with this assessment as suggested by their evaluation (Attachment 2). The following paragraphs give a summary of the presentations and discussions during the workshop.

Objectives of the workshop:

(1) provide an update on CPACC implementation and linkages among components

(2) review existing models for coastal vulnerability and risk assessment from climate change impacts;

(3) present a methodology for the region; and

(4) begin the process to identify sites for implementation

Expected outputs:

(1) an agreement on a coastal vulnerability and risk assessment methodology suitable for the region;

(2) a plan of action for component implementation;

(3) a list of criteria for selection of potential national sites for implementation; and

(4) a list of national requirements and needs for component implementation.

Agenda

3. The agenda for the three-day workshop included the following items (a full agenda is provided as Attachment 3):

Day 1, Monday, March 29, 1999

- CPACC update and linkages between components;
- Climate change and impacts on coastal areas: sea-level rise;

- Concepts and examples on coastal vulnerability and risk assessments
- Proposed methodology

Day 2, Tuesday, March 30, 1999

- Screening assessments: countries presentations
- Breakout sessions by country

Day 3, Wednesday, March 31, 1999

- Plan of action for implementation

Opening speeches

4. The Minister of Information, the Director of Financial Planning of Grenada and Mr. Volonte gave the opening speeches. Both Grenadine representatives emphasized the importance of CPACC to the region and reminded us that CPACC should make every effort to involve the public in the implementation of the project.

Sea-level rise and coastal vulnerability assessment

5. Drs. Nurse and Nicholls conducted a series of presentations on the concepts and technical issues on climate change, sea-level rise and coastal vulnerability assessment methodologies. It was cleared from these presentations that protection or other adaptation measures against sea-level rise would have serious environmental and socio-economic consequences, primarily for small island states and low-lying coastal countries. Regarding coastal vulnerability and risk assessment methodologies, Dr. Nicholls presented to the participants his evaluation of existing methodologies and proposed the adaptation of one of them as a valid alternative for the Caribbean (UNEP, 1998). The technical report backing his presentation will be available through CPACC's Web site in the near future.

6. In brief, the methodology adopted for CPACC regarding coastal vulnerability assessment can be summarized in the following steps:

Stage 1. Problem definition and scope of the analysis.

Stage 2. Scenarios for coastal vulnerability assessment.

Stage 3. Impact assessment.

Stage 4. Autonomous adaptation.

Stage 5. Planned adaptation.

7. The present workshop is part of Stage 1 and included discussions on the levels of analysis, delineation of the study area, and the likely magnitude and impacts of sea-level rise. Three levels of analysis, on increasing difficulty and effort, are defined within the methodology: Screening Assessment (SA), Vulnerability Assessment (VA) and Planning Assessment (PA). Prior to the workshop, the three countries received guidelines on how to conduct a SA, which by its quick nature, primarily focuses on the susceptibility of today's coastline to sea-level rise. Countries presentations were based on these guidelines. The results of the SAs will be used to plan how the VAs might be most effectively implemented (the next step), including selection of study areas and other climate change scenarios to be considered.

Country Presentations

Barbados

8. The representatives of Barbados exhibited an excellent presentation on the potential impacts of sea level rise on the Bajan coast followed by a proposed plan action for the implementation of this component. As with other Caribbean countries, the coastline is heavily used and therefore, any increase in sea-level will affect the basis of the country's economic and environmental sustainability. Sea-level rise would increase beach erosion and profile steepening due to the fact that most beaches in Barbados are very narrow (12-15 meter wide) with gentle slopes (<10°). Some of the potential adaptation options could include relocation of activities and renourishment of beaches. The Coastal Zone Management Unit of Barbados conducted a study on the south and west coast to estimate potential coastal inundation due to a storm surge generated by a Category 3 hurricane and a one meter sea-level rise (1:50 inundation return period). The result is astonishing since most of the present day coastal development, including the tourism infrastructure, is located within this inundation zone. It was suggested that adaptation options could be similar to those used against increased erosion as well as improvements in drainage. Salt water intrusion is another potentially severe problem since all water supplies for Barbados comes from wells located on the coastal zone (changes in the frequency and intensity of droughts should be also considered as part of any further assessments). Barbados is already beginning the process of adaptation by building its first desalinization plant.

9. From a national prospective, the Bajan representatives concluded that any further vulnerability assessments should concentrate on three sectors: tourism, human settlements and water supplies. Potential sites for conducting the VA include Maxwell/Hastings/Worthing/Dover; Oistins; Holetown; Spring Garden and Bridgetown.

Guyana

10. Guyana's representatives also made an excellent presentation. Although Guyana is a continental country with vast extensions of highlands, about 90% of the population live within the coastal plain. The coastal plain of Guyana is about 0.5 to 1 meter below high water level making it highly vulnerable to any increase in sea level. The coastline is presently protected by a sea wall (about 100 miles) and drainage system that needs repair and maintenance work and a natural line of mangroves which is under exploitation with no sustainable management practices. Georgetown, with 70% of the country's population, is located on the Atlantic coast and on the right bank of the Demerara River. Flooding of the city occurs on a daily basis due to clogging of the poor maintained drainage system that works only during low tide. Agriculture along the coast is a major source of foreign exchange and highly vulnerable to future salt water intrusion that could impoverish the soils and contaminate the freshwater reservoirs used for irrigation.

11. Potential sites to conduct the vulnerability assessment include Georgetown, Leguan, West Coast Berbice, Lusignan and Essiquibo coast.

Grenada

12. The delegates from Grenada presented a very good analysis of the potential vulnerability of this country's coast to future sea-level rise. Most of the country's infrastructure and human settlements are located along a very narrow coastal plain with steep topography in the background. Grand Anse and St. George's were considered as the two sites with the greatest economic importance to the country (centers of tourism activities) and with the highest vulnerability risk to sea level rise. The coastal highway along the west coast of the country was mentioned as potentially vulnerable to any sea level rise given that is presently located very close to present sea level.

13. Potential sites for the vulnerability assessment include the Grand Anse, the southwest peninsula, St. George's, Grenville area, the western and the northern coast, including the towns of Sauteurs, and the islands of Carriacou and Petit Martinique.

14. Given the limited technical human resources and information, Grenada would require the most direct assistance and supervision from CPACC to successfully complete this component.

Next Steps

15. During the last day of the workshop, participants discussed and agreed on a series of tasks, milestones and time table required for the completion of Component 6.

(1) Refinement of Methodology. First draft completed. Review based on inputs from workshop by Robert Nicholls. Final version due by April 16, 1999. The final version will be edited by OAS and then printed for distribution under CPACC logo.

(2) Sub-regional workshop. Completed.

(3) Country screening assessments. First draft completed. Review by country teams. Final version by April 16, 1999. It was decided that the SAs prepared by each of the participating countries contained very useful information and should be presented as part of a technical report. The report will be completed by the end of April 1999.

(4) National consultations. The three countries suggested that before a final decision on site selections could be made they will have at least one meeting with other national agencies to discuss the outputs of the sub-regional workshop and agree on the sites. These national consultations will take place during the month of April.

(5) Terms of reference for local consultants. It was agreed that CPACC will provide funding to support a national component coordinator for Grenada and Guyana (Barbados explained that the Coastal Zone Management Unit will be the focal point for this component and that one of its staff will be assigned as the coordinator). Draft terms of reference will be prepared for these consultants for discussion and comments by the national focal points. The national focal points will provide CPACC and the OAS with two or three potential candidates. Selection and appointment of the consultants should be completed not later than May 1.

(6) Vulnerability assessment. Several tasks for the VA will be completed under Component 3 (i.e., evaluation of existing data, identification of gaps and acquisition of new data) in coordination with C6 consultants and national focal points. In addition, during the execution of VA, additional technical assistance, equipment, training and new data will be provided. Several national workshops will be organized to keep national institutions informed on the progress of the component. The timeframe for this task will extend from May 1999 to January 2000.

(7) It is expected that a draft VA for each country will be completed by January 2000.

(8) National workshop to present results. February 2000.

(9) Final VA. April 2000.

(10) National training workshop on VA exercise (February-May 2000)

(11) Regional workshop to transfer knowledge and experience from the three participating countries to the rest of CPACC countries. May-June 2000.

Attachment 1

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Attachment 2

Workshop Evaluation by Participants

(1) How much did you know before the workshop about (1 not much; 4 very much):

percentages	1	2	3	4
CPACC	16	21	32	31
Climate Change	5	21	47	27
Sea-level rise due to climate change	5	40	35	20
Coastal vulnerability assessments methodologies for sea-level impacts	50	33	6	11
Sea-level rise impacts:				
Coastal erosion	12	44	44	10
Inundation	12	37	40	11
Salt water intrusion	29	36	29	6

(2) Did you find the workshop useful in improving your knowledge about these topics (1 not useful; 4 very useful):

percentages	1	2	3	4
CPACC		12	33	55
Climate Change		12	44	44
Sea-level rise due to climate change		12	38	50
Coastal vulnerability assessments methodologies for sea-level impacts		10	30	60
Sea-level rise impacts:				
Coastal erosion		24	23	53
Inundation		29	38	33
Salt water intrusion	12	16	22	50

(3) Do you feel you could do a 2-3 hours presentation to your superiors or colleagues about these topics:

percentages	Yes	No	Because of worhshop
CPACC	58	42	64
Climate Change	87	13	64

percentages	Yes	No	Because of worhshop
Sea-level rise due to climate change	72	28	64
Coastal vulnerability assessments methodologies for sea-level impacts	50	50	73
Sea-level rise impacts:			
Coastal erosion	75	25	50
Inundation	60	40	43
Salt water intrusion	70	30	50

(4) Do you like to receive more materials/documentation about these topics:

percentages	Yes
CPACC	80
Climate Change	85
Sea-level rise due to climate change	85
Coastal vulnerability assessments methodologies for sea-level impacts	90
Sea-level rise impacts:	
Coastal erosion	95
Inundation	85
Salt water intrusion	80

(5) In your opinion what were the workshop's strong points?

The presentations from the individual countries and sharing of information from same (10).

Stressing the need to take climate change seriously (3)

The extent to which data is needed so that plans and forecasts can impact on a country future.

Understanding of some of the methodologies in conducting VAs (2).

(6) What were the weak points?

Lack of clearly defined guidelines for SA (5)

Time was too short/too long sessions (4)

Volume of background information and appropriate time to prepare in advance (2)

Possible uses of the information generated from the execution of the component (2).

Lack of IT facilities (5).

More social activities to encourage informal exchanges with other participants.

(7) What topic(s) would you like to have added or receive more emphasis?

Saltwater intrusion of coastal aquifers (2).

Data/facts showing that there is actually sea-level rise.

Coastal erosion and marine biology.

Screening assessment (3)

Training and technical assistance to execute the project (2)

Effects of sea-level rise on human settlements in other parts of the world.

Climate change modeling for the region (2).

(8) What actions/initiatives will you take in your country based on what you learned in this workshop?

Try to get my office more involved in the aspects of coastal management (2).

Support a team to realize CPACC goals (6)

Encourage those concerned to consider importance of taking action to counter effects of climate change and sea-level rise (5).

The need to bring this issue in the public arena; elements of the work will be shared with community groups (2).

Gather as much data as possible on coastal resources/features; work along with other agencies to ensure component is successful; and give full support to action/initiatives taken to mitigate possible impacts.

Try to do some public awareness in my Ministry.

Attachment 2

Agenda

Monday, March 29, 1999

8:00-8:30	Registration and breakfast
8:30-9:00	Welcome by representatives of the Government of Grenada, OAS and CPACC
9:00-9:30	CPACC implementation update and linkages with other components
	Presenters: Claudio Volonte, Organization of American States/CPACC
9:30-10:15	Climate change impacts on the coastal zone: accelerated sea level rise and the Caribbean
	Presenter: Leonard Nurse, Coastal Zone Management Unit, Barbados
10:15-10:30	Coffee Break
10:30-11:30	Coastal Vulnerability Assessments: concepts
	Presenter: Robert Nicholls, Middlesex University, UK
11:30-12:30	Review of coastal vulnerability assessment methodologies
	Presenter: Robert Nicholls
12:30-2:00	Lunch
2:00-3:30	Coastal Vulnerability Assessments: examples from the world and the region
	Presenters: Robert Nicholls
3:30-3:45	Coffee Break
3:45-5:30	CPACC proposed methodology and discussion
	Presenters: Robert Nicholls
	Leonard Nurse

Tuesday, March 30, 1999

8:00-8:30	Breakfast
8:30-10:30	Country Presentations: screening assessment matrix
	Presenters: Barbados
	Grenada
	Guyana
	Moderator: Leonard Nurse
10:30-10:45	Coffee Break
10:45-12:30	Country Presentations: discussion and review by experts
	Panel: Leonard Nurse
	Robert Nicholls

12:30-2:00	Lunch
2:00-5:30	Group discussions by country to discuss country circumstances, available information, human and technical needs, time table; prepare country proposals; pilot sites for implementation.

Wednesday, November 25, 1998

8:00-8:30	Breakfast
8:30-10:15	Reports/proposals by country
	Presenters: Barbados
	Grenada
	Guyana
	Moderators: Leonard Nurse
10:15-10:30	Coffee Break
10:30-12:30	Discussion and plan of action for component implementation
	Moderators: Leonard Nurse
	Claudio Volonte
	Robert Nicholls
12:30-2:00	Lunch
2:00-5:30	Field Trip (Grand Anse, Greneville, Telescope, Vitoria)