



UNESCO-IHE
Institute for Water Education



IMPROVING MUNICIPAL WASTEWATER MANAGEMENT IN COASTAL CITIES IN ACP COUNTRIES



COURSE REPORT FOR CALABAR AND PORT HARCOURT WORKSHOPS

Submitted By



The Rivers State University of Science and Technology
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Contents

1.0	THE TRAINING COURSE	3
2.0	COURSE ORGANIZERS.....	3
3.0	SPONSORS	4
4.0	FINANCIAL REPORT.....	4
5.0	DETAILED REPORT ON THE CALABAR WORKSHOP.....	5
	Co-ordinating Team.....	5
	Instructors.....	6
	Day 1 - 15 th September 2008	6
	Day 2 - 16 th September 2008	7
	Day 3 - 17 th September 2008	7
	Day 4 - 18 th September 2008	8
	Day 5 - 19 th September 2008	9
6.0	DETAILED REPORT ON THE PORT HARCOURT WORKSHOP.....	9
	Co-ordinating Team.....	9
	Instructors.....	9
	Day 1 - 13 th October 2008	9
	Day 2 - 14 th October 2008	10
	Day 3 - 15 th October 2008	11
	Day 4 - 16 th October 2008	13
	Day 5 - 17 th October 2008	13
7.0	APPRECIATION.....	14
8.0	CONCLUSION	14
	ANNEXURE 1.....	15
	ANNEXURE 2.....	19
	ANNEXURE 3.....	20
	ANNEXURE 4.....	22
	ANNEXURE 5.....	23



1.0 THE TRAINING COURSE

Municipal wastewater discharges are severely impacting human health and sustainable development along the African, Caribbean and Pacific (ACP) coastlines. The United Nations Environment Programme Global Programme for Action for the Protection of the Marine Environment from Land-based Activities (UNEP-GPA), with its global mandate to reduce land-based sources of marine pollution is concentrating efforts to assist governments and municipalities to address pollution from untreated wastewater.



The UNESCO-IHE Institute for Water Education and the UNEP-GPA Coordination Office, jointly forming the Train-Sea-Coast GPA Centre, offers a 5-day intensive training course "Improving Municipal Wastewater Management in Coastal Cities." The training provides participants with analytical tools, substantive information and skills on how to select plan and finance appropriate and environmentally sound municipal wastewater management systems. The training is aimed at project managers at municipal level, mandated with the task to develop and manage municipal wastewater collection and treatment systems, often with very limited resources. The course contains four major components: (i) Objective oriented planning (OOP), (ii) Involvement of stakeholders in project planning and implementation including mobilizing local resources, (iii) Conventional and innovative approaches to municipal wastewater management; and (iv) Formulation and presentation of project proposals.



2.0 COURSE ORGANIZERS

The Rivers State University of Science and Technology is Nigeria's Premier University of Science and Technology. Founded in 1980, RSUST has 7 Faculties, a Postgraduate School and several Institutes. Among these Institutes are an

Institute for Pollution Studies and the Institute for Geosciences and Space technology which offers postgraduate courses in Environmental Management. The Vice Chancellor, Professor Barineme Beke Fakae is a distinguished scholar in the field of Veterinary Medicine and has special interests in the effective management of wastewater produced from abattoirs in Nigeria. Under his leadership, the University is pioneering research on the resource potentials wastewater produced by abattoirs and the feasibility of Biogas production and re-use.

The Course Co-ordinator, Dr (Mrs) Iyenemi Ibimina Kakulu is a Land Management Expert and a staff of the Department of Estate Management in the Faculty of Environmental Sciences - RSUST. The Faculty of Environmental Sciences and indeed the University, is committed to Lifelong Learning for Environment and Sustainable Development in Nigeria. RSUST is blazing the trail as a centre for excellence in this area through her capacity building initiatives and with strong support and commitment of the Government of Rivers State, Nigeria.



3.0 SPONSORS

The delivery of the course "Improving Municipal Wastewater Management in Coastal Cities" in Calabar and Port Harcourt -Nigeria, was made possible with support from the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities Co-ordination Office in Geneva through funding from UNDP-GEF and the EU

4.0 FINANCIAL REPORT

RSUST-EM received an advance sum of US\$22,875 representing 75% of the approved MOU budget total sum of \$30,500 (Thirty Thousand and Five Hundred Dollars, only) from UNEP for the local organization of the delivery of the training course on "Improving Municipal Wastewater Management in Coastal Cities" in

Calabar and Port Harcourt. Exchange rate used during the delivery of the courses was NGN118 to USD\$1.

This report shows a total expenditure of US\$30,500 including bank charges which amounted to over USD\$300 (Annex 1). Additional support was received from RSUST and the University of Calabar. While spending did not comply entirely with the allocated budget, in the individual categories overspending or under-spending occurred. The outstanding MOU balance of US\$7,625 is now due for payment.

5.0 DETAILED REPORT ON THE CALABAR WORKSHOP

Co-ordinating Team

Dr (Mrs) Iyenemi Ibimina Kakulu	- RSUST (Course Co-ordinator)
Mr Utchay Okorji	- RSUST
Miss Chika Mpi	- Logistics PHC
Mr Charles Ikenna Eze	- Logistics PHC
Dr (Mrs) Elizabeth Anrew-Essien	- UNICAL (LOC Co-ordinator)
Mrs Jicenta N. Foncha	- UNICAL
Mr Princewill Odum	- UNICAL
Mr Gabriel Ekpo	- UNICAL

Members of Port Harcourt Team paid two pre-training visits to Calabar to hold meetings with our partners at the University of Calabar - U. Okorji on 19/08/2008; I.I. Kakulu & U. Okorji on 2/09/2008. The purpose of the meeting was to discuss logistics details, meet with potential stakeholders, to select an appropriate venue for the training course and conclude accommodation arrangements for the instructors, co-instructors and potential instructors.

The full team arrived in Calabar on Saturday 13th September 2008 and were received by Dr Elizabeth Andrew-Essien. On Sunday 14th September, Dr Erik De Ruyter van Steveninck the UNESCO-IHE instructor arrived as well as the Regional co-instructor from Ghana - Mr Lambert Faabeluon and a potential instructor from Lagos, Mr Sewanu Adebodun-Toplonu. The team also paid a courtesy visit to Professor Francis Bisong, Head, Department of Geography and Regional Planning, University of Calabar.

Instructors

Dr. Erik de Ruyter van Steveninck - UNESCO-IHE - Main Instructor, Mr Lambert Faabeluon - International Co-instructor, Dr (Mrs) I.I. Kakulu - Regional Co-instructor

Day 1 - 15th September 2008

Registration commenced at 8.30 a.m. and the workshop commenced at 9.45 a.m. with a formal opening ceremony. Professor Francis Bisong of UNICAL welcomed the team of instructors and participants to the course. Dr (Mrs) Iyenemi Ibimina Kakulu welcomed the team on behalf of the Government of Rivers State and the Vice Chancellor of the Rivers State University of Science and Technology (RSUST), Professor Barineme Beke Fakae. Dr Erik De Ruyter of UNESCO-IHE introduced the course and gave a brief explanation about UNEP-GPA involvement on this course as well as UNDP-GEF and the EU.

The course programme was introduced - see Annex 2. Contents of the first module on Problem Analysis were facilitated by Dr. Erik de Ruyter van Steveninck. This session included the identification of problems and the process of problem analysis. Sample problems were discussed thoroughly to aid the participants in the process of identifying focal problems and their associated causes. The steps in problem analysis were emphasized. The participants were divided into four (4) groups for workshop purposes.



1 - Group Photograph on Day 1

A case study on the wastewater management in Speranza was introduced. Each group was asked to prepare a problem tree and present their outputs. Each group discussed different stakeholder groups as follows:

Group 1 - Green Corazon

Group 2 - Hotel Owners

Group 3 - Healthy Corazon

Group 4 - Local Farmers

The module on Presentations Techniques was facilitated by Dr Kakulu. The major highlight of the session was a role play by Dr. Erik de Ruyter van Steveninck as Professor Acorn who delivered a very lively sample presentation. The exercise of the session was for the participants to comment on his style of presentation. Constructive comments were collected from the participants and key points for a successful presentation were discussed.

Day 2 - 16th September 2008

Dr. Erik de Ruyter van Steveninck facilitated this session during which the Problem Tree Analysis done by the different groups were presented, commented upon and discussed. Objectives Analysis was introduced based on the Problem Tree discussion, tacked in this session was the Objective Analysis. After lecture, again the participants went into their group workshops to prepare their Objective Tree. Participants were given a mastery test form to be filled-up and submitted before the award of their certificates.

Day 3 - 17th September 2008

A Stakeholder Day was planned to allow course participants to discuss issues with various stakeholders in the wastewater management and sanitation fields. This session took place on the morning of Wednesday. The day commenced with participants presenting their objectives trees in a session coordinated by Mr Lambert Faabeluon. This was followed by a field trip to the Calabar Marina and a local abattoir.

The field trip uncovered a lot of wastewater management issues and was followed by the stakeholder analysis session. Mr Robert Bechtloff, the UNEP-GPA Programme Officer and Mr Kizito Masinde Kubasu from Nairobi were both present during the stakeholder interview session.



2- Photograph of the Group at the Marina in Calabar

Day 4 - 18th September 2008

Dr Kakulu commenced the session on Thursday with Financial Approaches to Municipal wastewater management.



3 - Cross Section of participants

The following were addressed in her presentation: Traditional approaches to financing wastewater management; the need for an alternative approach; and alternatives for financing wastewater management. Also discussed in this session were the sources of finance through tariffs, grant finance, loans, market

financing, revolving funds and other income sources. Participants continued working in groups towards their presentation on Friday.

Day 5 – 19th September 2008

The whole morning of day 5 was spent on proposal preparation. All 4 groups completed their tasks and group presentations were made. The presentations were of high quality showing mastery of the course within such a short period. The course evaluation forms were filled and the closing formalities were taken by Mr Robert Bechtloff and certificates were awarded to 28 participants in all. The workshop ended with a closing cocktail. See Participants List in Annex 3

6.0 DETAILED REPORT ON THE PORT HARCOURT WORKSHOP

Co-ordinating Team

Dr (Mrs) Iyenemi Ibimina Kakulu	- RSUST (Course Co-ordinator)
Mr Dumo Mac-Barango	- RSUST
Mr Moses B. Baridoma	- RSUST (LOC Co-ordinator)
Mr Charles Ikenna Eze	- Logistics
Mr Ibinabo Owuti	- Logistics
Mr A. Amadi	- Logistics
Mr Boma Horsfall	- Logistics
Miss Chinenye O.	- Logistics
Miss Florence Gbarabe	- Logistics

Instructors

Mr Daniel Amlalo of Ghana Environmental Protection Agency and Dr (Mrs) I.I. Kakulu

Day 1 – 13th October 2008

Registration commenced at 8.30 a.m. and the workshop commenced at 9.45 a.m. with a formal opening ceremony.

Professor Akpezi Ogbuigwe of UNEP, Nairobi, declared the workshop open along with the Acting Registrar Mrs D.C. Odimabo and Mr Daniel Amlalo of the Ghana Environmental Protection Agency. The Mrs Odimabo welcomed the participants on behalf of the Government of Rivers State and the Vice Chancellor of the Rivers State University of Science and Technology (RSUST), Professor Barineme Beke Fakae. Dr Kakulu and Mr Amlalo introduced the course and gave a brief explanation about UNEP-GPA involvement on this course as well as UNDP-GEF and the EU.



4 - Group Photograph

The course programme was introduced - see Annex 4. Contents of the first module on Problem Analysis were facilitated by Mr Amlalo. The session included the identification of problems and the process of problem analysis. Sample problems were discussed thoroughly to aid the participants in the process of identifying focal problems and their associated causes. The steps in problem analysis were emphasized. The participants were divided into four (4) groups for workshop purposes.

A case study on the wastewater management in Speranza was introduced. Each group was asked to prepare a problem tree and present their outputs. Each group discussed different stakeholder groups as follows:

- Group 1 - Green Corazon
- Group 2 - Hotel Owners
- Group 3 - Healthy Corazon
- Group 4 - Local Farmers

The major highlight of the session was a role play by Mr Amlalo as Professor Acorn who delivered a very lively sample presentation. The exercise of the session was for the participants to comment on his style of presentation. Constructive comments were collected from the participants and key points for a successful presentation were discussed.

Day 2 - 14th October 2008

Dr Kakulu re-capped the previous day's session and introduced Conventional Approaches and alternative technologies in wastewater management. Mr Amlalo facilitated subsequent sessions. The Problem Tree Analysis done by the different

groups were presented, commented upon and discussed. Objectives Analysis was introduced based on the Problem Tree discussion. After the lectures, the participants continued their group work and prepared and presented their Objective Tree. Participants were given a mastery test form to be filled-up and submitted before the award of their certificates.



5 - Cross section of Participants

Day 3 - 15th October 2008

A Stakeholder Day was planned to allow course participants to discuss issues with various stakeholders in the wastewater management and sanitation fields. This session took place on the morning of Wednesday. The day commenced with a continuation of Innovative approaches and alternative technologies by Dr Kakulu who introduced the 3-step strategic approach. She also made an introduction to stakeholder analysis.



6 Field Trip Photos

This was followed by a field trip to the Trans-Amadi-Woji Bridge Abattoir and a typical sewage disposal site within the Port Harcourt metropolis. The field trip uncovered a lot of wastewater management issues and was followed by the stakeholder analysis session.



7 - Abattoir Waste and soot



8 - Sewage disposal site.

Three Invited stakeholders were interviewed.

Day 4 - 16th October 2008

Dr Kakulu commenced the session on Thursday with Financial Approaches to Municipal wastewater management. This was followed with a session on Options Analysis taken by Mr Amlalo. Participants continued working in groups towards their presentation on Friday.

Day 5 - 17th October 2008

The whole morning of day 5 was spent on proposal preparation. All 4 Groups completed their tasks and group presentations were made to a panel of three namely: Mr Amlalo, Mr Dumo Mac Barango and Mr Moses Baridoma. The presentations were of high quality showing mastery of the course within such a short period. Engr Lawrence A. Kakulu of SPDC announced the winning team.



9- Presentation of Certificates

The course evaluation forms were filled and the closing formalities were taken by The Acting Registrar, Mrs D.C. Odimabo, Engr. Lawrence Kakulu, Mr Daniel Amlalo and Dr (Mrs) I.I. Kakulu. 24 participants in all were awarded certificates. See Participants List in Annex 5.

7.0 CONCLUSION

The allocated budget for the delivery of the Municipal Wastewater Management course was US\$30,500.00 of which US\$22,875.00 has been received. RSUST managed to come in almost exactly on budget, but there is a shortfall in income between the budget and what has been received to date. The release of the balance of **USD\$7,625.00** is therefore requested on acceptance of this report.

7.0 APPRECIATION

The Rivers State University of Science and Technology (RSUST) wishes to extend her gratitude to our sponsors for their generous support. We also acknowledge the collaboration efforts of the Environmental Protection Agency of Ghana; the University of Calabar through the Department of Geography and Regional Planning; the Department of Estate Management, RSUST; and the Rivers State Ministry of Environment for their involvement and contribution to the overall success of the programme.

Technical Report prepared
by

Dr (Mrs) Iyenemi Ibimina Kakulu
Course Coordinator, TSC Course
17th November 2008

Technical Report Approved
by

Professor Barineme Beke Fakae
Vice Chancellor, RSUST
19th November 2008

ANNEXURE 1

RSUST/EM – UNEP GPA SSFA - Expenditure Statement for TSC delivery in Calabar and Port Harcourt, Nigeria

PROJECT PERSONEL COMPONENT					
Item No.	ANNEX-B Description	SSFA Budget \$USD	RSUST Detailed Description	Detailed Expenditure	Total Expenditure \$USD
10	1200 Coordination (incl. guest speakers)	2,450	1. Honorarium to invited Stakeholders. 4 in Calabar and 3 in Port Harcourt	550	2,450
			2. Facilitation of Project team of 10 persons. (Courtesy of RSUST and UNICAL) – UNEP Contribution:	1900	
	1201 Consultancies, 2 co-instructors from Nigeria and Ghana 2*2*9 days @ 140 USD/day (including preparation) Calabar (one from Ghana, one from Nigeria) and Port Harcourt (two from Nigeria)	5,040	3. Consultancies paid to 1 International and 1 Regional co-instructor at 140 USD/day for 9 days (including 3 days preparation).	2520	5,040
			4. Consultancies paid to 1 International and 1 Regional instructor for Port-Harcourt workshop @ 140 USD/day for 9 days (including 3 days preparation)	2520	
	1202 Consultancies, 2 new instructors from Nigeria 2 * 7 days @ 140 USD/day (including preparation)	2,520	5. Consultancies paid to 2 potential instructors. 1 from Lagos and 1 from Calabar @140 USD/day for 7 days (including 1 day preparation)	1,960	1,960
1300 Administrative support	2,500	6. Temporary project secretariat in Calabar and RSUST, admin staff and other follow-up logistics support personnel. (Courtesy of UNICAL and RSUST), -UNEP Contribution	2,500	2,500	
1999	Component Total	12,510			11,950

TRAINING COMPONENT					
Item No.	ANNEX-B Description	SSFA BUDGET \$USD	RSUST Detailed Description	Detailed Expenditure	Total Expenditure \$USD
30	3201 Group Training (workshops, seminars etc.) Venue Port Harcourt and Calabar, audio-visual equipment, field trip, banners.	10,300	7. Venue and Meeting rooms in Calabar and Port Harcourt. (80% hall hire discount from RSUST for Port Harcourt Work shop), -UNEP Contribution	1,600	10,750
			8. Lunch and Snacks and Drinks (70*15*5days)	4,597	
			9. Equipment: Flip Charts, Photocopying Facilities, LCD Projector, Computer facilities, Printer with additional support from UNICAL and RSUST, -UNEP Contribution:	1234	
			10. Publicity and Media coverage: Banners, Press etc. Workshop Bags (60*\$4)	1100	
			11. Transportation and Logistics from Port Harcourt to Calabar, in Calabar and in Port Harcourt with additional support from RSUST,- UNEP Contribution:	1550	
			12. Hiring of Bus for field trip with support from RSUST, -UNEP Contribution:	800	

30 Contd	3202 Travel and DSA 1 international co-instructor (1 x Accra – Calabar) 1 Regional co-instructor from Port Harcourt Travel and DSA	2,832	13. Flight, transportation logistics and transit accommodation for 2 nights in Lagos for 1 International co-instructor (1*Accra to Calabar) and 1 International Instructor (1*Accra to Port Harcourt).	1298	2690
			14. Transport and transit logistics for 1 International IHE Instructor, UNEP Representative from Nairobi and Programme Officer from Geneva (With support from NLNG and LASEPA):	220	
			15. DSA for 2 co-instructors in Calabar (\$123USD*2*6 nights)	1,476	
			16. Travel and logistics for one Regional co-instructor from Port-Harcourt to Calabar (Courtesy RSUST). Travel cost for two additional potential instructors from RSUST	178	
	3203 Travel and DSA of 2 national potential new instructors to Calabar (ToT) and One national instructor to Port Harcourt	3,356	17. DSA for 1 potential national instructor in Calabar (\$123USD*1*6) plus Accommodation support for 2 additional potential national instructors from RSUST	1,365	3,245
			18. DSA for 1 Regional instructor in Port-Harcourt (\$175USD*1*6 days)	1,050	
			19. Travel costs for 1 potential instructor and 1 International co-instructor from Lagos to Calabar and 1 international instructor from Lagos to Port Harcourt.	915	
3999	Component Total	16,488			17,383

MISCELLANEOUS COMPONENT					
Item No.	ANNEX-B Description	SSFA BUDGET \$USD	RSUST Detailed Description	Detailed Expenditure	Total Expenditure \$USD
50	5200 Reporting costs	1502	20. Compilation and production of final report for UNEP-GPA – Mainly Courtesy of UNICAL and RSUST, -UNEP Contribution	862	1167
			21. Bank COT Charges on Account for withdrawals @ 1% of \$USD22,865 and Bank COT Charges @ 1% on withdrawal upon receipt of MOU Balance \$USD7,625	305	
5999	Component Total	1502			1,167

Total Sum Advanced is = **\$USD 22,875.00** (Twenty-two Thousand, Eight Hundred and Seventy-five Dollars), only.

Total Expenditure is = **\$USD 30,500.00** (Thirty Thousand and Five Hundred Dollars), with support from RSUST and UNICAL

Balance Outstanding now due for payment is **USD\$ 7,625.00** (Seven Thousand, six hundred and twenty-five US Dollars) only.

Financial Statement prepared
by

Dr (Mrs) Iyenemi Ibimina Kakulu
Course Coordinator, TSC Course

Financial Statement Approved on 19th November, 2008
by

Professor Barineme Beke Fakae
Vice Chancellor, RSUST

ANNEXTURE 2

Programme for Calabar Workshop

Improving Municipal Wastewater Management in Coastal Cities Calabar, September 15-19, 2008					
Time	Day 1	Day 2	Day 3	Day 4	Day 5
08:30-10:15	Registration 09:30 Opening	Problem analysis: presentations by participants	Stakeholder analysis: lecture and group assignment	Evaluation field trip and involvement of stakeholders: discussion	Preparation proposal: group assignment
10:15-10:30	Coffee/tea break	Coffee/tea break	Coffee/tea break	Coffee/tea break	Coffee/tea break
10:30-12:30	Introduction to the course	Conventional approaches and alternative technologies: lecture and discussion	Field trip	Financial approaches to municipal wastewater management: lecture	Preparation proposal: group assignment
12:30-13:30	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
13:30-15:15	Problem analysis: lecture and group assignment	The way forward: the 3-step strategic approach: lecture and discussion	Invited stakeholders: interviews	Options analysis and Writing the feasibility report: lecture	Presentations proposals: presentations by participants
15:15-15:30	Coffee/tea break	Coffee/tea break		Coffee/tea break	Coffee/tea break
15:30-17:00	Problem analysis: hand in written group assignment	Objectives analysis: Lecture, group assignment and presentations by participants		Preparation proposal: group assignment	Evaluation Closing Farewell drinks

ANNEXURE 3
PARTICIPANTS LIST FOR CALABAR WORKSHOP

S/NO	Names	DESIGNATION / POSITION	SEX	FULL CONTACT ADDRESS	E-MAIL	PHONE
1	Elegance Edim		M	CUDA, Calabar		08033486937
2	Akintoye Oluyemi Ayorinde	Lecturer	M	Dept. of Geo. & Reg. planning, UNICAL	oluwayemijubilee@yahoo.co.uk	08052013949
3	Inwang Christiana I. N	Supervisor	F	Tourism Bureau	inguishie@yahoo.com	08057633960
4	Owan Pius Richard	Proj. Coordinator	M	Tourism Bureau	Ask4peejay@yahoo.com	08064232627, 08055863999
5	Engr. James E. Ekaba	Asst. Director (Engineering)	M	Cross Rivers State Water Board	James_ekabua@yahoo.com	08056767841
6	Emmanuel E. Basse	Director of Works	M	Calabar Municipal Council	engreebssy@yahoo.com	08037096465
7	Gabriel Unimke Atebi	Asst Director/ Head, Lab. Serv.	M	(RUDA/ RUWATSSA, Water Board Premises, Calabar	gabrielatebi@yahoo.com	08037626199
8	Adebodun – Toplonu Sewanu	Asst. Chief Sci Officer	M	Lagos State EPA	detop4real@yahoo.com	08033157290
9	Edet Ekpo Edet	Supervisor(Eenvt Sanitation&H ₂ O Supply)	M	Calabar Municipal Council	Edee_tec@yahoo.com	08037100625, 08075677770
10	Engr. Nyong Ekpenyong I.	Director	M	(RUWATSSA Water Board Premises, Calabar	ekpenyoungibah@yahoo.com	08027426072
11	Mr Ndemita Okon Ndem	Director	M	CRS. Water Board Ltd, Calabar	nonadem@yahoo.com	08036737371
12	Udono Emmanuel Nya	Snr. Manager	M	CROSSPIL	emmanudono@yahoo.co.uk	08037041622
13	Arc. Essien O Oku		M	CUDA, Calabar		08036272204
14	Jicenta N. Foncha	Ph. D student	F	Dept. of Geo. & Reg. planning, UNICAL	Jacinta_Foncha@yahoo.com	08068923829
15	Lilian Ekanem	Comm Mobilization Specialist	F	EU/WSSSRP, Water Board, Calabar	ekanemlilian@yahoo.com	08077014051
16	Elizabeth Andrew-		F	Dept. of Geo. & Reg. planning,	liessien@yahoo.ca	08023903999

	Essien			UNICAL		
17	Lambert Faabeluon	Deputy Director	M	EPA TEMA, Box AS11, Com 22	ifaabeluon@epaghana.org	233-22-310009
18	Richard Ita Ita	Supervisor	M	Calabar Municipal Council	Itarich2007@yahoo.com	08038489415
19	Dr (Mrs) Caroline A. Etim	Supervisor	F	Municipal Council, CRS	caikpoe@yahoo.com	07038041254, 08023257016
20	Princewill Ode Odum	Youth Corps (Graduate Assistant)	M	Dept. of Geo. & Reg. planning, UNICAL	successfullprince@yahoo.com	08025360375
21	Godwin Unor Ilem	Deputy Director	M	Ministry of Environment	ilemoholoh@yahoo.com	08064355638
22	Linus Beba Obong		M	Dept. of Geo. & Reg. planning, UNICAL	linusobong@yahoo.com	08037370227
23	Christopher Ukam O.	Deputy Director (Engr.)	M	CRSWBL		08055157900
24	Duma Mac-Barango	H.O.D.	M	Dept. of Quantity Survey	dumomac@yahoo.com	08058466067
25	Baridoma Moses Baridi	H. O. D	M	Dept of Est. Mgt. RSUST. PortHarcourt	Mozito4u@yahoo.com	08033083163
26	Ushaka A. Ushaka	H.O.D. Eenvt Lab	M	CRS Ministry of Environment	Ushakaushaka@yahoo.com	08027175641

ANNEXURE 4

Programme for Port Harcourt Workshop 13th to 17th October 2008

	Day 1	Day 2	Day 3	Day 4	Day 5
08:30-10:00	09:30 Opening	Conventional approaches and alternative technologies	Stakeholder analysis & interviews	Field trip evaluation Financial approaches to municipal wastewater management	Introduction proposal presentation Preparation proposal
10:00-10:30	Coffee/tea break	Coffee/tea break	Coffee/tea break	Coffee/tea break	Coffee/tea break
10:30-12:00	Introduction	Objectives analysis* Presentations Objectives analysis	Field Trip	Financial approaches to municipal wastewater management Water management in the city of tomorrow	Preparation proposal
12:00-13:30	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
13:30-15:00	Problem analysis	Presentations Problem analysis Objectives analysis	Stakeholder analysis & interviews* Presentations Stakeholder interviews	Options analysis: making the long-list	Presentations proposals*
15:00-15:30	Coffee/tea break	Coffee/tea break		Coffee/tea break	Coffee/tea break
15:35-17:30	Problem analysis* Oral presentations	Conventional approaches and alternative technologies The way forward: the 3-step strategic approach		Options analysis Writing the feasibility report	General discussion Evaluation Farewell drink

ANNEXURE 5
LIST OF PARTICIPANTS AT THE PORT HARCOURT WORKSHOP

S/No	NAME	ORGANIZATION	ADDRESS	TELEPHONE	EMAIL
1.	Miss Chika Bariala Mpi	IBK and Associates, Estate Surveyors and Valuers	16B Road 2, Fed Ministry of Works and Housing Estate, Mile 4 Rumueme PH	+234 803 092 1935	barialampi@yahoo.co.uk
2.	Mr Chuka Dean Ogoegbu	Logistics Department, Nigerian Agip Oil Company Ltd.	Logistics Department, OB/OB Gas plant, NAOC Ltd, Port Harcourt	+234 803 750 1849 +234 802 820 1629 +234 807 425 9927	chuka.ogoegbu@naoc.gip.it chukaog@yahoo.com
3.	Dr. Gods'will Benjamin Ukoikpoko	Livestock/Vetinary Service Department, Ministry of Agriculture	Flat 1, AZ EST. Rumuagholu Port Harcourt	+234 803 340 5245	gbukoikpoko@yahoo.com
4.	Engr. Reuben Nwomandah Okparanma	Rivers State University of Science and Technology	Department of Agriculture and Environmental Engineering, RSUST Port Harcourt	+234 803 262 6169	rokparanma@yahoo.com
5.	Mr Sunday Ahusi Onuigwe	Rivers State Housing and Property Development Authority	Rivers State Housing and Property Development Authority, Moscow Road Port Harcourt	+234 803 671 7559	-
6.	Mr Henry Urombo	Rivers State Housing and Property Development Authority	Rivers State Housing and Property Development Authority, Moscow Road Port Harcourt	+234 805 714 1767 +234 802 310 8159	henryu16@yahoo.com
7.	Mr Moore Maclean	Rivers State Ministry of	Ministry of Environment,	+234 803 338 1736	-

	Ubuo	Environment	State Secretariat Complex, Port Harcourt		
8.	Idereghi Thomas Ogbokuma	Rivers State Ministry of Environment	Ministry of Environment, State Secretariat Complex, Port Harcourt	+234 803 877 5305	-
9.	Mrs Hannah Ezinma Magnus Uku	Livestock/Vetinary Service Department, Ministry of Agriculture	Livestock/Vetinary Service Department, Ministry of Agriculture, State Secretariat Complex, Port Harcourt	+234 803 669 265	ezinmah.uku@yahoo.com
10.	Barr. Sopakirite Kuruye-Alele	Kuruye-Alele and Associates (Barristers and Solicitors)	Plot 1B, Shalom Drive, Old GRA Extension, Port Harcourt	+234 802 312 1240	kuruyealeleassociates@yahoo.com sopakirite@yahoo.com
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