

GUINEA CURRENT LARGE MARINE ECOSYSTEM PROJECT



REPORT ON THE REGIONAL TRAINING WORKSHOP ON THE APPLICATION OF GIS IN FORMULATION AND IMPLEMENTATION OF INTEGRATED COASTAL AREA MANAGEMENT IN THE GUINEA CURRENT REGION

LAGOS, NIGERIA 6 – 10 DECEMBER, 2004



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1. INTRODUCTION

The Workshop was convened to expose participants to the application of GIS (Geographic Information Systems) in the formulation and implementation of Integrated Coastal Area Management. It was organized by the International Centre for Science and High Technology of the United Nations Industrial Development Organization (ICS-UNIDO) in collaboration with the Guinea Current Large Marine Ecosystem (GCLME) Project and the University of Lagos.

Participants came from all the participating countries except Angola, Liberia, and Equatorial Guinea (refer to Annex C for the list of participants). Most of the participants had a working knowledge of GIS and remote sensing. It was therefore very easy for them to follow the lectures.

2. OPENING CEREMONY

The opening ceremony took place at the University of Lagos Julius Berger Building. Speeches were delivered by the Vice-Chancellor, University of Lagos, the UNIDO Country Representative, the GCLME Project Director and the Representative of the Honourable Minister for Environment, who also declared the Workshop open.

3. TECHNICAL SESSION

Following the opening ceremonies, the Workshop took off with a brief introduction of the objectives of the Workshop, by Dr. G. Longo, followed by the introduction of resource persons and participants. The Workshop lasted for five days (workshop programme in Annex A) and covered issues such as:

1. The Guinea Current Large Marine Ecosystem (GCLME) Project.
2. Perspectives in Integrated Coastal Area Management in the GCLME Region.
3. GCLME Regional Environmental Information Management System.

4. Remote Sensing Techniques and Data Analysis.
5. Remotely Sensed Data Extraction and Image Pre-processing.
6. Image Processing.
7. The Importance of Remote Sensing in the Integrated Management of Large Marine Ecosystem and GOOS (Global Ocean Observing System) Development.
8. Draft UNIDO/GEF Medium Size Project Proposal on Building Capacity for ICM in Support of Large Marine Ecosystems (LMEs) in Africa.
9. Advanced Decision-support Systems for the Sustainability of Industrial Processes.
10. Environmental Planning & Management for Conservation.
11. Methods for Monitoring Environmental Changes from Space.
12. Landscape Assessment: Various Locations of Ecological Landscape Value.
13. Land-cover Classification.
14. Analysis of Land-cover Changes.
15. Management-based Lecture on Integrated Coastal Area Management (ICAM): An Introduction to Coastal Landscape Issues.
16. GIS-based Decision Support Tools for the Management of Coastal Areas.
17. GIS for Land-cover Change Detection and Forecast.
18. Environmental Planning and Management for Conservation.
19. Optimal Site Planning: Fuzzy Set Membership, Multi-criteria Evaluation and Multi-objectives Land Allocation.

The lectures were structured in such a way that the resource persons presented their lectures first, followed by hands-on exercises on the systems in the form of practicals. The practicals were aimed at assessing the candidates' understanding of the topics.

4. OUTPUTS

The participants had a better understanding of the Environmental Information Management System (EIMS) component of the GCLME projects and the coordinating role the EIMS has to play in the entire project. For instance, the participants were able to appreciate the fact that EIMS will play a central role in decision-making. Eighty percent of all human activities are spatial and so are location based. It therefore follows that one of the central issues in the project is to obtain the coordinates of the issues of interest. If we are interested in a mangrove ecosystem, we would need both the coordinates of the locations of the mangrove ecosystem and the extent of the distribution. Methods of doing these include Remote Sensing and Global Positioning System (GPS).

5. SOCIAL EVENTS

Participants were hosted by the organizers of the Workshop to a dinner at Eko Hotels, Victoria Island, Lagos. The Vice-Chancellor also hosted the participants to a cocktail party.

6. CONCLUSION

The Workshop was very successful. It afforded the organizers the opportunity to develop a database of experts from the region in the field of GIS and ICAM. Annex B shows some photographs taken during the Workshop.

ANNEX A

WORKSHOP PROGRAMME

Day 1 Inauguration and Background Lectures

09:00- 09:30	Registration
09:30- 10:00	Opening Ceremony
	Welcome Speeches and Introduction to the Regional Training Workshop
	(i) UNIDO Representative in Nigeria and Director RIDC Abuja
	(ii) GCLME Regional Director
	(iii) ICS-UNIDO Representative
	(iv) UNILAG Vice Chancellor
	(v) Hon. Minister of Environment, Nigeria
10:00- 10:15	Introduction to ICS and UNIDO
	Presentation of Programme and Objectives
	Brief Introduction by Participants
10:15- 10:30	Coffee Break
10:30- 11:00	The Guinea Current Large Marine Ecosystem (GCLME) Project
	Mr. Chika Ukwe, GCLME Project Manager
11:00 -11:30	Perspectives in Integrated Coastal Area Management in the GCLME Region
	Mr. Chidi Ibe, GCLME Regional Director
11:30- 12:30	Management-based Lecture on ICAM: An Introduction to Coastal Landscape Issues - by Mr. Louis F. Cassar
12:30- 14:15	Lunch Break
14:15- 15:15	Advanced Decision-Support Systems for the Sustainability of Industrial Processes – by Mr. Gennaro Longo
15:15- 15:30	Coffee Break
15:30- 16:15	Environmental Information Management System as a Decision Support System:

- The Case of Guinea Current Large Marine Ecosystem – by DR. P. C. Nwilo,
University of Lagos
- 16:15- 17:00 The Importance of Remote Sensing in the Integrated Management of Large
Marine Ecosystems and GOOS Development in Africa – by Mr. J. Ahanhanzo,
IOC-UNESCO
- 17:00-17:45 Draft UNIDO/GEF Medium Size Project Proposal on Building Capacity for ICM
in Support of LME Projects in Africa – by Mr. C. Ukwé, UNIDO Industrial
Development Officer International Waters

Day 2 Methods for Analysis and Supporting Tools for ICAM

- 09:15- 10:15 Remote Sensing Techniques – by Mr. Alfredo Altobelli
- 10:15- 10:30 Coffee Break
- 10:30- 11:30 GIS-based Decision Support Tools for the Management of Coastal Areas – by
Mr. Mounir Ghribi
- 11:30- 12:30 Landscape Assessment: Various Locations of Ecological/Landscape Value – by
Mr. L. F. Cassar
- 12:30- 14:15 Lunch Break
- Hands-on Exercises** (Mr. A. Altobelli and Mr. M. Ghribi)
- 14:15- 15:15 Remotely Sensed Data Extraction and Image Pre-processing
- 15:15- 15:30 Coffee Break
- 15:30- 16:30 Image Processing

Day 3 Monitoring Environmental Changes

- 09:15- 10:15 Methods for Monitoring Environmental Changes from Space – by Mr. A.
Altobelli
- 10:15- 10:30 Coffee Break
- 10:30- 11:30 GIS for Land-cover Changes Detection and Forecast – by Mr. M. Ghribi

11:30- 12:30 Environmental Planning & Management for Conservation – by Mr. L. F. Cassar
12:30- 14:15 Lunch Break

Hands-on Exercises (Mr. A. Altobelli and Mr. M. Ghribi)

14:15- 15:15 Land-cover Classification
15:15- 15:30 Coffee Break
15:30- 16:30 Analysis of Land-cover Changes

Day 4 Optimal Site Planning

09:15- 10:15 Presentation of Case Studies by Participants
10:15- 10:30 Coffee Break
10:30- 11:30 Presentation of Case Studies (cont.)
11:30- 12:30 Optimal Site Planning: Fuzzy Set Membership, Multi-criteria Evaluation and Multi-objectives Land Allocation – by Mr. M. Ghribi
12:30- 14:15 Lunch Break
Hands-on Exercises (Mr. A. Altobelli and Mr. M. Ghribi)
14:15- 15:15 Multi-criteria Evaluation for Industrial Site Planning
15:15- 15:30 Coffee Break
15:30- 16:30 Multi-objective Land Allocation

Day 5 Closure

09:15- 10:15 Presentation of Case Studies (cont.)
10:15- 10:30 Coffee Break
10:30- 12:30 Presentation of Case Studies (cont.)
12:30- 14:15 Lunch Break
14:30- 16:30 Working Groups: Reports on Significant Remarks for Follow-up Actions
Closure of the Training Course: Conclusions and Recommendations

ANNEX B

WORKSHOP PHOTOGRAPHS



Consultants from ICS- UNIDO, Trieste Italy before the start of a Technical Session



The Acting UNIDO Representative in Nigeria, Dr. David Tommy with the GCLME Regional Director, Prof. Chidi Ibe



From L-R: Prof. Jide Alo (UNILAG), Mrs. Grace Ogolo (Ministry of Environment, Nigeria), Prof. Ibidapo-Obe (V.C. UNILAG), Prof. Chidi Ibe, Dr. Chika Ukwé (UNIDO) and Dr. Peter Nwilo (UNILAG), following the official Opening Ceremony



Participants on the road garden of the Lagos University Guest House



Group photo of the Participants



A Hands on Session during the Workshop

ANNEX C

LIST OF RESOURCE PERSONS AND PARTICIPANTS

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