

**SEVENTH FRAMEWORK PROGRAMME
THEME 6
Environment (Including Climatic Change)**

Grant agreement for:

Coordination and Support Actions (Coordinating)

Annex I - "Description of Work"

Project acronym: IWWA

Project full title: Integrated Waste Management in Western Africa

Grant agreement no.: 244188 – IWWA- CSA - CA

Date of preparation of Annex I (latest version): 17/11/2011

Date of approval of Annex I by Commission: *(to be completed by Commission)*

List of Beneficiaries

Beneficiary Number *	Beneficiary name	Beneficiary short name	Country	Date enter project**	Date exit project**
1 (coordinator)	Verein zur Förderung des Technologietransfers an der Hochschule Bremerhaven e. V.	TTZ	Germany	Month 1	Month 24
2	Bioazul S.L.	BIOAZUL	Spain	Month 1	Month 24
3	Eidgenoessische Materialpruefungs - Und Forschungsanstalt	EMPA	Switzerland	Month 1	Month 24
4	Sveriges Lantbruksuniversitet	SLU	Sweden	Month 1	Month 24
5	Öko-Institut e.V. – Institut für angewandte Ökologie	OEKO	Germany	Month 1	Month 24
6	Fundación Gaiker	GAIKER	Spain	Month 1	Month 24
7	Technische Universität Berlin	TUB	Germany	Month 1	Month 24
9	Enda Tiers Monde	ENDA	Senegal	Month 1	Month 24
11	Regional Council of Matam	MATAM	Senegal	Month 1	Month 24
12	Institut Africain de Gestion Urbaine	IAGU	Senegal	Month 1	Month 24
13	Zoomlion Ghana Limited	ZOOM	Ghana	Month 1	Month 24
15	Kwame Nkrumah University of	KNUST	Ghana	Month 1	Month 24

IWWA (Project number 244188)

	Science and Technology				
16	Basel Convention Regional Coordinating Centre for Africa	BCRC	Nigeria	Month 1	Month 24
17	Environmental Law Research Institute	ELRI	Nigeria	Month 1	Month 24
19	University of Abobo Adjamé	UAA	Côte d'Ivoire	Month 1	Month 24
20	Centre for Environment and Development for the Arab Region and Europe	CEDARE	Egypt	Month 1	Month 24
21	Influential Inputs cc T/A Icando	ICANDO	South Africa	Month 1	Month 24
22	Centre for Environmental Impact Analysis	CEIA	Ghana	Month 3	Month 24

Table of contents:

List of Beneficiaries.....	1
Table of contents:.....	3
PART A	4
Budget breakdown and project summary.....	4
□ PART B.....	6
B1. Concept and objectives, contribution to the coordination of high quality research, quality and effectiveness of the coordination mechanism and associated work plan.....	6
B 1.1 Concept and project objective(s)	6
B 1.2 Contribution to the coordination of high quality research	8
B 1.3 Quality and effectiveness of the coordination mechanisms and associated work plan	9
B 1.3.1 Overall strategy and general description:.....	9
B 1.3.2 Timing of work packages and their components:.....	10
B 1.3.3 Work package list / overview:	13
B 1.3.4 Deliverables list:	14
B 1.3.5 Work package descriptions:.....	17
B 1.3.6 Efforts for the full duration of the project:	40
B 1.3.7 List of milestones and planning of reviews:.....	44
B2. Implementation.....	46
B 2.1 Management structure and procedures	46
B 2.1.1 Organisational and decision-making structure	46
B 2.1.2 Communication strategy	49
B 2.1.3 Meetings and reporting	50
B 2.2 Beneficiaries.....	50
B 2.3 Consortium as a whole	65
Sub-contracting:	67
B 2.4 Resources to be committed	68
B3. Impact	71
B 3.1 Strategic impact.....	71
Environmental impacts:	71
Awareness raising and capacity building:	71
Economic and social impacts:.....	72
Contribution to Policy Development:	72
B 3.2 Spreading excellence, exploiting results, disseminating knowledge.....	72
Management of intellectual property:	73

PART A**Budget breakdown and project summary**

- Budget breakdown form (copy of A3.2 form of the GPFs):

**A3.2:
what it costs:**

Project number	244188	Project Acronym	IWWA
-----------------------	--------	------------------------	------

One form per project

Participant number in this project	Participant short name	Estimated eligible costs (whole duration of the project)				Total receipts	Requested EC contribution
		Coordination / Support (A)	Management (B)	Other (C)	Total A+B+C		
1	TTZ	138.934,22	44.692,56	0,00	183.626,78	0,00	132.756,52
2	BIOAZUL	69.688,00	22.272,00	0,00	91.960,00	0,00	82.268,50
3	EMPA	97.110,00	0,00	0,00	97.110,00	0,00	86.589,75
4	SLU	64.596,00	0,00	0,00	64.596,00	0,00	57.598,10
5	OEKO	149.042,23	0,00	0,00	149.042,23	0,00	78.924,81
6	GAIKER	69.644,15	0,00	0,00	69.644,15	0,00	38.447,78
7	TUB	48.960,00	0,00	0,00	48.960,00	0,00	43.656,00
9	ENDA	56.160,00	0,00	0,00	56.160,00	0,00	50.076,00
11	MATAM	36.840,00	0,00	0,00	36.840,00	0,00	32.849,00
12	IAGU	65.955,00	0,00	0,00	65.955,00	0,00	58.809,88
13	ZOOM	53.880,00	7.140,00	0,00	61.020,00	0,00	54.409,50
15	KNUST	41.340,00	0,00	0,00	41.340,00	0,00	36.861,50
16	BCRC	64.649,48	0,00	0,00	64.649,48	0,00	57.645,79
17	ELRI	43.172,79	0,00	0,00	43.172,79	0,00	38.495,73
19	UAA	48.120,00	0,00	0,00	48.120,00	0,00	42.907,00
20	CEDARE	47.760,00	0,00	0,00	47.760,00	0,00	42.586,00
21	ICANDO	41.460,00	0,00	0,00	41.460,00	0,00	36.968,50
22	CEIA	31.440,00	0,00	0,00	31.440,00	0,00	28.034,00
TOTAL		1.168.751,87	74.104,56	0,00	1.242.856,43	0,00	999.884,35

Project summary form (copy of A1 form of the GPFs):

A1: Our project

Project Number ¹	244188	Project Acronym ²	IWWA
-----------------------------	--------	------------------------------	------

One form per project

General information

Project title ³	INTEGRATED WASTE MANAGEMENT IN WESTERN AFRICA		
Starting date ⁴	Start date to be notified; must lie within 0 months of grant agreement signature		
Duration in months ⁵	24		
Call (part) identifier ⁶	FP7-ENV-2009-1		
Activity code(s) most relevant to your topic ⁷	ENV.2009.3.1.3.1: Supporting sustainable nationwide and local waste processing industry in ACP countries: legal framework, economical incentives, business/ organisational know-how		
Free keywords ⁸	waste management, ISWM, solid waste Africa, Life Cycle Assessment, Waste Policy		

Abstract ⁹ (max. 2000 char.)

Most of African countries are struggling towards development and improving their living conditions. An appropriate waste management structure at a national and regional level is a milestone that must be achieved in order to improve living standards, health and environment. The situation in many countries is that the obvious lack of a functional waste management system brings perennial garbage problems such as inefficient garbage collection, poor public compliance to waste segregation, uncontrolled open burning, and tolerated presence of open dumpsites. Furthermore valuable resources are lost due to inefficient or non-existing recycling systems. The establishment of an efficient waste management and recycling system contributes to enhancing the resource efficiency of these countries and thus supports a sustainable development in the long-term. The present Coordination Action will seek the establishment of Integrated Solid Waste Management systems (ISWM) in Western Africa. ISWM systems combine waste streams, waste collection, treatment and disposal methods, with the objective of achieving environmental benefits, economic optimization and societal acceptability. For the achievement of the project objectives, a solid waste management expert and research co-ordination platform will analyze the current situation in the targeted countries (Ghana, Nigeria, Senegal and Ivory Coast), identifying main gaps and constraints of any type (technological, sociological, organisational, etc.) and selecting suitable management systems. According to the results obtained, including inputs from authorities and policy makers in participatory workshops, the consortium will provide valuable guidelines and recommendations to be used in the future implementation of developed strategies such as National and Regional Action Plans on solid waste management. The project will also build local capacities through workshops and seminars where relevant stakeholders must be involved.

▪ PART B

B1. Concept and objectives, contribution to the coordination of high quality research, quality and effectiveness of the coordination mechanism and associated work plan

B 1.1 Concept and project objective(s)

IWWA project proposes an alternative for the empowerment of authorities, policy makers and key stakeholders that have a role in the Waste Management chain. The project will contribute to the improvement of solid waste management systems in Western Africa, by promoting appropriate management policies at national and regional levels and gathering authorities, policy makers and other stakeholders (private sector, NGOs, general public, etc.) in the design of waste management practices, with the support of African and European experts.

This initiative will be focused on 4 target countries in Western Africa: Côte d'Ivoire, Ghana, Nigeria and Senegal. The situation in these countries is representative of the overall situation in Western Africa, and project results will provide synergies for the establishment of sustainable solid waste management systems across the region.

Taking advantage of the experience gathered by the group of experts of the Consortium, this project will build a proficient network in Solid Waste Management (SWM) that will analyze the current situation in the target countries, identifying main gaps and constraints of any type (technological, sociological, organisational, etc.) and selecting best practices and suitable management systems from European and non OECD countries. According to the results obtained, the consortium will provide valuable decision making tools to be used in the future implementation of strategies:

- Guide for identification of Integrated Waste Management Systems adapted to target countries regional situation
- Guide for implementation of Integrated Waste Management Systems
- Guidelines for participatory planning processes in Integrated Solid Waste Management (ISWM).
- Recommendations for the development of National and Regional Action Plans in each target country

These tools will empower stakeholders in two ways: providing technological and organizational solutions adapted to their necessities, and setting up the basis of a policy framework for a long-term implementation of improved and sustainable solid waste management systems.

Participatory workshops will be held before the development of guidelines and recommendations, and will aim to involve relevant actors and stakeholders (including Community Based Organisations who deploy a role in the Waste Management chain) in the development of policy options, ensuring that the solutions proposed are adapted to real necessities in the target countries. In addition the project will build local capacities through specific workshops and seminars where key stakeholders will be trained in the decision making tools developed under the project time frame. Authorities and government agencies in particular, will play a special role in both the participatory and capacity building workshops. The participation of these stakeholders will ensure that the measures provided to enhance good practices in SWM reach relevant actors able to implement them. In addition, government agencies and regional and local authorities will have the opportunity to exchange their experience with international experts from Europe and Africa, as well as to "listen" to problems and interests of other actors in the management of solid waste that are

not frequently considered such as Community Based Organizations, NGOs, micro and small enterprises, the informal sector, etc.

The activities, material and strategies developed under the project will be held under the **Integrated Solid Waste Management (ISWM)** concept.

ISWM is one of the holistic approaches to environmental and resource management which are emerging from applying the concept of sustainable development. Integrated systems combine waste characterisation, collection, treatment and disposal methods, with the objective of achieving environmental benefits, economic optimisation and societal acceptability. Key factors for a successful implementation are to create the necessary legal framework and to ensure its enforcement. This will be the basis for all successful future implementations. ISWM involves the use of a range of different treatment options at a local level and considers the entire solid waste stream. It provides a framework for the development of a sustainable service, which can take place with the use of a range of collection, transport and treatment options; active involvement of the stakeholders and the ISWM system. The aspects that are involved in the management of the waste are:

- Economic aspects. It should apply the "*Polluter Pays Principle*" for the waste generators; and provide technical and financial instruments for the private and community participation. As a result, new business opportunities will be created.
- Environmental aspects. It should consider the technical aspects to ensure that a negative impact to the environment is avoided, and thus eluding dramatic health and aesthetic problems in the short run and emission of landfill gases and discharge of leachate causing air, water and soil pollution in the long run.
- Social aspects. It is necessary to make people aware of the benefits of ISWM systems (active involvement of the government, NGOs and private organisations is needed). Benefits will be improvement of the health situation and the living conditions.
- Legal Framework. The necessary legal framework has to be set up or extended. Furthermore it is very important to ensure law enforcement. This is the most important point for a successful implementation of ISWM systems in a long run. In addition, the governments should strengthen the capacity of the solid waste management bodies with education, training and infrastructural support.

Unlike previous policies that focused predominantly on "end-of-pipe" treatment, IWWA underscores the importance of preventing pollution by reducing waste generation in the first place and avoiding environmental degradation. As urban environmental problems worsen in developing countries, non-conventional approaches to urban pressure points like waste management will have to be adopted.

General objectives of the IWWA initiative:

- To strengthen the institutional framework for Solid Waste Management and coordination at all levels
- Empowerment of authorities and relevant stakeholders (including private sector) for planning and management of solid waste.
- Encouraging technology transfer, know-how and best practices
- Strengthening links among local authorities
- Promoting participation, public awareness and stakeholder involvement
- Strengthening of the legal framework of SWM in the target countries.

Specific objectives:

- To collect and analyze relevant information that is required for proper Solid Waste Management planning and decision-making;

- To identify the stakeholders and their strategies, their interaction and their contribution to the improvement of the solid waste management.
- To identify policy and technology options for SWM adapted to the regional situation of the target countries.
- To develop tools for implementation of adapted action plans and systems by the regional and national authorities.
- To provide training for environmental specialists, increase the environmental awareness of the public and bring about effective public participation in Solid Waste Management

B 1.2 Contribution to the coordination of high quality research

There is a wide range of stakeholders - individuals, organizations and groups - involved in SWM in many different aspects (e.g. generators of waste, regulators and legislators, providers of services, informal sector, etc.). Hence stakeholders have different roles and interests in relation to waste management; the challenge of the ISWM process is to get them to agree to co-operate for a common purpose, that of improving the waste system. The gradual changes in the environmental policies with increase in human resources in education and training have initiated the process of effective management. However, the main barriers are the lack of financial resources for the SWM sector, regulations and their enforcement, and community awareness, involvement and participation. Community participation is of utmost importance as generators of the solid waste. **The general approach of IWWA is, therefore, multi-sectorial and participatory**, involving different actors in different sectors and countries through participatory processes, and training relevant stakeholders such as authorities and policy makers in integrated and sustainable approaches of SWM.

Generators of solid waste must be aware of the hazards posed by ineffective management of the refuse. Hence the government, environmental organizations and others groups are required to play a key role in bringing about this awareness through their participation in the SWM programs which creates a sense of ownership among the individuals increasing the interest for shouldering responsibilities. Unless the public are involved throughout the SWM programs by the implementing agencies, awareness cannot be achieved. Once the public understands and acknowledges the main constraints and challenges in the system, participation can be noticed in forms like: voluntary involvement in SWM campaigns; following of rules and regulations concerning waste disposal; willingness to pay adequate fees and charges; source separation and effective use of the facilities; and voicing any environmentally unethical behavior on the part of the public or the government.

The **private sector** plays an important role in the SWM including formal and informal sectors. The informal sector represents a significant part of the economy in most African countries, and waste recuperation and recycling is an important economic activity. A significant hurdle to overcome, when implementing new technologies and waste management systems, is the lack of understanding of the business functions involved in SWM. Both public and private sectors need to work together as partners, each aware of the situation that is facing and challenging the other. As a result, the development of a new set of socioeconomic extended multi-criteria is required in order to define and implement ISWM Action Plans,

The role of the informal sector in primary waste collection in African cities have certain particularities and the potential social impact of changes resulting from the introduction of new waste management methods need to be carefully considered. An integrated approach requires again interdisciplinary co-operation at several levels among various actors, such as municipal and national governments, nongovernmental initiators, or community representatives. Otherwise, they will not contribute to sustainable waste management systems.

The **NGOs** play a crucial role in reaching the communities helping to create awareness about the environmental impacts associated with the disposal of wastes. Their involvement in the management of solid waste ensures the sustainability of the measures proposed. A well-organized environmental program by NGOs can initiate motivation for involvement in SWM programs thus ensuring a continuous participation.

B 1.3 Quality and effectiveness of the coordination mechanisms and associated work plan

B 1.3.1 Overall strategy and general description:

Work package 1 (WP1): 'Definition of criteria and parameters' has been designed in order to settle common criteria, which will enable to work with a common methodology. These criteria will be firstly used to standardize the characterization of intensively mapped SWM related networks, stakeholders, policy background and socio-economic structure, and SWM practices under work package 2 (WP2): 'Analysis and Evaluation of current situation in the target countries'. As a result of this mapping major barriers and waste problems in Western Africa will arise. In addition, a regional assessment under WP2 will start at month 1 of the project and will be an important input of WP1 in order to assure that the criteria defined is tailored to the target countries conditions.

Work package 3 (WP3): 'Identified best suitable ISWM systems and approaches' will start at month 7 by identifying best practices in Europe and non European countries which will serve, jointly with the identification of technical and non technical requirements, to develop the Guide for selecting adapted ISWM systems, which will comprise technological and organizational solutions adapted to the target countries regional situation. Moreover, a Guide for Implementing ISWM systems will be also developed in order to assure that authorities and decision makers have the means and knowledge to put into practice the best solutions for their regions.

Once the results under WP3 have been achieved, work package 4: 'Elaboration of Policy options and recommendations' will merge the results obtained in previous work packages. Technological and organizational solutions proposed in WP3 will be enhanced by the outline of proposed policy framework and strategies. In this sense, specific guidelines will be firstly developed providing participatory planning processes that enable effective participation, formation of partnerships and integration with other policies. Subsequently, the elaboration of specific policy recommendations will seek to incorporate the Integrated Solid Waste Management concept in Regional and National Action Plans within the target countries. These recommendations will intend encourage the definition of objectives in the solution of SWM problem in Western Africa, as well as the identification of the resources and activities to achieve those objectives.

Work package 5: 'Evaluation of the implication of proposed changes' is planned to evaluate the extent to which project's activities will have positive impacts on the target countries of the project. Environmental and socio-economic effects of the measures proposed in previous work packages will be analyzed. This approach will help to attain IWWA expected outcomes. In addition, one day session in the Regional Council of Matam will be devoted to evaluate the feasibility of the tools developed during the project time frame.

All this results will be extended under work package 6: 'Training and dissemination' in order to reach relevant stakeholders and build capacities of decision makers in the developed tools. The Final Conference, participation in symposia and conference, dissemination leaflets and posters, or the project web site, will disseminate objectives and results of IWWA initiative. In addition participatory workshops are intended to involve relevant stakeholders by including their interests and conclusions regarding SWM as important inputs in the process of developing policy guidelines and recommendations. Moreover, capacity building workshops will train authorities in adapted tools to implement Integrated Solid Waste Management Systems.




IWWA (Project number 244188)

Work package 7: 'Project management', will be carried out throughout the whole duration of the project, in parallel to the coordination and dissemination activities, and will ensure the correct organisation, coordination, communication and co-operation between the partners and with the European Commission.

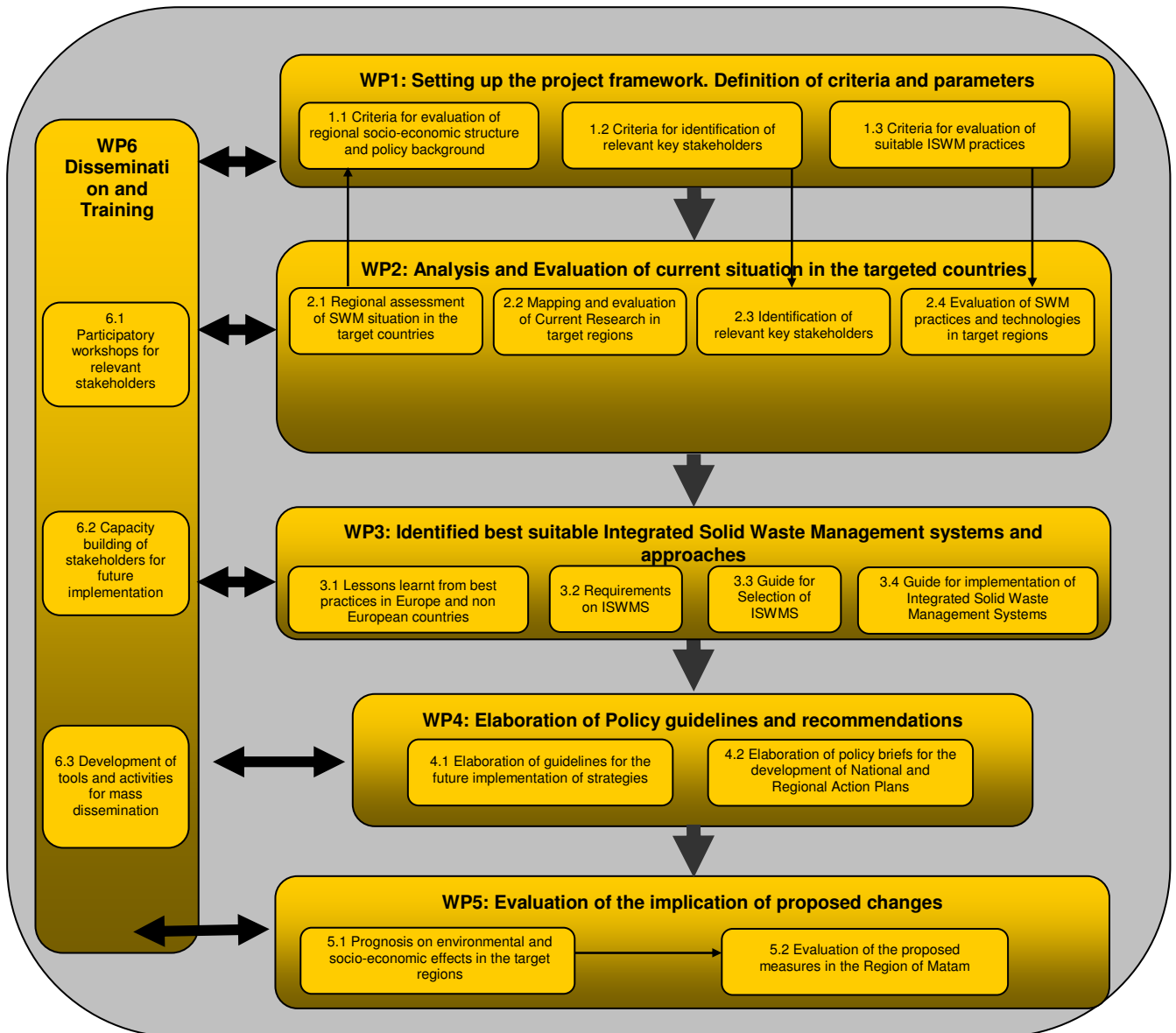
B 1.3.2 Timing of work packages and their components:

- Gant Chart of IWWA project:

IWWA (Project number 244188)

Work Packages IWWA and milestones 		Length (in person-months)	Months																							
			1. Year												2. Year											
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	WP 1 Setting up the project framework. Definition of criteria and parameters	25,00	█	█	D1.1 																					
1.1	Criteria for evaluation of regional socio-economic situation and policy background	7,50	█	█																						
1.2	Criteria for identification of relevant key stakeholders	8,25	█	█																						
1.3	Criteria for evaluation of suitable ISWM practices	9,25	█	█																						
2	WP 2 Analysis and Evaluation of current situation in the targeted countries	70,50	█	█	█	█	█	█	D2.1 																	
2.1	Regional assessment and characterization of SWM situation (State-of-the-art) in the targeted countries (Ghana, Nigeria, Ivory Coast, and Senegal)	23,00	█	█	█	█	█	█																		
2.1.1	Regional characterization of the targeted countries	11,75	█	█	█																					
2.1.2	Regional evaluation of legal background, governance and socio-economic structure	11,25				█	█	█																		
2.2	Mapping and evaluation of Current Research and Network in targeted regions	10,75							D2.2																	
2.3	Identification of relevant key stakeholders	12,25							D2.3																	
2.4	Evaluation of SWM practices and technologies in targeted regions	12,50																								
2.5	Detection of main problems, barriers and obstacles related to SWM	12,00																								
3	WP 3 Integrated Solid Waste Management systems and approaches	54,75							█	█	█	█	█													
3.1	Lessons learnt from technological/ organisational best practices in European and non European countries	12,50																								
3.2	Requirements on Integrated Waste Management Systems (IWMS)	13,75																								
3.3	Guide for Identification Integrated Solid Waste Management Systems.	15,00																								
3.4	Guide for implementation of Integrated Solid Waste Management Systems.	13,50																								
4	WP 4 Elaboration of Policy guidelines and recommendations	36,00																								
4.1	Elaboration of guidelines for the future implementation of strategies	17,75																								
4.2	Elaboration of policy briefs for the development of National and Regional Action Plans in each targeted country	18,25																								
5	WP 5 Evaluation of the implication of proposed changes	17,50																								
5.1	Prognosis on environmental and socio-economic effects on the region	13,25																								
5.2	Evaluation of the proposed measures in the region of MATAM (Senegal)	4,25																								
6	WP 6 Dissemination and Training	41,75																								
6.1	Participatory workshops for relevant stakeholders	8,50																								
6.2	Capacity building of stakeholders for future implementation	9,00																								
6.3	Development of tools and activities for mass dissemination	24,25																								
6.3.1	Webpage establishment (set-up and service)	1,75																								
6.3.2	Production and dissemination of project promotional leaflets and poster	2,50																								
6.3.3	Promotion of scientific knowledge in solid waste management	8,75																								
6.3.4	Communication of environmental policy related results	3,00																								
6.3.5	Final Conference of Solid Waste Management	8,25																								
7	WP 7 Project Management	12,00																								
7.1	General and financial project management	4,50																								
7.2	Regional project management	3,50																								
7.3	Administrative project management	4,00																								

PERT Chart of IWWA Project:



IWWA (Project number 244188)

Project acronym: IWWA		CSA: CA Project Effort Form (Section B2)																			TOTAL PARTNERS
Participant Number:		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P18	P19	P20	
Participant Short-name:		TTZ	BIOAZUL	EMPA	SLU	OEOK	GAKER	TUB	UNU	ENDA	MATAM	IAGU	ZOOM	CEIA	KNUST	BCRC	ELRI	UAA	CEDARE	ICANDO	
Partner Country:		DE	ES	CH	SE	DE	ES	DE	DE	SN	SN	SN	GH	GH	GH	NG	NG	CI	EG	ZA	
Coordination activities																					
WP 1 Setting up the project framework. Definition of criteria and parameters																					
1.1	Criteria for evaluation of regional socio-economic situation and policy background	0,00	0,00	0,00	0,25	0,00	0,00	0,00	0,00	0,00	0,50	1,00	0,00	1,00	2,50	0,25	1,00	1,00	0,00	0,00	
1.2	Criteria for identification of relevant key stakeholders	0,00	0,00	0,00	0,00	0,50	0,00	0,00	0,00	2,50	1,00	0,00	0,00	0,25	1,50	1,00	1,00	0,00	0,50	0,00	
1.3	Criteria for evaluation of suitable ISWM practices	0,00	0,00	1,00	0,00	2,00	1,00	0,00	0,00	0,00	0,00	1,00	0,00	0,00	1,25	1,00	0,50	1,00	0,50	0,00	
total activities 1:		0,00	0,00	1,00	0,25	2,50	1,00	0,00	0,00	2,50	1,50	2,00	0,00	1,25	5,25	2,25	2,50	2,00	1,00	0,00	
WP 2 Analysis and Evaluation of current situation in the targeted countries																					
2.1	Regional assessment and characterization of SWM situation (State-of-the-art) in the targeted countries (Ghana, Nigeria, Ivory Coast, and Senegal)	0,00	0,00	0,00	0,50	0,25	0,00	0,50	0,00	3,50	2,50	2,25	2,00	0,50	1,50	3,50	3,50	2,50	0,00	0,00	
2.1.1	Regional characterization of the targeted countries	0,00	0,00	0,00	0,50	0,00	0,00	0,00	0,00	2,00	1,00	1,25	1,00	0,00	1,50	2,00	1,50	1,00	0,00	0,00	
2.1.2	Regional evaluation of legal background, governance and socio-economic structure	0,00	0,00	0,00	0,00	0,25	0,00	0,50	0,00	1,50	1,50	1,00	1,00	0,50	0,00	1,50	2,00	1,50	0,00	0,00	
2.2	Mapping and evaluation of Current Research and Network in targeted regions	0,00	0,25	1,25	0,00	0,00	0,00	0,50	0,00	0,75	0,00	0,25	0,00	0,25	2,50	2,50	0,50	2,00	0,00	0,00	
2.3	Identification of relevant key stakeholders	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,00	1,50	2,00	1,00	0,75	1,00	1,50	2,00	1,50	0,00	
2.4	Evaluation of SWM practices and technologies in targeted regions	1,00	0,00	3,00	0,00	0,00	1,50	0,00	0,00	1,00	0,00	0,00	1,00	0,50	1,50	1,50	0,00	1,50	0,00	0,00	
2.5	Detection of main problems, barriers and obstacles related to SWM	0,00	0,50	0,50	1,00	1,75	0,00	0,00	0,00	1,00	1,50	0,75	0,50	0,00	1,50	1,50	1,50	0,00	0,00	0,00	
total activities 2:		1,00	0,75	4,75	1,50	2,00	1,50	1,00	0,00	7,25	5,50	5,25	4,50	2,00	8,00	10,50	7,50	7,50	0,00	0,00	
WP 3 Integrated Solid Waste Management systems and approaches																					
3.1	Lessons learnt from technological/ organisational best practices in European and non European countries	1,00	1,00	1,00	1,00	2,00	1,00	1,50	0,00	0,00	0,00	0,00	0,00	0,00	1,25	1,25	0,00	0,00	1,25	0,25	
3.2	Requirements on Integrated Waste Management Systems (IWMS)	2,00	0,50	0,00	1,00	0,00	1,25	0,00	0,00	0,00	1,25	1,25	1,25	0,00	1,50	1,25	1,25	0,00	1,25	0,00	
3.3	Guide for Identification Integrated Solid Waste Management Systems.	0,75	0,50	0,00	1,00	0,00	1,00	1,50	0,00	0,00	1,25	2,50	1,50	0,00	1,25	0,00	1,50	0,25	0,50	1,50	
3.4	Guide for implementation of Integrated Solid Waste Management Systems.	0,50	0,00	0,25	0,50	0,25	0,50	0,00	0,00	0,00	2,50	3,00	1,25	0,50	1,50	1,25	1,50	0,00	0,00	0,00	
total activities 3:		4,25	2,00	1,25	3,50	2,25	3,75	3,00	0,00	0,00	5,00	6,75	4,00	0,50	5,50	3,75	4,25	0,25	3,00	1,75	
WP 4 Elaboration of Policy guidelines and recommendations																					
4.1	Elaboration of guidelines for the future implementation of strategies	0,50	0,50	0,00	0,50	2,25	1,00	0,50	0,00	2,00	1,25	0,50	1,00	0,75	1,00	1,00	2,00	1,50	0,75	0,75	
4.2	Elaboration of policy briefs for the development of National and Regional Action Plans in each targeted country	0,25	0,25	0,25	0,50	0,00	0,50	1,25	0,00	1,25	2,50	1,00	1,00	0,50	1,00	2,25	2,50	1,50	0,75	1,00	
total activities 4:		0,75	0,75	0,25	1,00	2,25	1,50	1,75	0,00	3,25	3,75	1,50	2,00	1,25	2,00	3,25	4,50	3,00	1,50	1,75	
WP 5 Evaluation of the implication of proposed changes																					
5.1	Prognosis on environmental and socio-economic effects on the region	0,00	0,50	0,50	0,50	0,25	0,75	0,50	0,00	2,25	0,50	0,00	0,50	1,75	0,00	3,50	0,00	0,00	0,75	1,00	
5.2	Evaluation of the proposed measures in the region of MATAM (Senegal)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,75	3,50	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
total activities 5:		0,00	0,50	0,50	0,50	0,25	0,75	0,50	0,00	3,00	4,00	0,00	0,50	1,75	0,00	3,50	0,00	0,00	0,75	1,00	
WP 6 Dissemination and Training																					
6.1	Participatory workshops for relevant stakeholders	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	2,00	0,50	2,00	0,00	2,00	0,00	0,00	
6.2	Capacity building of stakeholders for future implementation	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	2,00	0,00	3,00	2,00	0,00	0,00	
6.3	Development of tools and activities for mass dissemination	4,00	5,75	1,00	0,50	0,50	0,25	0,25	0,00	1,00	1,25	0,25	2,00	1,50	1,50	1,25	0,50	1,25	0,75	0,75	
6.3.1	Webpage establishment (set-up and service)	1,75	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
6.3.2	Production and dissemination of project promotional leaflets and poster	0,00	2,00	0,00	0,00	0,00	0,00	0,00	0,00	0,50	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
6.3.3	Promotion of scientific knowledge in solid waste management	0,75	2,00	0,50	0,25	0,25	0,00	0,00	0,00	0,25	1,00	0,25	0,00	0,50	0,25	1,00	0,25	0,50	0,50	0,50	
6.3.4	Communication of environmental policy related results	0,50	0,50	0,25	0,25	0,00	0,25	0,25	0,00	0,00	0,00	0,00	0,00	0,25	0,25	0,00	0,25	0,25	0,25	0,00	
6.3.5	Final Conference of Solid Waste Management	1,00	1,25	0,25	0,00	0,25	0,00	0,00	0,00	0,25	0,25	0,00	2,00	1,00	1,00	0,25	0,50	0,00	0,25	0,25	
total activities 6:		4,00	5,75	1,00	0,50	0,50	0,25	0,25	0,00	3,00	1,25	2,25	2,00	3,50	4,00	3,25	3,50	5,25	0,75	0,75	
Total Coordination Activities		10,00	9,75	8,75	7,25	9,75	8,75	6,50	0,00	19,00	21,00	17,75	13,00	10,25	24,75	26,50	22,25	18,00	7,00	5,25	
SALARIES		5.940 €	4.640 €	8.300 €	6.280 €	6.714 €	3.158 €	5.000 €	5.200 €	1.900 €	1.000 €	2.550 €	1.700 €	2.000 €	1.000 €	1.610 €	1.114 €	1.500 €	4.500 €	5.000 €	
Other activities																					
Total		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
Management activities																					
WP 7 Project Management																					
7.1	General and financial project management	4,50	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
7.2	Regional project management	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,50	0,00	0,00	0,00	0,00	0,00	0,00	
7.3	Administrative project management	0,00	4,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
total activities 7:		4,50	4,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,50	0,00	0,00	0,00	0,00	0,00	0,00	
Total Management Activities 7:		4,50	4,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,50	0,00	0,00	0,00	0,00	0,00	0,00	
total activities:		14,50	13,75	8,75	7,25	9,75	8,75	6,50	0,00	19,00	21,00	17,75	16,50	10,25	24,75	26,50	22,25	18,00	7,00	5,25	

B 1.3.3 Work package list / overview:

Work package No	Work package title	Type of activity	Lead participant No	Lead participant short name	Person-months	Start month	End month
WP1	Setting up the Project-framework: Definition of criteria and parameters	COORD	5	OEKO	25.00	1	3
WP2	Analysis and Evaluation of current situation in the target countries	COORD	9/11	ENDA/IAGU	70.50	1	8
WP3	Identified best suitable ISWM systems and approaches	COORD	1	TTZ	54.75	7	11
WP4	Elaboration of Policy guidelines and recommendations	COORD	16	ELRI	36.	12	17
WP5	Evaluation of the implication of proposed changes	COORD	15	BCRC	17.50	18	21
WP6	Dissemination and Training	COORD	13	CEIA	41.75	1	24
WP7	Project Management	MGT	1	TTZ	12.00	1	24
TOTAL					257.50		

B 1.3.4 Deliverables list:

Del. no.	Deliverable name	WP no.	Lead beneficiary	Estimated indicative person-month	Nature	Dissemination level	Delivery date
D1.1	Report: Project framework. Definition of criteria and parameters	1	OEKO	25.00	R	PP	Month 3
D2.1	Report: Regional evaluation of the SWM situation in the target countries	2	ENDA	47.50	R	CO	Month 8
D2.2	Report: Current research within and outside the consortium	2	KNUST	10.75	R	CO	Month 8
D2.3	Report: Data base of relevant stakeholders	2	IAGU	12.25	R	CO	Month 8
D3.1	Report: Lessons learnt from technological/organizational best practices in Europe and non OECD countries'	3	OEKO	12.50	R	PU	Month9
D3.2	Report: Identification of technical and non-technical requirements for the implementation of ISWMS'	3	TTZ	13.75	R	PU	Month 11
D3.3	Guide for identification of	3	ICANDO	15.00	R	PU	Month

IWWA (Project number 244188)

	suitable Integrated Solid Waste Management Systems'						11
D3.4	Guide for implementation of Integrated Solid Waste Management Systems	3	IAGU	13.50	R	PU	Month 11
D4.1	Report: Description and evaluation of policy measures	4	BCRC	5.75	R	PU	Month 13
D4.2	Guidelines for implementation of policy strategies in ISWM	4	OEKO	12	R	PU	Month 15
D4.3	Policy briefs for the development of National and Regional Action plans	4	ELRI	18.25	R	PU	Month 16
D5.1	Report: Prognosis on environmental and socio-economic effects on the region	5	BCRC	13.25	R	PU	Month 20
D5.2	Report: Evaluation of IWWA policy recommendations and development of future scenarios for the Region of Matam	5	MATAM	4.25	R	PU	Month 21
D6.1	Report: Activities and material for participatory workshops	6	CEIA	4.25	R	PU	Month 7
D6.2	Report: Evaluation and conclusions of participatory workshops	6	CEIA	4.25	R	CO	Month 12
D6.3	Report: Material and activities for capacity building workshops	6	ELRI	4.5	R	PU	Month 15
D6.4	Report: Evaluation and conclusions of capacity building workshops	6	ELRI	4.5	R	CO	Month 20
D6.5	IWWA web page set up	6	TTZ	1.75	O	PU/CO	Month 3
D6.6	First promotional leaflet	6	BIOAZUL	1,00	O	PU	Month 6
D6.7	Promotional poster	6	BIOAZUL	0.75	O	PU	Month 6
D6.8	Second promotional leaflet	6	BIOAZUL	0.75	O	PU	Month 18
D6.9	Publication: 1 st publishable scientific article on the main barriers and obstacles for the implementation of ISWM concept in Western Africa	6	OEKO/SLU	1.00	O	PU	Month 20
D6.10	Publication: 2 nd publishable scientific article on Solid Waste Management practices in Western Africa	6	EMPA/ENDA	1.00	O	PU	Month 20
D6.11	Publication: 3 rd publishable scientific article on the Integrated Waste Management Systems for Western Africa	6	TTZ/KNUST	1.00	O	PU	Month 20
D6.12	Publication: 4 th publishable scientific article on the guidelines and recommendations for National and Regional Action Plans	6	ELRI/ICANDO	1.00	O	PU	Month 20
D6.13	Report: Content, evaluation and conclusions of the Final Conference	6	CEIA	8.25	R	PU	Month 24
D7.1	Report: First short project	7	BIOAZUL	0.8	R	CO	Month 6

IWWA (Project number 244188)

	update report						
D7.2	Report: First periodic report (activity report + management report + financial statements)	7	BIOAZUL	0.8	R	CO	Month 12
D7.3	Report: Second short project update report'	7	BIOAZUL	0.8	R	CO	Month 18
D7.4	Report: Second periodic report (activity report + management report + financial statements)	7	BIOAZUL	0.8	R	CO	Month 24
D7.5	Report: Final periodic report (activity report + management report + financial statements)	7	BIOAZUL	0.8	R	CO	Month 24
			TOTAL	241,75			

B 1.3.5 Work package descriptions:

Work package number	1	Start date or starting event:					Month 1	
Work package title	Setting up the Project-framework: Definition of criteria and parameters							
Activity Type	COORD							
Participant number	1	2	3	4	5	6	7	
Participant short name	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	
Person-months per participant:	0.00	0.00	1.00	0.25	2.50	1.00	0.00	
Participant number	9	11	12	13	15	16	17	
Participant short name	ENDA	MATAM	IAGU	ZOOM	KNUST	BCRC	ELRI	
Person-months per participant:	2.50	1.50	2.00	0.00	5.25	2.25	2.50	
Participant number	19	20	21	22				
Participant short name	UAA	CEDARE	ICANDO	CEIA				
Person-months per participant:	2.00	1.00	0.00	1.25				

Objectives

General objective: To define the needed evaluation criteria in order to achieve a consensus for the standardisation of the evaluation exercises to be performed across the region.

Specific objectives:

- To define criteria for the evaluation of regional socio-economic situation and policy background
- To define the criteria of identification of key actors
- To define a criteria for the evaluation of SWM practices

Description of work:

Task 1.1: Criteria for evaluation of the regional socio-economic situation and policy background.

Task leader KNUST

Other participating partners: SLU, MATAM, IAGU, CEIA, BCRC, ELRI and UAA.

The members of this team will propose a methodological framework for the assessment of the living conditions in these areas, including demographics and social aspects (human

population growth, poverty, urban and rural population), economic aspects (production sectors, financial capacity, quality of life, distribution of income, etc.) and institutional aspects (authority, law enforcement, community organisation, etc). They will identify indicators that will allow classifying the regions according to similarities. UAA and IAGU will be in charge of the demographic aspects. KNUST and CEIA will be in charge of the economic aspects. ELRI and MATAM will be in charge of the institutional aspects. According to this, the task team will provide a list of indicators. SLU and BCRC will provide feedback on the work performed under Task 1.1. The task team will also define general guidelines for the subsequent assessment under WP2.

The outcome of this task will be a set of criteria and indicators, which will allow the socio-economical evaluation and classification of the regions in work package 2. A report will be prepared by KNUST to be included as section 1 in Deliverable 1.1.

Task 1.2: Criteria for identification of relevant key stakeholders

Task leader ENDA

Other participating partners: OEKO, MATAM, CEIA, KNUST, BCRC, ELRI and CEDARE.

A selection scheme for the identification of key actors will be defined under this task in order to establish the methodology for the selection of the key stakeholders in the target countries and the level and scope that the dissemination process will have.

These criteria will permit to identify under WP2 relevant stakeholders (task 2.3) such as Community Based Organizations, NGOs, micro and small enterprises, the informal sector, etc. as well as those actors with a high potential in the implementation of the results achieved during the project. In this sense, special attention will be paid to government agencies in the target countries.

The selection scheme will be prepared by ENDA before month 3. This output will be included as section 2 in Deliverable 1.1.

Task 1.3: Criteria for evaluation of SWM practices

Task leader OEKO.

Other participant partners: EMPA, GAIKER, IAGU, KNUST, BCRC, ELRI, UAA and CEDARE.

The members of this task will describe a methodological framework for the assessment of existing SWM practices within the target countries, as well as the selection of good practices from EU and non EU countries. They will define a set of indicators that will permit to evaluate SWM practices and technologies in target regions (task 2.4), as well as best practices for SWM in EU and developing countries (task 3.1).

Indicators defined will include for instance the amount and type of waste collected, the rate of recovery and disposal, implementation costs, organisational and technical conditions (technical skills needed), compatibility with existing legal background, demands of the community, robustness, quality of SWM service obtained, efficiency, manpower, feasibility in developing countries, among other.

The task team will also define general criteria for the subsequent assessment of SWM practices under WP2 and WP3. In particular, GAIKER will define the criteria for plastic recycling practices and technologies in the target countries.

A report will be prepared by OEKO before month 3 to be included as section 3 in Deliverable 1.1

Deliverable 1.1 "Report: Project framework. Definition of criteria and parameters" (month 3, responsible OEKO) will comprise main results of work package 1, and will include the following sections:

- Section 1: 'Criteria for the evaluation of socio-economic situation and legal background' (responsible KNUST), developed under task 1.1.
- Section 2: 'Criteria for the identification of relevant key stakeholders' (responsible ENDA), developed under task 1.2.
- Section 3: 'Criteria for evaluation of existing SWM practices' (responsible OEKO), developed under task 1.3.

Deliverables

- **Deliverable 1.1: 'Report: Project framework. Definition of criteria and parameters'**
(Month 3, responsible OEKO).

Work package number	2	Start date or starting event:					Month 1	
Work package title	Analysis and Evaluation of current situation in the target countries							
Activity Type	COORD							
Participant number	1	2	3	4	5	6	7	
Participant short name	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	
Person-months per participant:	1.00	0.75	4.75	1.50	2.00	1.50	1.00	
Participant number	9	11	12	13	15	16	17	
Participant short name	ENDA	MATAM	IAGU	ZOOM	KNUST	BCRC	ELRI	
Person-months per participant:	7.25	5.50	5,25	4.50	8.00	10.50	7,50	
Participant number	19	20	21	22				
Participant short name	UAA	CEDARE	ICANDO	CEIA				
Person-months per participant:	7.50	0.00	0.00	2.00				

Objectives:

General objective: This work package will establish a complete and cross-sectional diagnosis of the current situation of the solid waste management at a regional level in the target countries: Côte d'Ivoire, Ghana, Nigeria and Senegal. This work will facilitate the proposal of appropriate technological and organizational solutions in work package 3, as well as policy guidelines and recommendations in work package 4.

Specific Objectives:

- To present a regional characterization and assesment of the target countries regarding SWM aspects.
- To identify key actors and stakeholders in the target countries.
- To evaluate the current solid waste management practices in the target countries.
- To evaluate the national and regional policy and legislative frame, governance and socio-economic structure regarding SWM in the target countries.
- To detect and analyze main barriers and obstacles related to SWM in the target countries.

Description of work:**Task 2.1: Regional characterization and assessment of SWM situation (State-of-the-art) in the target countries (Ghana, Nigeria, Côte d'Ivoire, and Senegal)**

Task leaders: ENDA and ELRI

Other participating partners: SLU, OEKO, TUB, MATAM, IAGU, ZOOM, CEIA, KNUST, BCRC and UAA.

Sub-task 2.1.1: Regional characterization of the target countries

Starting at the first month of the project time-frame, SLU, KNUST, IAGU, ELRI, UAA, BCRC, ZOOM, MATAM and ENDA will geographically characterize regions in the target countries with regards to their needs of solid waste management systems. Different locations will be classified, giving at the end a list of localities with homogeneous characteristics, which will facilitate the study in the following tasks so that the subsequent evaluations under this work package will be developed according to this classification. In month 4, ENDA will gather the results of this work in section 1 of Deliverable 2.1.

Sub-task 2.1.2: Regional evaluation of legal background, governance and socio-economic structure

ELRI, OEKO, IAGU, TUB, ZOOM, ENDA, MATAM, BCRC, CEIA and UAA will perform a review of the current national and regional legal and institutional frame regarding solid waste management under this task, identifying the policy gaps and the legislative needs for enhanced implementation of solid waste management systems. Needs for the institutional development of regional and national administrations will be also identified. An evaluation of the capability of regional and national authorities for the executive implementation of successful solid waste management action plans will be performed. The socio-economic structure and its relation with the management of waste will be also included in this analysis, with especial importance to the role of the informal sector.

The members of this team will receive from the criteria resulting from task 1.1 a methodology for the evaluation of the legislative frame of the target countries. ELRI will prepare a questionnaire that will be applied across the target countries by the national partners. The questionnaire will be intended to collect information regarding: Legal framework and its applicability, investment in SWM, economic activity linked to solid waste, involvement of micro and small enterprises (MSEs) and community-based organisations (CBOs), waste services responsibility, fees, seasonal or cultural variations in waste generation, etc.

CEIA, OEKO, ZOOM, ENDA, MATAM, BCRC and UAA will analyze the information gathered and will collaborate on the writing of the final report. OEKO and CEIA will give special assistance in this task and bring in its expertise in environmental, policy, economic and social evaluation of WEEE management systems.

In month 8, ELRI will gather the results of this work in section 2 of Deliverable 2.1.

Task 2.2: Mapping and evaluation of current research in target regions

Task leader: KNUST

Other participating partners: BIOAZUL, EMPA, TUB, ENDA, IAGU, CEIA, BCRC, ELRI and UAA.

An identification of research centres in solid waste management within the target countries will be carried out. The aim of this exercise is to document objectives, methods, disclosed results and expected impacts of solid waste management related projects. The first step will be the presentation of the on-going research activities that are being performed by the partners of the consortium during the kick of meeting. In month 4, BCRC supported by EMPA, BIOAZUL will compile the results of this work in a section called "Current research within the consortium" of Deliverable 2.2, which will be further published in the web-site. On the other hand, a list of the current research outside the consortium is going to be developed by KNUST with the collaboration of EMPA, CEIA, UAA, ENDA, TUB, ELRI, IAGU and BCRC. This information will be compiled, mapped and analysed by KNUST in a section called "Current research outside the consortium" of Deliverable 2.2 by month 8. All the research institutions identified will be contacted and invited to form part of the network as an external member, in order to create links of cooperation among institutions working in the same field of expertise. All institutions contacted will be invited to participate in IWWA Final Conference in Accra – Ghana.

Deliverable 2.2" Report: Current research within and outside the consortium" (responsible

KNUST, month 8) will comprise main results and conclusions of task 2.2. This report will include the following sections:

- Section 1: Current research within the consortium (responsible BCRC, month 4).
- Section 2: Current research outside the consortium (responsible KNUST, month 8).

Task 2.3: Identification of relevant key stakeholders

Task leader IAGU.

Other participating partners: ENDA, MATAM, ZOOM, CEIA, KNUST, BCRC, ELRI, and UAA.

This activity will start at month 4, once the criteria for identification of relevant key stakeholders is ready. Waste collectors and processors, local municipalities and policy makers, government agencies, companies providing Waste Management services, recycling and waste treatment industry and business sector, local NGOs representatives, rural associations of women and indigenous, rural cooperatives, and stakeholders from the informal sector (CBO organisations, waste pickers associations, etc), and other relevant actors will be identified by ZOOM, KNUST, ENDA, MATAM, ELRI, BCRC and UAA and also grouped according to their interests in a data base, in order to create a dissemination and involvement platform. CEIA in collaboration with KNUST will contribute by giving information related to WEEE stakeholders.

The members of this task will receive from the criteria resulting from task 1.2 a methodology for the selection of the key stakeholders of the target countries. ELRI will prepare a questionnaire comprising the information needed to be collected, and the questionnaire will be applied across the target countries by the national partners. Once the questionnaire has been applied, this task group will gather the information collected and will prepare by month 8 the database of key actors and stakeholders that will be used for future dissemination and involvement of the stakeholders in participatory and capacity building workshops (Deliverable 2.3, responsible IAGU).

Task 2.4: Evaluation of SWM practices and technologies in target regions

Task leader: EMPA

Other participating partners: TTZ, GAIKER, ENDA, ZOOM, CEIA, KNUST, BCRC, and UAA.

The members of this task will receive from the criteria resulting from task 1.3 a methodology for the characterisation of current solid waste management practices in the target countries. EMPA will prepare a questionnaire comprising the information needed to be collected, and will be applied across the target countries by the national partners. The questionnaire will be intended to collect information regarding: Type and quantity of waste, technical and tangible elements of the waste system, characteristics of the landfill, collection, processing and disposal practices, efficiency and effectiveness of the system, etc. Once the questionnaire of WP2 has been applied, this task group will analyse the information regarding the solid waste management practices. The members will also identify best practices, giving especial importance to solid waste management systems, energy-efficiency and least-polluting ways to deal with the various components of the solid waste stream.

The results of this task will be compiled by EMPA in a section of Deliverable 2.1 at month 8.

Task 2.5: Detection of main barriers and obstacles for the implementation of ISWM.

Task leader: OEKO

Other participating partners: BIOAZUL, EMPA, SLU, ENDA, MATAM, IAGU, ZOOM, KNUST BCRC and ELRI.

The aim of this task is to identify the most relevant barriers and obstacles for the implementation of suitable ISWM systems adapted to the situation of the different regions characterized in subtask 2.1.1. The analysis will be based on the results of mapping current

research (task 2.2), the evaluation of SWM practices and technologies (task 2.4), as well as the legal background, governance and socio-economic structure (task 2.1.2.).

The analysis will be related to the following topics:

- Lack of proper implementation of national / local government policy on SWM.
- Lack of environmental and health legislation that fosters good practices.
- Inadequate funding.
- Deficits in personnel know-how at the technological and organizational level.
- Missing waste characterization & data on collected and recovered waste.
- Lack of reliable waste collection service and waste segregation.
- Generally informal structure of local recycle-material market (i.e. regarding environmental unsound processes to recover of secondary materials as for example from WEEE).
- Land availability for landfills and transport-problems to landfills.

Outcomes of task 2.6 will be presented by OEKO strongly supported by SLU in one of the sections of Deliverable 2.1. These results will be discussed in participatory workshops (task 6.1) and form the basis for the solutions and policy options provided in subsequent work packages.

Deliverable 2.1 "Report: Regional evaluation of the situation in the target countries" (responsible ENDA, month 8) will comprise main results and conclusions of tasks 2.1, 2.4, and 2.5. This report will include the following sections:

- Section 1: Regional characterization of the target countries (responsible ENDA, month 4).
- Section 2: Regional evaluation of legal background, governance and socio-economic structure (responsible ELRI, month 8).
- Section 3: Evaluation of SWM practices and technologies in target regions (responsible EMPA, month 8).
- Section 4: Analysis of main barriers and obstacles for ISWM in the target countries (responsible OEKO, month 8).

Deliverables:

- **Deliverable 2.1 'Report: Regional evaluation of the SWM situation in the target countries'** (Month 8, responsible ENDA).
- **Deliverable 2.2: 'Report: Current research within and outside the consortium'** (Month 8, responsible KNUST): Presentation of the on-going research activities that are being performed within the consortium.
- **Deliverable 2.3: 'Report: Data base of relevant stakeholders'** (Month 8, responsible IAGU).

Work package number	3	Start date or starting event:					Month 7	
Work package title	Identified best suitable Integrated Solid Waste Management systems and approaches							
Activity Type	COORD							
Participant number	1	2	3	4	5	6	7	
Participant short name	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	
Person-months per participant:	4.25	2.00	1.25	3.50	2.25	3,75	3.00	
Participant number	9	11	12	13	15	16	17	
Participant short name	ENDA	MATAM	IAGU	ZOOM	KNUST	BCRC	ELRI	
Person-months per participant:	0.00	5.00	6.75	4.00	5.50	3.75	4.25	
Participant number	19	20	21	22				
Participant short name	UAA	CEDARE	ICANDO	CEIA				
Person-months per participant:	0.25	3.00	1.75	0.50				

Objectives

General objective: To provide to the West African stakeholders with the appropriate tools to implement **Integrated Solid Waste Management Systems (ISWMS)** adapted to regional conditions in the target countries. Those systems will offer logistical, technological, and organizational models of SWM for the different regional situations.

Specific objectives:

- To identify best practices in Europe and non European countries.
- To identify technological and non technological requirements for the implementation of ISWM in the target countries.
- To develop a guide for selecting suitable ISWMS.
- To develop a guide for implementation of chosen ISWMS.

Description of work:

Task 3.1: Lessons learnt from technological/organizational best practices in Europe and non European countries.

Task leader OEKO

Other participating partners: TTZ, BIOAZUL, EMPA, SLU, GAIKER, TUB, KNUST, BCRC, CEDARE and ICANDO.

OEKO, BIOAZUL, SLU, GAIKER, TTZ, and EMPA will carry out a screening of all the logistical, technological, legal, and organisational aspects and elements of integrated waste management systems in Europe against the background in the target countries in West Africa provided in WP2. The screening process will take into account the special waste composition in West Africa including WEEE.

Experiences of successful solid waste management technologies and organizational practices, in non European developing countries with the focus on African countries, will be identified by CEDARE, which will be strongly supported by ICANDO, KNUST, and BCRC.

OEKO, supported by SLU, will write a report (Deliverable 3.1) by month 9 comprising the main outcomes of this task. TUB, supported by BCRC, will integrate in the report a summary of experiences made with substance bans in waste legislation in EU, such as the Restriction of Hazardous Substances Directive (RoHS) for electrical and electronics equipment. Suitability of different products substance bans in the target countries. Alternative approaches to legal substance bans will be also evaluated, including voluntary agreements by the industry of electronic equipment on product requirements, code of conducts and labelling schemes.

Task 3.2: Requirements on Integrated Solid Waste Management Systems (ISWMS).

Task leader TTZ.

Other participating partners: BIOAZUL, SLU, GAIKER, MATAM, IAGU, ZOOM, KNUST, BCRC, ELRI and CEDARE.

A regionally adapted set of technical and non-technical requirements on ISWMS will be defined taking into account inputs from WP2 (evaluation of SWM practices, detection of main barriers and obstacles, etc). Technical requirements like primary collection, treatment and recycling activities, logistics, installation, operation and maintenance will be defined by TTZ, BIOAZUL, SLU, GAIKER, ZOOM, and KNUST. Non-technical requirements like formal organisations and informal institutions, legal framework, financial issues, markets for recycled products, and environmental and health effects will be defined by MATAM, IAGU, ELRI, BCRC, and CEDARE.

A final report will be elaborated by TTZ (Deliverable 3.2) strongly supported by KNUST in month 11.

Task 3.3: Guide for Selection of suitable Integrated Solid Waste Management Systems.

Task leader ICANDO

Other participating partners: TTZ, BIOAZUL, SLU, GAIKER, TUB, MATAM, IAGU, ZOOM, KNUST, ELRI, UAA and CEDARE.

The technological and organisational practices described in task 3.1 will be evaluated and adapted, based on the technical and non-technical requirements identified in task 3.2 as well as the regional descriptions in the WP2. As a result, the task team will propose a set of technological and organizational solutions suitable for the different conditions of the regions characterized under task 2.1.

In a next step, ZOOM, IAGU, ELRI and UAA will assign most suitable systems to specific regions in their respective countries (Ghana, Senegal, Nigeria and Côte d'Ivoire), identified in the regional assessment of task 2.1 as examples of identification of suitable ISWMS. These specific regions will be selected from the different types of homogeneous regions defined in the regional assessment with the objective of providing examples of the identification of ISWMS which are representative of the different situations in the target countries. The systems selected should be integrated, affordable, and tailored to the necessities of the target regions.

This work will lead to the development of Deliverable 3.3 '**Guide for Identification of Suitable ISWMS**' (responsible ICANDO, month 11) that will comprise technological and organizational solutions adapted to the target countries regional situation, including specific examples of application. IAGU will be responsible of the translation of the guide to French.

Task 3.4: Guide for implementation of Integrated Solid Waste Management Systems.

Task leader IAGU

Other participating partners: TTZ, EMPA, SLU, OEKO, GAIKER, MATAM, ZOOM, KNUST, BCRC, ELRI and CEIA.

The task team will design and develop a **Guide for Implementation of ISWMS**. The guide will enable authorities to follow effective procedures to implement solid waste management solutions adapted to their regional context. It will point out typical problems that occur during the implementation of ISWMS and will suggest possible solutions and contingency plans. IAGU, KNUST and ELRI will elaborate the document that will be available on-line for download on the IWWA web page by month 11 (Deliverable 3.4, responsible IAGU). Additionally, MATAM will be responsible for the manual's translation into French.

Deliverables:

Deliverable 3.1: 'Report: Lessons learnt from technological/organizational best practices in European and non European countries' (Month 9, responsible OEKO)

Deliverable 3.2: 'Report: Identification of technical and non-technical requirements for the implementation of ISWMS' (Month 11, responsible TTZ)

Deliverable 3.3: 'Guide for identification of suitable Integrated Solid Waste Management Systems' (Month 11, responsible ICANDO)

Deliverable 3.4: 'Guide for implementation of Integrated Solid Waste Management Systems' (Month 11, responsible IAGU)

Work package number	4	Start date or starting event:					Month 12	
Work package title	Elaboration of Policy guidelines and recommendations							
Activity Type	COORD							
Participant number	1	2	3	4	5	6	7	
Participant short name	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	
Person-months per participant:	0.75	0.75	0.25	1.00	2.25	1.50	1.75	
Participant number	9	11	12	13	15	16	17	
Participant short name	ENDA	MATAM	IAGU	ZOOM	KNUST	BCRC	ELRI	
Person-months per participant:	3.25	3.75	1.50	2.00	2.00	3.25	4.50	
Participant number	19	20	21	22				
Participant short name	UAA	CEDARE	ICANDO	CEIA				
Person-months per participant:	3.00	1.50	1.75	1.25				

Objectives:

General objective: In Work package 4 policy options will be evaluated in relation to results of previous work packages, and be elaborated into recommendations for management and planning strategies in a multidisciplinary approach for the promotion of region-adapted waste management solutions.

Specific objectives:

- To evaluate policy measures and recommend suitable policies for ISWM.
- To develop guidelines on ISWM for the future implementation of policy strategies.
- To develop specific recommendations for the elaboration of National and Regional Action Plans.

Description of work:**Task 4.1: Elaboration of guidelines for the future implementation of strategies:**

Task leader: OEKO

Other participating partners: TTZ, BIOAZUL, SLU, GAIKER, TUB, ENDA, MATAM, IAGU, ZOOM, CEIA, KNUST, BCRC, ELRI, UAA, CEDARE and ICANDO.

Different policy measures will be described and evaluated in relation to the results of WP 2 and 3. Policy measures to be evaluated will include producer responsibility, substance bans, voluntary agreements by multinational companies, and regulatory measures by public administration among others. The work will be presented in a report (deliverable 4.1) by BCRC in Month 13.

In a report (Deliverable 4.2) presented in month 15 by OEKO, methods for implementation of policy strategies that enable effective participation, formation of partnerships and integration

with other policies will be described. ENDA will translate this report into French.

Task 4.2: Elaboration of policy briefs for the development of National and Regional Action Plans in each target country:

Task leader ELRI

Other participating partners: TTZ, BIOAZUL, EMPA, SLU, GAIKER, TUB, ENDA, MATAM, IAGU, ZOOM, CEIA, KNUST, BCRC, UAA, CEDARE and ICANDO.

Four policy briefs will be developed under this task with specific recommendations for the establishment of plans, targets and objectives in SWM. The policy briefs are intended to guide SWM stakeholders, especially Public Authorities, policy makers and Governmental agencies, in the development and execution of National and Regional Action Plans in their respective countries with a basis on the analysis performed during the IWWA project.

Each policy brief will be devoted to one of the target countries: IAGU and ENDA will be responsible of the policy brief of Senegal. KNUST and ZOOM will be in charge of the policy brief of Ghana. ELRI and BCRC will be in charge of the policy brief of Nigeria and UAA will be in charge of the policy brief of Côte d'Ivoire.

The policy briefs will propose specific measures for the National and Regional Action Plans that will take into account:

- Social-cultural, institutional-organisational, technical, environmental-health and financial-economic aspects.
- Involvement of relevant stakeholders in a participatory approach.
- Waste management hierarchy, with priority to waste prevention, minimisation, recycling and other forms of recovery of materials.
- Efficiency, effectiveness, equal access to waste services, and sustainability principles.
- Measures tailored to the reality of the regions in which they are applied.

ELRI will prepare a report comprising the 4 policy briefs (Deliverable 4.3) in month 16. MATAM will translate this report into French.

Deliverables:

Deliverable 4.1: 'Report: Description and evaluation of policy measures' (Month 13, responsible BCRC)

Deliverable 4.2: 'Guidelines for implementation of policy strategies in ISWM' (Month 15, responsible OEKO)

Deliverable 4.3: 'Policy briefs for the development of National and Regional Action plans in Côte d'Ivoire, Ghana, Nigeria and Senegal' (Month 16, responsible ELRI)

Work package number	5	Start date or starting event:					Month 18	
Work package title	Evaluation of the implication of proposed changes							
Activity Type	COORD							
Participant number	1	2	3	4	5	6	7	
Participant short name	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	
Person-months per participant:	0.00	0.50	0.50	0.50	0.25	0.75	0.50	
Participant number	9	11	12	13	15	16	17	
Participant short name	ENDA	MATAM	IAGU	ZOOM	KNUST	BCRC	ELRI	
Person-months per participant:	3.00	4.00	0.00	0.50	0.00	3.50	0.00	
Participant number	19	20	21	22				
Participant short name	UAA	CEDARE	ICANDO	CEIA				
Person-months per participant:	0.00	0.75	1.00	1.75				

Objectives:

General objective: To assess the influence of proposed system solutions on waste sectors of target countries. This approach will help to ensure that the project attains its expected outputs.

Specific objectives:

- General analysis of changes including socio-economic and environmental effects in the target regions.
- Definition of future environmental and socio-economic scenarios in the region of Matam.
- Development of a theoretical case study in the Region of Matam

Description of work:**Task 5.1: Prognosis on environmental and socio-economic effects in the target regions.**

Task leader BCRC and CEIA

Other participating partners: BIOAZUL, EMPA, SLU, OEKO, GAIKER, TUB, ENDA, MATAM, ZOOM, CEDARE and ICANDO.

EMPA, SLU, OEKO, ENDA, GAIKER, TUB, CEIA, CEDARE, lead by BCRC, will analyze and assess the environmental effects of the measures proposed in previous work packages (e.g. in guides for selection and implementation of ISWMS, and policy guidelines and recommendations) in the different regions characterized in WP2 within the target countries. The results of this work will be compiled by BCRC in a section of Deliverable 5.1 by month 20.

BIOAZUL, ENDA, BCRC, ZOOM, MATAM, CEDARE, and ICANDO, lead by CEIA, will analyze and assess socio-economic effects (including health aspects) of the measures

proposed in previous work packages (e.g. in guides for selection and implementation of ISWMS, and policy guidelines and recommendations) in the different regions characterized in work package 2 within the target countries. In particular, ICANDO will assess the appropriateness of the measures by the stakeholder involved, and CEDARE will analyze the effects of the measures to the informal sector. The results of this work will be compiled by CEIA in a section of Deliverable 5.1 by month 20.

Additionally, the impact of the project measures will be evaluated by the task team by presenting an exemplary case study of future environmental and socio-economic scenarios in the region of Matam for which strengths, weaknesses, opportunities and threats will be defined in a SWOT analysis.

The results of this task will be compiled in a report (Deliverable 5.1, responsible BCRC) by month 20. Deliverable 5.1 will include the following sections:

Section 1: Prognosis of environmental effects (Responsible BCRC)

Section 2: Prognosis of socio-economic effects (Responsible CEIA)

Section 3: Exemplary case study of future scenarios in the region of Matam (Responsible BCRC)

Task 5.2: Evaluation of the proposed measures in the Region of Matam (Senegal).

Task leader MATAM

Other participating partners: ENDA

The authorities of the Region of Matam (partner 10: MATAM), developers of waste management strategies, will be responsible of this task, supported by ENDA. Policy briefs developed under WP4 will be assessed by the authorities in terms of their applicability in their own territory. For a one day session of the regional council, that will take place in month 20, after the capacity building workshops (task 6.2), the authorities will participate in an open discussion regarding the applicability and feasibility of the proposed changes and how they would improve the solid waste management services in Matam and whether the future scenarios defined in task 5.1 can be achieved with the proposed measures. ENDA will send in advance to the appropriate municipality services the policy briefs developed under work package 4 as well as the environmental and socio-economic scenarios and SWOT analysis defined under task 5.1. ENDA will also introduce these results to the authorities of the regional council during the session.

MATAM will be in charge of preparing the minutes of this session, which will serve as a basis for the elaboration of a final report (Deliverable 5.3, responsible MATAM) in month 21, in which main conclusions will be reflected.

Deliverables:

Deliverable 5.1: 'Report: Prognosis on environmental and socio-economic effects in the target regions' (Month 20, responsible BCRC)

Deliverable 5.2: 'Report: Evaluation of IWWA policy recommendations and development of future scenarios for the Region of Matam' (Month 21, responsible MATAM).

Work package number	6	Start date or starting event:					Month 1	
Work package title	Dissemination and Training							
Activity Type	COORD							
Participant number	1	2	3	4	5	6	7	
Participant short name	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	
Person-months per participant:	4.00	5.75	1.00	0.50	0.50	0.25	0.25	
Participant number	9	11	12	13	15	16	17	
Participant short name	ENDA	MATAM	IAGU	ZOOM	KNUST	BCRC	ELRI	
Person-months per participant:	3.00	1.25	2.25	2.00	4.00	3.25	3.50	
Participant number	19	20	21	22				
Participant short name	UAA	CEDARE	ICANDO	CEIA				
Person-months per participant:	5.25	0.75	0.75	3.50				

Objectives:

The main objective of this work package is to extend IWWA results to main stakeholders in the target countries, as well as to the rest of African Countries and worldwide.

Specific objectives:

- Involvement of stakeholders in the process of elaboration of guidelines and recommendations through participatory workshops.
- Capacity building of relevant stakeholders in the main tools developed in the project: Integrated Waste Management Systems, and guidelines and recommendations for Regional and National Action Plans.
- Broad dissemination of IWWA initiative through the project Final Conference, participation in symposia and conference, scientific articles, program courses, promotional material, or the project web site.
- Solidification of IWWA networking.

Description of work:**Task 6.1: Participatory workshops for relevant stakeholders**

Task leader: CEIA

Other participating partners: ENDA, KNUST, BCRC, and UAA

The task team will plan suitable activities for the participatory workshops. CEIA, strongly supported by ENDA, KNUST, BCRC and UAA will prepare by month 7 a report including the activities planned (Deliverable 6.1, responsible CEIA), as well as an agenda with the topics that will be discussed in the participatory workshops, taking into account the information gathered in previous stages (regional assessment, evaluation of legal background and socio-

economical structure, etc). This material could be employed in different workshops. The material will be developed in English, UAA and ENDA will be in charge of its translation to French.

Four participatory workshops will be carried out in Ghana, Ivory Coast, Nigeria and Senegal, organised respectively by CEIA and KNUST, UAA, BCRC and ENDA with support of the rest of local partners in their respective countries. Task 2.3 (Identification of relevant key stakeholders) will provide a suitable list of contacts that will let CEIA, KNUST, UAA, BCRC, and ENDA reach local municipalities, policy makers, companies providing Waste Management services, representatives of the informal sector, among others. The topics to be tackled in the workshops will be: interest and involvement of different stakeholders regarding SWM, effects of inappropriate SWM in environment, health and social aspects, sustainable approaches of SWM and their benefits, opportunities for development, obstacles and barriers, among others.

The workshops will be scheduled as follows:

- Month 8: Workshop in Ghana organized by CEIA (language English)
- Month 9: Workshop in Nigeria organized by BCRC (language English)
- Month 9: Workshop in Senegal organized by ENDA (language French)
- Month 10: Workshop in Ivory Coast organized by UAA (language French)

The results and outcomes of the participatory workshops will be assessed and analysed, and the conclusions will be compiled in a report in month 12 by the task leader (Deliverable 6.2, responsible CEIA). These results will be an important input for the proposal of policy options under work package 4.

Task 6.2: Capacity building of stakeholders for future implementation

Task leader: ELRI

Other participating partners: IAGU, KNUST and UAA.

Workshops performed under this task will build the necessary capacities of key stakeholders to be able to further implement adapted Integrated Solid Waste Management Systems identified in WP3, as well as the guidelines and recommendations developed under WP4. One of the main objectives of this task will be to support local authorities and policy makers to deploy Regional and National Action Plans in their respective regions.

The task team will design and propose a set of activities for the workshops, based on the information gathered in previous stages (identification of key actors, review of the local and national policy, definition of Integrated Waste Management Systems, strategy for the implementation of Integrated Solid Waste Management Systems, etc), with the main purpose of training key actors in the guidelines and recommendations developed during the project in order to build intellectual and institutional capital in the target regions. The task leader will lead this process and elaborate a report with the activities and material planned (Deliverable 6.3, responsible ELRI) by month 15. The material will be developed in English, UAA and IAGU will be in charge of its translation to French.

4 workshops for capacity building of relevant stakeholders will be held in the target countries (one seminar in each country). The seminars will be scheduled as follows:

- Month 17: Workshop in Nigeria organized by ELRI (language English)
- Month 18: Workshop in Ghana organized by KNUST (language English)
- Month 18: Workshop in Ivory Coast organized by UAA (language French)
- Month 19: Workshop in Senegal organized by IAGU (language French)

The task leader will prepare a final report with the conclusions and results of all the

workshops, and a general assessment of the work performed under this task (Deliverable 6.4, responsible ELRI) by month 20.

Task 6.3: Development of tools and activities for mass dissemination

Task leader: BIOAZUL

Activities performed under this task will be the vehicle to spread world-wide the project findings in order to attract interest and new stakeholders for future development of waste management technologies and policies. Therefore, this task will be devoted to the general public, located everywhere in the world, to disseminate efficiently information on the project and its outcomes to various target communities. This mass dissemination strategy will be based on the following instruments:

Sub-task 6.3.1: Webpage establishment (set-up and service):

TTZ will establish a web page during the third month of the project (Deliverable 6.5), which is intended to show all information related to IWWA initiative. The project website will enable a widespread dissemination of the project, its objectives, results, the beneficiaries and the Integrated Solid Waste Management approach in general. The internet web page as the main information tool will provide a platform for information and communication with other experts in the field concerned. It will be presented in the two main languages of IWWA project: English and French.

The web-page is planned to have the following features:

1. Distinctive domain name (e.g., www.IWWA-PROJECT.com).
2. Proposal summary, description of project objectives, methods and expected benefits.
3. Description of the partners, contact details and links to their web sites.
4. Public news area for the dissemination of network public results
5. Links to useful websites, incl. CORDIS, WWW Virtual Library and co-ordinated and related projects.
6. Private area for network members, including bulletin board for news items and events.
7. Website forum to enhance communication among the partners.

TTZ will be responsible for subcontracting the website design, to supervise the content and manage the updates. Work Package leaders will be responsible for keeping the quality and relevance of the reports and material to be exposed to the public. They will prepare articles and reports to be included in the webpage. TTZ will be responsible to half-yearly update the content accordingly to the results achieved, however it will be continuously managed to maintain the information updated.

All reports, annexes and deliverables, as well as other relevant information materials for the different tasks to be performed, will be available in a password protected area for the beneficiaries and the EC in the project website. Additionally, public deliverables (according to the Deliverables list of section B.1.3.4 of the DoW) will be also uploaded in the public area of the site, being therefore all this information reachable for the general public. IAGU will support with translation in French. Confidential information will be password-protected; other areas will be open access.

Sub-task 6.3.2: Production and dissemination of project promotional leaflets and poster

To promote the work performed during the project, two A4 leaflets and one poster will be produced; the first leaflet and the promotional poster will be ready by month 6 in order to be used in the participatory workshops of task 6.1, and the second leaflet will be ready before the final meeting, by month 18. Leaflets and poster will be developed in English and

translated by ENDA to French.

The first leaflet and the promotional poster (Deliverable 6.6 and 6.7 respectively, responsible BIOAZUL) will include: a brief summary of the project together with the expected results and coming reports, relevant results obtained and contact details of all the partners and the EC scientific officer.

The second leaflet (Deliverable 6.8, responsible BIOAZUL) will include the summary of report on the activities performed, including the outputs obtained in the different work packages. This leaflet will be the principal disseminator for the Final Conference, containing information for future exhibitors, place, date and the contact person for those who are willing to participate.

All work package leaders will contribute in the preparation of the leaflets sending summarised conclusions to BIOAZUL, who will compile them. The master of the leaflets will be available in the IWWA website. 800 paper copies in French and 800 in English will be prepared for the dissemination among the relevant stakeholders identified in the target countries (800 at month 6 and 800 at month 18). 800 more leaflets (400 in English and 400 in French) will be also prepared for the dissemination in Europe and other African countries. BIOAZUL will be in charge of the design and printing. Regarding the posters, 200 posters will be printed and distributed (100 in English and 100 in French) through Europe and Africa. UAA, ENDA, ZOOMLION, BCRC and CEIA will be in charge of distributing the leaflets and posters in the target countries. CEDARE and ICANDO will distribute them in other African countries. And BIOAZUL and TTZ will distribute them among European countries.

Sub-task 6.3.3: Promotion of scientific knowledge in solid waste management

Four publications are foreseen related to IWWA results and potential impacts of SWM in Western African countries. These articles are planned to be published in scientific international journals. The topics tackled in the articles will be the following: 'Main barriers and obstacles for the implementation of ISWM concept in Western Africa', to be produced by month 20, being SLU and OEKO the lead beneficiaries. 'Solid Waste Management practices in Western Africa', to be produced by month 20, being EMPA and ENDA the lead beneficiaries. 'Integrated Waste Management Systems for Western Africa', to be produced by month 20, being TTZ and KNUST the lead beneficiaries. 'Guidelines and recommendations for National and Regional Action Plans', to be produced by month 20, being ICANDO and ELRI the lead beneficiaries.

EMPA, SLU, CEDARE, IAGU, KNUST, CEIA and UAA will evaluate the material developed under IWWA project and include it in university training courses held under their respective organizations such as seminars, lecture courses, conferences, seminars, PhD courses, etc. in order to include in their programmes the results achieved during the project timeframe for future capacity development in Europe and Africa. EMPA and SLU will also support African universities to include appropriately the project materials to their curricula.

Sub-task 6.3.4: Communication of environmental policy related results.

The project and its activities will be promoted at international conferences and symposia. All members of the consortium will be responsible for representing IWWA beyond the scope of the meetings, in order to widen the dissemination of this CA. The promotional poster developed in sub-task 6.3.2 will be used in national and international events.

Furthermore, partners from the target countries will specifically contact authorities in their respective countries from the beginning of the project in order to send them general information about the project, provide project leaflets, provide access to usable results (i.e. guides, recommendations, etc.), and invite them to the different events to be held under the project time frame such as workshops and the Final Conference. In particular, government agencies from the target countries will be contacted from the very beginning of the project and invited to the participatory and capacity building workshops as well as the kick off meeting in order to involve them in the development of the project and to ensure the

appropriation of the project results by relevant stakeholders that ensure the sustainability of the actions planned during the project time frame. Results of task 2.3 will be an important input for the development of this activity.

Sub-task 6.3.5: Final Conference of Solid Waste Management

The most important event related to mass dissemination that will be held in IWWA framework will be the Final Conference that will take place at month 22 in Accra, Ghana. All the logistic and administration needed for this activity will be organised and co-ordinated by ZOOM, with the support of KNUST, CEIA, TTZ and BIOAZUL. It will also be the scenario for expert exhibitions by gathering relevant actors in Solid Waste Management. It is expected that specialised seminars will be given by members of the consortium:

1. Evaluation of Solid Waste Management practices in the target countries (presented by EMPA).
2. Results of the tailored Solid Waste Management Systems (presented by TTZ).
3. Guidelines and recommendations for the implementation of National and Regional Action Plans (presented by ELRI and ICANDO).
4. Case Study on the municipality of MATAM (presented by MATAM).
5. Prognosis on environmental and socio-economic effects in the target regions (presented by CEIA).
6. Main barriers and lessons learnt by EU and non European countries (presented by OEKO).

Presentation of other results will also be considered.

The content of the seminars will be decided and reported by KNUST by month 20, when most of the tasks will be ready. This report will be a section of Deliverable 6.13.

Target R&D attendants for this conference will be identified by the information provided in WP2 (Task 2.2 Mapping and evaluation of Current Research and Network in target regions) and will be contacted by KNUST. They will be invited to participate in the final conference by bringing scientific papers and posters for the exhibitions. Work package leaders will evaluate the incoming abstracts, deciding which will be presented orally and which ones with posters. Other relevant stakeholders will also be contacted by ZOOM and ZOOM for their participation in the Conference. Information about the IWWA Conference will be also available to general public in the web-page.

All the documentation distributed during the workshops will be prepared by ZOOM, with the support of KNUST, BIOAZUL and ZOOM at the end of month 21 and also published on the project website. At the end of the final conference a report summarising the activities with general public will be compiled by month 24 (Deliverable 6.13, responsible ZOOM).

Deliverables

- **Deliverable 6.1: 'Report: Activities and introductory material for participatory workshops'** (Month 7, responsible CEIA)
- **Deliverable 6.2: 'Report: Evaluation and conclusions of participatory workshops'** (Month 12, responsible CEIA)
- **Deliverable 6.3: 'Report: Material and activities for capacity building workshops'** (Month 15, responsible ELRI)
- **Deliverable 6.4: 'Report: Evaluation and conclusions of capacity building workshops'** (Month 20, responsible ELRI)

- **Deliverable 6.5: 'IWWA web page set up'** (Month 3, responsible TTZ)
- **Deliverable 6.6: 'First promotional leaflet'** (Month 6, responsible BIOAZUL)
- **Deliverable 6.7: 'Promotional poster'** (Month 6, responsible BIOAZUL)
- **Deliverable 6.8: 'Second promotional leaflet'** (Month 18, responsible BIOAZUL)
- **Deliverable 6.9: "Publication: 1st publishable scientific article on the main barriers and obstacles for the implementation of ISWM concept in Western Africa"** (Month 20, responsible OEKO and SLU)
- **Deliverable 6.10: 'Publication: 2nd publishable scientific article on Solid Waste Management practices in Western Africa'** (Month 20, responsible EMPA and ENDA).
- **Deliverable 6.11: 'Publication: 3rd publishable scientific article on the Integrated Waste Management Systems for Western Africa'** (Month 20, responsible TTZ and KNUST)
- **Deliverable 6.12: 'Publication: 4th publishable scientific article on the guidelines and recommendations for National and Regional Action Plans'** (Month 20, responsible ELRI and ICANDO).
- **Deliverable 6.13: 'Report: Content, evaluation and conclusions of the Final Conference'** (Month 24, responsible ZOOM)

Work package number	7	Start date or starting event:					Month 1	
Work package title	Project Management							
Activity Type	MGT							
Participant number	1	2	3	4	5	6	7	
Participant short name	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	
Person-months per participant:	4.50	4.00	0.00	0.00	0.00	0.00	0.00	
Participant number	9	11	12	13	15	16	17	
Participant short name	ENDA	MATAM	IAGU	ZOOM	KNUST	BCRC	ELRI	
Person-months per participant:	0.00	0.00	0.00	3.50	0.00	0.00	0.00	
Participant number	19	20	21	22				
Participant short name	UAA	CEDARE	ICANDO	CEIA				
Person-months per participant:	0.00	0.00	0.00	0.00				

General objective:

- To ensure an effective progress of the project, correct organisation, communication and co-operation between the beneficiaries and with the European Commission over the entire project duration according to the work plan.

Specific objectives:

- To supervise, monitor and evaluate the overall development of the project.
- To assure that all contractual obligations under the grant and consortium agreement are met.
- To distribute the payments done by the EC.
- To submit first and second short project update reports to the EC.
- To submit first, second and final periodic reports to the EC.

Description of work:

This work package has been foreseen comprising all the management and coordination of the beneficiaries. It will be carried out throughout the whole duration of the project, in parallel to the dissemination activities, and will ensure the correct organisation, communication and co-operation between the beneficiaries and with the European Commission. Among others, more specific objectives are to organise the project meetings, or to prepare and submit the project periodic reports. The overall management will be under responsibility of TTZ. In order to assure an efficient running of the project, the overall management was divided into the following tasks:

Task 7.1: General and financial project management: TTZ will seek to maximise the

project objectives. The management activities for which TTZ will be responsible are:

- **Coordinating activities:** TTZ will supervise, monitor and evaluate the overall development of the project, assuring an organised and smooth working together of all project components.
- **Communication activities:** TTZ will act as the single contact point between the participants and the Commission.
- **Financial activities:** will be the effectiveness of the work to be performed and the efficiency of the resources to be committed, in order to achieve responsible for receiving and distributing the payments (advance, intermediate and final) done by the Commission.
- **Contractual activities:** TTZ will be responsible for assuring that all contractual obligations under the grant and consortium agreement are met.
- **Administrative support:** TTZ will provide support in administrative activities to all partners of the consortium, specially to ZOOM, MATAM, CEDARE and ICANDO, partners with a lower workload allocation within the consortium, ,in order to assure that all resources of those partners are focused on networking activities.

Task 7.2: Regional project management: In order to improve communication among the African beneficiaries, to coordinate simultaneous tasks and organise meetings in the host countries, ZOOM will act as regional manager.

In this function, ZOOM will be the first contact point for all African partners and will support and control all project activities in the region. A specific focus will be given to the local workshops and the regional conference. ZOOM will also coordinate the regional dissemination strategy and press related work. Another important task is the troubleshooting activities within the region during the project and the distribution of the efforts for an effective solution finding strategy. ZOOM will also monitor the progresses towards the creation of a permanent network of local and regional stakeholders, which is an overall objective of the project.

Task 7.3: Administrative project management: BIOAZUL will be responsible for the preparation of the reports, support in the organisation of the meetings of the consortium, and support in the preparation of dissemination activities and materials. The administrative activities for which BIOAZUL will be responsible are:

- **Reporting:** BIOAZUL will prepare and submit to the co-ordinator the periodic, final and the short project update reports (see section 2.1.3 Reports), according to the instructions and guidance notes established by the Commission. Specifically, it will: (i) develop guides for reporting and cost control for the project and prepare the templates and forms to be used by the beneficiaries; (ii) request and process the information for the preparation of the reports and submit them to the co-ordinator for the final review before being sent to the Commission, and (iii) follow up the comments made by the Commission after the submission, request any further information to the beneficiaries and forward it to the co-ordinator.
- **Organisation:** BIOAZUL will support the responsible host beneficiary in the overall organisation of consortium meetings (kick-off, mid-term and final meetings) and will support the regional manager and WP-Leaders in the organisation of work package meetings, respectively (see section 2.1.3 Meetings). It will also support in the organisation of the dissemination and training programme (see WP6). For the consortium meetings (3 official meetings: Kick-off Meeting in Bremerhaven, Germany, month 1; Mid-term Meeting in Dakar, Senegal, month 12; and Final Meeting in Accra, Ghana, month 22), it will: (i) schedule the meetings and collaborate in the definition of the agenda; (ii) support beneficiaries in the arrangement of travel itineraries and visa requirements (within EU countries), (iii) organise and collect the necessary material needed and (iv) prepare the meetings minutes reflecting the progress of the project, problems

encountered, their possible risk for the project and actions undertaken. These minutes will be sent regularly to the EC by the coordinator with a copy to all consortium members.

- **Dissemination material:** BIOAZUL will (i) define standards for the preparation of any dissemination material, printed or electronic, (ii) supervise the content and approve the layout, and (iii) upload the master files of the leaflets, poster and any other dissemination material on the restricted area of the web page for those beneficiaries presenting the network in national and international events.

After each project year, BIOAZUL will prepare a CD to be sent to the EC containing all reports, deliverables, annexes or any other kind of materials produced within that year.

Deliverables

- **Deliverable 7.1: 'Report: First short project update report'** (Month 6, responsible BIOAZUL)
- **Deliverable 7.2: 'Report: First periodic report'** (Month 12, responsible BIOAZUL)
- **Deliverable 7.3: 'Report: Second short project update report'** (Month 18, responsible BIOAZUL)
- **Deliverable 7.4: 'Report: 'Second periodic report'** (Month 24, responsible BIOAZUL)
- **Deliverable 7.5: 'Report: Final periodic report'** (Month 24, responsible BIOAZUL)

B 1.3.6 Efforts for the full duration of the project:

Project Effort Form 1 - Indicative efforts per beneficiary per WP:

Work Package	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL per Beneficiary
TTZ	0	1	4.25	0.75	0	4	4.5	14.5
BIOAZUL	0	0.75	2	0.75	0.5	5.75	4	13.75
EMPA	1	4.75	1.25	0.25	0.5	1	0	8.75
SLU	0.25	1.5	3.5	1	0.5	0.5	0	7.25
OEKO	2.5	2	2.25	2.25	0.25	0.5	0	9.75
GAIKER	1	1.5	3.75	1.5	0.75	0.25	0	8.75
TUB	0	1	3	1.75	0.5	0.25	0	6.5
ENDA	2.50	7.25	0	3.25	3	3	0	19
MATAM	1.5	5.50	5	3.75	4	1.25	0	21
IAGU	2	5.25	6.75	1.5	0	2.25	0	17.75
ZOOM	0	4.5	4	2	0.5	2	3.5	16.5
KNUST	5.25	8	5.5	2	0	4	0	24.75
BCRC	2.25	10.5	3.75	3.25	3.5	3.25	0	26.5
ELRI	2.5	7.5	4.25	4.5	0	3.5	0	22.25
UAA	2	7.5	0.25	3	0	5.25	0	18
CEDARE	1	0	3	1.5	0.75	0.75	0	7
ICANDO	0	0	1.75	1.75	1	0.75	0	5.25
CEIA	1.25	2	0.5	1.25	1.75	3.5	0	10.25
TOTAL	25	70.5	54.75	36	17.5	41.75	12	257.5

IWWA (Project number 244188)

Project Effort Form 2 - indicative efforts per activity type per beneficiary:

<i>Activity Type</i>	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB
RTD/Innovation activities							
Total 'research'	0	0	0	0	0	0	0
Demonstration activities							
Total 'demonstration'	0	0	0	0	0	0	0
Consortium management activities							
WP 7	4.5	4	0	0	0	0	0
Total 'management'	4.5	4	0	0	0	0	0
Other activities							
WP1	0	0	1	0.25	2.5	1	0
WP2	1	0,75	4.75	1.5	2	1.5	1
WP3	4.25	2	1.25	3.5	2.25	3.75	3
WP4	0.75	0.75	0.25	1	2.25	1.5	1.75
WP5	0	0.5	0.5	0.5	0.25	0.75	0.5
WP6	4	5.75	1	0.5	0.5	0.25	0.25
Total 'other'	10	9.75	8.75	7.25	9.75	8.75	6.5
TOTAL BENEFICIARIES	14.5	13.75	8.75	7.25	9.75	8.75	6.5

IWWA (Project number 244188)

<i>Activity Type</i>	ENDA	MATAM	IAGU	ZOOM	KNUST
RTD/Innovation activities					
Total 'research'	0	0	0	0	0
Demonstration activities					
Total 'demonstration'	0	0	0	0	0
Consortium management activities					
WP 7	0	0	0	3.5	0
Total 'management'	0	0	0	0	0
Other activities					
WP1	2.5	1.5	2	0	5.25
WP2	7.25	5.5	5.25	4.5	8
WP3	0	5	6.75	4	5.5
WP4	3.25	3.75	1.5	2	2
WP5	3	4	0	0.5	0
WP6	3	1.25	2.25	2	4
Total 'other'	19	21	17.75	13	24.75
TOTAL BENEFICIARIES	19	21	17.75	16.5	24.75

IWWA (Project number 244188)

<i>Activity Type</i>	BCRC	ELRI	UAA	CEDARE	ICANDO	CEIA	TOTAL ACTIVITIES
RTD/Innovation activities							
Total 'research'	0	0	0	0	0	0	0
Demonstration activities							
Total 'demonstration'	0	0	0	0	0	0	0
Consortium management activities							
WP 7	0	0	0	0	0	0	12
Total 'management'	0	0	0	0	0	0	12
Other activities							
WP1	2.25	2.5	2	1	0	1.25	25
WP2	10.5	7.5	7.5	0	0	2	70.5
WP3	3.75	4.25	0.25	3	1.75	0.50	54.75
WP4	3.25	4.5	3	1.5	1.75	1.25	36
WP5	3.5	0	0	0.75	1	1.75	17.5
WP6	3.25	3.5	5.25	0.75	0.75	3.5	41.75
Total 'other'	26.5	22.25	18	7	5.25	10.25	245.5
TOTAL BENEFICIARIES	26.5	22.25	18	7	5.25	10.25	257.5

B 1.3.7 List of milestones and planning of reviews:

Summarised overview of the milestones:

During the first month of the project, partners of the consortium will gather in Accra, Ghana, for the kick off meeting. This meeting will facilitate the organization of the work among the partners on the basis established in the work plan. At month 3, the project web site will be available. This will be a strong dissemination tool of the project objectives and results that will permit to reach relevant actors and general public as well as raise awareness in the importance of sustainable waste management. Also at month 3, the definition of criteria and parameters will be performed once the activities of work package 1 have been finalized. This milestone will be an important input for the rest of the project activities since it will settle a framework for the proper assessment of practices, technologies, relevant stakeholders, etc. Regional evaluation of the target countries will be ready at month 8; this work will provide a diagnosis of the current situation of the solid waste management at a regional level in the target countries. At month 11, two guides for identification and implementation of ISWM systems will be respectively performed by partners of the consortium. These guides will offer a regional framework for the selection and perform of suitable systems adapted to the regional context. With all these results achieved, at month 12 partners of the consortium will meet again in the mid-term meeting after a deep assessment of the situation in target countries during the previous months. The mid-term meeting will be an excellent opportunity to start the proposal of policy options that will be developed in subsequent activities on the basis of the work already performed. At month 15, Guidelines for participatory planning processes in ISWM will be developed. This important result of the project will permit to enhance participatory methods and the concern that in the proposal of policy measures the process is as important as the result. At month 16 a set of recommendations will be provided in order to promote the definition of clear objectives and foster suitable measures to achieve the proposed objectives. The Case Study to be held in the municipality of Matam will permit to test the feasibility in the territory of Matam of the guidelines and recommendations developed and it will be an important task for the evaluation of the results achieved during the project. The Final Conference will be the main dissemination activity during the project time frame. Local authorities, government agencies, research institutes, NGOs, representatives of groups of interests, etc. will be invited to participate serving as multipliers of the project results. After the Conference, the consortium will meet for its Final Meeting in order to evaluate and establish main conclusions of the work developed.

List of milestones:

Milestone number	Milestone name	Work package(s) involved	Expected date (in months)	Means of verification
01	Kick-off meeting	7	1	Minutes of the meeting submitted to the EC
02	Web site on line	6	3	Web page free access
03	Definition of criteria and parameters	1	3	Deliverable submitted to the EC
04	Regional evaluation	2	8	Set of deliverables from work package 2 submitted to the EC
05	Guide for identification of suitable ISWMS	3	11	Deliverable submitted to the EC
06	Guide for implementation of ISWMS	3	11	Deliverable submitted to the EC
07	Mid-term meeting	7	12	Minutes of the meeting submitted to

Milestone number	Milestone name	Work package(s) involved	Expected date (in months)	Means of verification
				the EC
08	Guidelines for participatory planning processes in ISWM	4	15	Deliverable submitted to the EC
09	Recommendations for the development of National and Regional Action plans	4	16	Deliverable submitted to the EC
10	Case study on the municipality of MATAM	5	21	Deliverable submitted to the EC
11	Final Conference	6	22	Minutes of the meeting submitted to the EC
12	Final meeting	7	22	Minutes of the meeting submitted to the EC

Planning of reviews:

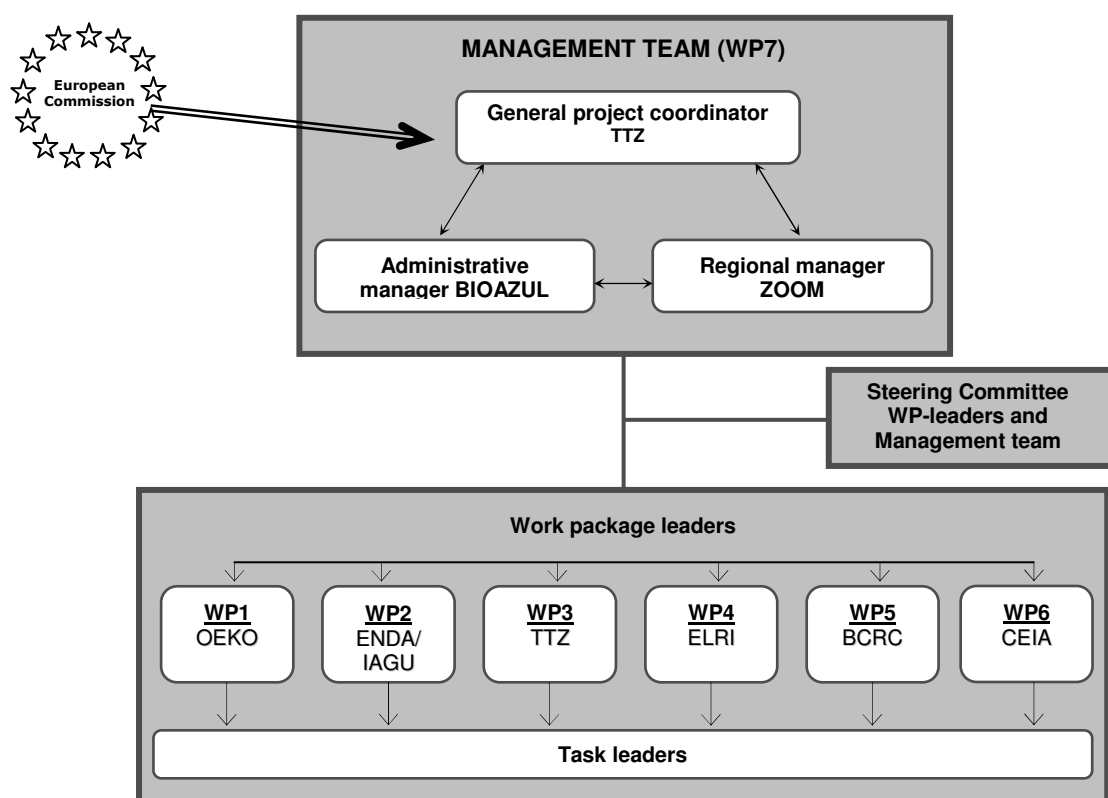
Tentative schedule of project reviews			
Review n°	Tentative timing	Planned venue of review	Comments
1	Month 1	Accra, Ghana	Preliminary review in the framework of the official kick-off meeting
2	Month 12	Dakar, Senegal	Mid-term review in the framework of the official mid-term meeting
3	Month 22	Accra, Ghana	Final review in the framework of the official final meeting

B2. Implementation

B 2.1 Management structure and procedures

B 2.1.1 Organisational and decision-making structure

To assure a proper overall legal, ethical, financial and administrative management, as well as high quality and optimal efficiency of the implementation of the project, the organisational and decision-making structures will consist of: a **management team** conformed by the project co-ordinator, an administrative manager, and a regional manager; **work package** and **task leaders**, and a **steering committee**, integrated by the management team and the work package leaders.



IWWA management structure

I. Management team.

It is constituted by the general project coordinator (TTZ), the administrative manager (BIOAZUL) and the regional manager (ZOOM), gathering the most experienced partners in coordinating, administrative and local issues for a project of these characteristics. The effectiveness of this management structure for the implementation of IWWA, is assured based on the individual experience of each one of the team members in the management of RTD projects, the joint and successful experience of TTZ and BIOAZUL in the project management (e.g. NETSSAF, WAFLA, CLEANSOIL, WACOSYS, etc.), and the experience of ZOOM in coordinating and implementing SWM projects in Ghana, at community level promoting health, education, employment, and good governance.

The management team represents the structure where the most important and determining decisions within IWWA are to be made. The activities assigned to the team correspond to the **Management activities** of the project, for which the necessary resources have been

estimated in the project effort table. The general and specific activities of the members of the management team are listed below.

General project co-ordinator: TTZ. It will seek to maximise the effectiveness of the work to be performed and the efficiency of the resources to be committed, in order to achieve the project objectives. **TTZ** has a long and successful trajectory in coordinating different kinds of projects covering the whole spectrum of activities (RTD, demonstration, training, coordination, support and other activities) managing large and international consortia. Due to its continuous participation in FP5, FP6 and other EU programmes it has a valuable know-how and expertise in project management of large and small consortia (see **TTZ**'s description in section 2.2 for more details) The management activities for which **TTZ** will be responsible are:

- a. **Coordinating activities:** **TTZ** will supervise, monitor and evaluate the overall development of the project, assuring an organised and smooth working together of all project components, by: (i) determining, together with the administrative and regional managers and work package leaders, measures to assure that deliverables are duly completed, and milestones are achieved, and (ii) monitoring the overall performance of the participants.
- b. **Communication activities:** **TTZ** will act as the single contact point between the participants and the Commission. Internally to the consortium, it will undertake activities to: (i) assure effective communication and exchange of information, horizontally (among the management team) and vertically (among work package and task leaders); (ii) inform all partners about the status of the project, notifying any preventive or corrective measures to be taken in order to avoid any deviation from the work plan, and (iii) verify the appropriateness of all dissemination activities and materials.
- c. **Financial activities:** as the responsible for receiving and distributing the payments (advance, intermediate and final) done by the Commission, **TTZ** will: (i) administer the funds received in accordance with the grant and consortium agreements; (ii) control the exploitation of the budget in order to assure an optimal utilisation of resources, and (iii) give support to all partners on financial issues, compile the financial statements and certificates and submit them to the Commission together with the corresponding reports.
- d. **Contractual activities:** **TTZ** will be responsible for assuring that all contractual obligations under the grant agreement are met. Besides, it will be responsible for the preparation and management of the consortium agreement. Specifically, **TTZ** will: (i) explain all contractual obligations to the partners, prepare a draft version of the consortium agreement and accord the final version; (ii) review and submit to the Commission all deliverables, reports and any official information requested; (ii) inform the Commission about any change in the consortium relevant for contractual or legal issues (e.g. change of legal status, new participants, etc.); (iii) monitor the compliance by the participants with their obligations; (iv) prepare any necessary amendment to the grant and/or consortium agreement, (v) check that any subcontract is done for the tasks foreseen, and (vi) ensure that the project activities are compatible with the protection of intellectual property rights (see section 3.2.1).
- e. **Administrative support:** **TTZ** will provide special support in administrative issues to all partners of the consortium, specially to ZOOM, MATAM, CEDARE and ICANDO, partners with a lower workload allocation within the consortium in order to assure that all resources of those partners are focused on networking and technical activities

Administrative manager: BIOAZUL. It will be responsible for the preparation of the reports, support in the organisation of the meetings of the consortium, and support in the preparation of dissemination activities and materials. The participation of **BIOAZUL** as administrative manager in several kinds of projects ranging from CRAFTs, STREPs and Collaborative

projects to Coordination and Support actions are prove of its knowledge and experience in administrative issues (see **BIOAZUL**'s description in section 2.2 for more details). The administrative activities for which **BIOAZUL** will be responsible are:

- a. **Reporting:** **BIOAZUL** will prepare and submit to the co-ordinator the **periodic, final and short project update reports** (see section 2.1.3 Reports), according to the instructions and guidance notes established by the Commission. Specifically, it will: (i) develop guides for reporting and cost control for the project and prepare the templates and forms to be used by the partners; (ii) request and process the information for the preparation of the reports and submit them to the co-ordinator for the final review before being sent to the Commission, and (iii) follow up the comments made by the Commission after the submission, request any further information to the partners and forward it to the co-ordinator.
- b. **Organisation:** **BIOAZUL** will support the responsible host partner in the overall organisation of **consortium meetings** (kick-off, mid-term and final meetings) and will support the regional manager and WP-Leaders in the organisation of the dissemination and training programme. For the consortium meetings, it will: (i) schedule the meetings and collaborate in the definition of the agenda; (ii) prepare and distribute the meeting minutes; (iii) support partners in the arrangement of travel itineraries and visa requirements (within EU countries), and (iv) organise and collect the necessary material needed (handouts, presentations, etc.).
- c. **Dissemination material:** **BIOAZUL** will (i) define standards for the preparation of leaflets, brochures, posters and any other dissemination material, printed or electronic, and (ii) supervise the content and approve the layout.

Regional manager: ZOOM It will be responsible for monitoring the activities performed in Africa, offering local and regional assistance to the Coordinator in achieving milestones. ZOOM will be the representation of the coordinator body in Africa, mobilising local and regional expertise. ZOOM works for the improvement of living conditions of poor people mainly, by improving their access to waste collection and therefore waste practices. Other roles of the local project coordinator will be:

1. To represent the General Coordinator in Africa.
2. To monitor and coordinate the work performed in Africa, reporting the General Coordinator the development of the project in the region.
3. To coordinate with institutions in the region for data analysis and scientific reporting of project results.
4. To establish linkages with institutions and related projects.

II. Work package and task leaders.

The work plan consists of 7 work packages, each one with a clearly defined set of tasks. For each work package and task, there is a **work package leader (WP-Leader)** and a **task leader**, respectively. They represent the second decision-making structure, being responsible for the co-ordination of the other participants involved, the planning and organisation of the work, and the reporting to the management team.

The role of the **WP-Leaders** is to ensure an efficient co-ordination and information flow between the members of the WP and the rest of the consortium, in order to complete the deliverables and attain the milestones that belong to the WP. Partners appointed as WP-Leaders are, therefore, those most experienced in technical and coordination issues in the group. WP-Leaders will:

- ✓ Co-ordinate with the tasks leaders of the WP the strategies to be followed in order to ensure that the tasks are correctly and timely performed.

- ✓ Inform the project co-ordinator about the development and status of the WP, as well as of any circumstance that might affect its correct completion.
- ✓ Submit all deliverables belonging to the WP, timely to the coordinator.
- ✓ Approve any necessary preventive or corrective measure in order to avoid deviations from the work plan and inform them to the co-ordinator.

Task leaders have the responsibility to co-ordinate on a day-to-day basis, the other participants involved in the task and organise the specific activities to be developed. Task leaders will have the following functions:

- ✓ Plan and organise the specific activities necessary to complete the task.
- ✓ Define specific deadlines for the completion of deliverable(s) belonging to the task, anticipating the official deadlines.
- ✓ Supervise and directly participate in the performance of the activities belonging to the task.
- ✓ Inform the WP-Leader about the development of the activities and the contribution of the participants.
- ✓ Foresee any important deviation from the work plan, propose preventive or corrective measures and inform them to the WP-Leader.

III. Steering Committee

It is the third decision-making structure of the project and will be constituted by the management team and the WP-Leaders. Its main function will be conflict resolution arising from technical, scientific, political or any other issue affecting the further development of the project. The project co-ordinator (**TTZ**) will be the mediator, seeking to get consensus. In the **case of dispute**, decisions will be taken by **majority voting**, with representatives of **each partner of the consortium having one vote**. A specific clause for the composition and functions of the steering committee will be included in the consortium agreement.

The steering committee will gather for the first time at the kick-off meeting, laying down specific duties for the members and establishing possible scenarios for those activities which could represent any important contingency. Eventually, it will meet at each official meeting of the consortium (yearly meetings and final meeting). If necessary, the steering committee will attend the Industrial clusters meetings.

B 2.1.2 Communication strategy

The organisational and decision-making structure proposed in section 2.1.1, is intended to provide the consortium with the necessary mechanisms for an efficient organisation, communication and information flow. Informal communication among participants will be, however, encouraged at all times, with the responsibility to report via the WP-Leader to the project co-ordinator significant actions and/or conclusions. Besides the conventional means of communication (phone, fax, letters, etc), the use of **e-mail** will be the main communication tool, especially where interactive amendments to documents is required. For all official management-related issues and /or in-depth discussions, **written correspondence** will be necessary in the form of concise text via post or fax.

Additionally, the **secured area** of the **project website** (see sub-task 6.3.1) will be an electronic tool for the exchange of information among participants. This area will be restricted to the consortium members and will feature online-conferencing, forums, upload-download section, project progress, etc. Official **project meetings** and **reports** are also part of the communication strategy (see section 2.1.3).

All communications will be in **English** and, if electronic, in a Microsoft Office compatible format.

B 2.1.3 Meetings and reporting

Meetings. For a project of 24 months duration and a consortium of 20 partners from 10 different European and African countries, meetings are a key issue for a fruitful face-to-face discussion, interaction and cohesion among the group. It is foreseen that three consortium meetings are held during IWWA time frame, where coordination and management issues relevant for all members will be presented and discussed, therefore, the participation of all partners is compulsory. The resources necessary for the organisation and attendance to these meetings is included in the estimation for the travel costs of each participant in the table of resources. **BIOAZUL**, as administrative manager, will be responsible for the organisation of the three consortium meetings:

- **Kick-off meeting:** in month 1 in Accra, Ghana.
- **Mid-term meeting:** in month 12 in, Dakar, Senegal.
- **Final meeting:** in month 22 in Accra, Ghana.

Besides, in order to ensure coordination of activities among the partners taking part on each task, the consortium will schedule internal e-conferences that will be carried out using **VoIP program**, which will be specified during the kick-off meeting. This ensures direct communication and real time discussion of project outcomes, which enable the partners to take decisions in real time. It is anticipated that, at least one e-conference will be carried out for each work package. Nevertheless, the use of this tool will be encouraged as a complement for the usual communication channels. The objective is that the partners meet in an electronic conference at least on a three-monthly basis.

Reports. Besides to the official reports delivered to the Commission (**periodic, final and supplementary** reports), **short project update reports** will be prepared by the Administrative manager (**BIOAZUL**) in **months 6 and 18**, in order to keep all participants informed about the status of the tasks, deliverables and milestones, and to identify and/or inform any preventive or corrective measures to avoid a deviation from the work plan or timetable. All reports will be electronically recorded and posted in the secured area of the project website. At the end of the project, they will be compiled in a master file, which will be available for the participants in a CD.

B 2.2 Beneficiaries

Participant n° 1: Verein zur Förderung des Technologietransfers an der Hochschule Bremerhaven e. V. (TTZ), private non-profit organization, Germany

TTZ is a private non-profit organisation established in Bremerhaven, Germany specialized in the fields of environment technology, biomass production, conversion and use, waste and wastewater management and energy efficiency. It is an innovative provider of technology transfer services and conducts customer-oriented training, research and development. TTZ has a long experience in European and International projects, as it has participated in more than 140 during the 6th and 7th Framework Program, either as co-coordinator or key member. TTZ carries out applied research and has been or is involved in several European projects dealing with waste and wastewater management, sustainable biomass and biogas production and use.

TTZ is the coordinator of the currently running European Networks: on sustainable approaches for large scale implementation of sanitation in **West Africa** called "NETSSAF" on integrated approach for biogas production with agricultural waste called "AGROBIOGAS", on **integrated sustainable solid waste management** in Asia called "ISSOWAMA", and on several other innovative projects listed on www.ttz-bremerhaven.de. TTZ has a worldwide partner network and a broad experience in the development and implementation of projects financed by international organisations, e.g the EU and the UNDP, as well as by national or regional institutions.

Main role in the project:

TTZ will be the general and financial project coordinator. Leading and coordinating the work team of work package 3: Integrated Solid Waste Management systems and approaches. TTZ will support in the evaluation of SWM practices and technologies in the target regions, as well as selection of best practices in Europe and non OECD countries. They will collaborate in the evaluation of technical requirements for the implementation of ISWM systems, in the elaboration of the guide for selection of adapted ISWM systems, and the guide for their implementation. Furthermore they will participate in the elaboration of policy guidelines and recommendations for future strategies, web page establishment and management, and development of adapted dissemination tools.

Personnel involved:

Dr. - Ing. Gerhard Schories is Technical Director of the Environmental Department of TTZ Bremerhaven. He is Doctor in Waste treatment technologies and has a long time experience in solid waste treatments technology (municipal, industrial waste, land filling, etc.). He is responsible for several scientific publications (conferences, magazines) in the fields of solid waste management and has managed several international projects related to solid waste.

Dipl.- Eng Mirko Hänel is Research Director, Environmental Department and he studied Landscape Planning at the TU Berlin/Germany. He has a Master Degree (Australian National University) in Environmental Management and Development. Professional experience in scientific research work related to renewable energy production and soil remediation/sustainable land management, as well as vast working experience in public institutions such as the Australian Ministry of Environment, or European Commission (DG TREN). More than 8 years of experience in project development and management of several EU projects. He has participated in research projects devoted to the development of technical and sustainable concepts regarding Land Use Technology and Management in developing countries, and currently coordinates two networks in the field of integrated waste management in West Africa and Latin America.

Participant nº 2: Bioazul S.L. (BIOAZUL), SME, Spain.

BIOAZUL company is a catalyst, promoter and facilitator of R&D projects and developer and distributor of innovative environmental products. The product line of BIOAZUL includes organic waste treatment, soil remediation, complete SBR and MBR systems for wastewater treatment, and water reuse especially in remote locations or for specific wastewater compositions.

BIOAZUL has an extensive experience in the preparation, management and participation in R&D projects in the fields of renewable energy and energy efficiency (especially concerning biomass), solid wastes and wastewater management, and environmentally-sound agriculture. BIOAZUL is currently working in the development and optimisation of biotechnological products and systems devoted to wastewater treatment and reuse, as well as in the preparation, development and management of projects within the VI and VII Framework Programmes of the European Commission.

BIOAZUL acts as administrative coordinator in the currently ongoing EU network on ecological wastewater treatment in West Africa (NETSSAF). In addition, BIOAZUL is the administrative coordinator of the ongoing initiative ISSOWAMA, a FP7 EU project which aims the implementation of Integrated Solid Waste Management assessment methods in Asia. Using its knowledge and network from several international projects and wide international market experience in the West African, BIOAZUL has valuable local experience and partner networks in the target countries.

Main role in the project:

BIOAZUL will be the administrative project coordinator. The company will bring its experience in technical treatment systems of specific organic waste in the development work

in WP3, selecting best practices from Europe and non OECD countries, analyzing requirements for the implementation of ISWM systems in the target countries, and developing a guide for selection of adapted ISWM systems. BIOAZUL will develop and distribute posters and leaflets as mass dissemination material under work package 6 in order to disseminate the project results. They will be in charge of networking solidification on account of their vast experience in managing R&D projects.

Personnel involved:

Ms. Antonia Lorenzo López is R&D responsible and she has studied Chemistry with the specialty of Agricultural Chemistry. She is specialist in technologies for the minimisation and up-grading of agro-food residues (solid wastes and wastewater) and has been the technology area coordinator during three years in a European network related to agro-food residues (AWARENET) where BAT have been revised, and has been working in the preparation of several projects focused in particular in solid wastes, including a project for the construction of a municipal waste treatment plant in Pakistan and two Thematic networks on technologies for food packaging treatment and recycling. She has worked as a project manager for 5 years organising and /or managing successfully 8 European research projects and 3 Thematic Networks.

Mr. Rafael Casielles Restoy studied Chemical Engineering with the speciality of Environment Engineering, and holds a Master degree in International Cooperation for development. Mr. Casielles has worked in the deployment of tasks in European research projects devoted to different fields, like sustainable sanitation and biological remediation on polluted soils, amongst others. He currently acts as administrative coordinator of a research project in the field of Agroforestry and Integrated water management in Latin America.

Participant n° 3: Eidgenoessische Materialpruefungs - Und Forschungsanstalt (EMPA), non profit public body, Switzerland.

EMPA is the multidisciplinary research institute for material science and technology of the Swiss Federal Institute of Technology (ETH) domain. It is specialised in applications-oriented research and development, as well as in offering services to help solving demanding problems in the fields of sustainable materials science and technology. The Technology and Society Lab within EMPA analyses the impacts of technological developments on society and the environment and is leading EMPA's e-waste activities. It is a pioneer in monitoring and control for e-waste management systems as the technical control body for setting recycling and disposal standards as well as auditing material flows through the Swiss system. EMPA is also leading several projects in developing and emerging economies in Asia, Africa and Latin America to build capacities for e-waste management in areas of policy & legislation, business & financing and technology & skills. It has been instrumental in founding the *StEP Initiative* to develop a global knowledge sharing platform on e-waste.

Main role in the project:

EMPA will lead the evaluation of SWM practices and technologies in the target countries in task 2.4, and participate in the selection of best practices in Europe and non OECD countries. EMPA will also collaborate in the development of a guide for the implementation of ISWM systems in the target countries. EMPA will write an article in order to disseminate the project results, as well as participate in the Final Conference by giving a seminar, in both cases regarding SWM practices in the target countries. As a member of the StEP initiative, EMPA will be an efficient multiplier of the project results.

Personnel involved:

Mathias Schluep is programme manager and scientist at the Technology and Society Lab at EMPA in Switzerland. He is leading EMPA's e-waste related research and is responsible for several cooperation projects with developing countries in e-waste management in Africa, Latin America and Asia. Before that he worked in the private sector in the field of environmental and general business consultancy at national and international level for

several years. He received his MSc in Environmental Engineering and his PhD in natural sciences from the Swiss Federal Institute of Technology in Zurich (ETH).

Heinz Böni is team leader of the research group "sustec-sustainable technology cooperation" at the Technology and Society Lab at EMPA in Switzerland. He is responsible for the cooperation activities with developing countries at the Technology and Society Lab at EMPA. He is particularly involved as programme manager of the ICT- and e-waste-related projects in Latin America. Before that he worked more than 15 years as waste management specialist and consultant on national and international level. He received his MSc in Rural and Environmental Engineering from the Swiss Federal Institute of Technology in Zurich (ETH) in 1983.

Participant n° 4: Sveriges Lantbruksuniversitet (SLU), non profit public body, Sweden.

Sveriges Lantbruksuniversitet (SLU) is a university with vast experience of research and education within the fields of agriculture, horticulture, forestry, veterinary medicine and landscaping. SLU' s mission is to develop the understanding and sustainable use of biological natural resources through research and education. The Department of Energy and Technology has long experience of research and assessment projects concerning agricultural systems, including resources originating from agriculture, such as food and bioenergy. One speciality is organic waste management systems, the effects of these systems on environment and their resource efficiency, function, robustness and acceptability. Since 1994 SLU has led several national and inter-Nordic research projects on composting, aimed at improving the sustainability of composting. SLU has experience from working in several projects in Africa, including ongoing projects in West Africa, on sanitation, waste management and food chain logistics. SLU have, in cooperation with partners, developed the software assessment package ORWARE, which is based on LCA (Life Cycle Assessment) methodology. During 1998-2001 ORWARE is being used in a project funded by the Swedish Energy Board named as "STEM - Energy from waste".

Main role in the project:

SLU will participate in the analysis of main barriers and obstacles for a sustainable management of solid waste. They will have a strong role in work package 3, where they will provide their experience in organic waste management systems in order to identify best practices, technological and non technological requirements, and elaborate a guide for selection of adapted ISWM systems, and a guide for their implementation. Furthermore, SLU will collaborate in the elaboration of policy guidelines and recommendations. SLU will also evaluate the future environmental scenario of SWM in the target countries considering the measures proposed during the project. SLU will write an article jointly with OEKO regarding the main barriers and obstacles for the implementation of ISWM.

Personnel involved:

Cecilia Sundberg: Dr. Researcher with a specialty in aerobic treatment technologies for organic waste. More than 7 years experience of research and education on composting, environmental systems analysis and energy from waste. Experience from work as task leader in the ongoing FP6 NETSSAF project and leader of a project on sustainable urban sanitation in Ghana.

Håkan Jönsson: Associate Professor. Leader of the Environmental Engineering group at Department of Biometry and Engineering. More than 15 years of experience of leading research in the field of organic waste management systems and environmental systems analyses of such systems.

Partner n° 5: Öko-Institut e.V. – Institut für angewandte Ökologie (OEKO), private non profit organization, Germany

OEKO is a leading European research and consultancy institution working for a sustainable future. Ever since the Institute was founded in 1977, it has striven to build the foundations

and forge the strategies needed to make sustainable development happen at all levels – global, national and local.

The Institute, with more than 120 staff, including 80 researchers, completes a good 100 projects each year, tackling both national-level and international issues. Work is organized around the themes of Chemicals Management and Technology Assessment, Energy and Climate, Emission and Ambient Pollution Control, Radiation Protection, Agriculture and Biodiversity, Sustainable Consumption, Sustainable Mobility, Sustainable Resource Management, Sustainable Enterprises, Nuclear Engineering and Facility Safety, Law, Policy and Governance.

The Institute generates value-driven, research-based advice for decision-makers in politics, industry and civil society. The key clients are ministries, industrial companies and the European Union. In addition, the Institute works for non-governmental organizations and environmental associations.

Main role in the project:

Leading and coordinating the work team for work package 1: ‘Setting up the project framework. Definition of criteria and parameters’. OEKO will lead task 2.6 team in the analysis of main barriers and obstacles for a sustainable management of solid waste. OEKO will lead task 3.1 team towards lessons learnt in waste management practices in OECD & non-OECD countries, and will participate in the elaboration of the guide for the implementation of ISWM systems. OEKO will be responsible of developing policy guidelines under work package 4. OEKO will also write an article jointly with SLU regarding the main barriers and obstacles for the implementation of ISWM, in order to disseminate the project results.

Personnel involved:

Dr. Matthias Buchert has studied in Darmstadt (Technical University) and holds a PhD in chemistry. Since 1992 he is working at Oeko-Institut and since 1998 he is in charge of the Infrastructure & Enterprises Division. Matthias Buchert is a senior expert in waste management, recycling, LCA, material flow analysis and scenario techniques. Within the last 15 years he worked in projects for e.g. statistical offices, the German Ministry of Environment, UNEP, Defra (UK), Umicore, Holcim, Redland Braas and many other institutions and companies. He will be involved in an EU/Basel Network Project on E-waste.

Att. Andreas Hermann, LL.M. holds a full law degree and a Masters’ degree in Environmental Law (University of Lüneburg) and is working in the Oeko-Institut from 2001 as staff lawyer. Since 2002 he is deputy leader of the Environmental Law & Governance Department of the Institute. Over the last years Mr. Hermann has gained experience in assessing the impacts and developing policy options regarding regulations for several waste streams, including the prevention and recycling of waste. He also carries out policy advisory work in Germany and abroad, e.g. for the Nordic Council of Ministers “When Do Wastes Cease to Be Waste? – A Nordic Study through Interviews in Four Countries” or “Household Waste Prevention - Policy Side Research, commissioned by the Environment Council on behalf of Defra (UK). Besides that Mr. Hermann has experience in waste management consultancy for EU Accession Countries and will be involved in an EU/Basel Network Project on E-waste.

Partner nº 6: Fundación Gaiker (GAIKER), private non profit organization, Spain.

GAIKER carries out Research and Technological Development Projects, Technological Services of Advice and Technical Assistance related to Recycling and Recovery. GAIKER has long experience in the plastic recycling field including sorting (identification and classification technologies), conditioning (identification and removal of contaminants), dismantling (separation of different material streams) and recycling process (shredding, washing, agglomeration, pelletizing and injection).

GAIKER develops and transfers technology to the industry with regards to recycling and recovery. In its work of gathering own knowledge, the Centre has carried out more than 350 projects and has led or taken part in more than 20 European Programmes (EESD, BRITE EURAM II y III, EUREKA, GROWTH y QLF, among others). Besides, GAIKER has taken part in programmes promoted by the Basque Government or the Spanish Ministry of Science and Technology, as well as in 8 thematic networks, among which is remarkable GAIKER's leadership of the VERC (Virtual European Recycling Centre) and current participation in other cutting-edge recycling projects such as: Active Disassembly of Smart materials (ADSM), Sustainability Evaluation of Solar Energy Systems (SENSE), Next Generation of Environment friendly soldering (EFSOT), High quality plastic materials recycling from electronic wastes using combined identification (RECYCOMB), Cost Management System for greening Electrical and Electronic Equipment (GREEN), Long Fibre Recycling, from Optical cables, lines and ropes (L-FIRE), Labelling Agricultural Plastic Waste for valorising the Waste Stream (LABELAGRIWASTE) and other.

Main role in the project:

GAIKER will be able to provide the reference indicators for the evaluation of recycling and re-using practices. GAIKER will participate in the evaluation of SWM practices and technologies in the target countries in task 2.4 with regards to recycling and recovery methods, and participate in the selection of best practices in Europe and non OECD countries. GAIKER will also collaborate in the development of the guide for selection of ISWM systems, and in the identification of technological and non technological requirements, and will support in the elaboration of policy guidelines for the development and implementation of ISWM systems.

Personnel involved:

Mr. Joseba Basterretxea: M.Sc. Environmental Engineering and Chemical Engineering. Researcher in the Recycling and Sustainability Unit. More than four years of experience in treatment and classification of MSW, recycling and sorting of plastics, processing of plastic and development of new materials. Experience within European projects as L-FIRE (Long Fibre Recycling, From Optical cables, Lines and Ropes, FP6), LABELAGRIWASTE (Labelling Agricultural Plastic Waste for Valorising the Waste Stream, FP6), and FAST2LIGHT (High Throughput Large Area and Low Cost-effective OLED Production Technologies, FP7) among other.

Ph. D. Sixto Arnaiz: M.Sc. Industrial Chemistry, Ph.D. Chemical Engineering. Head of the Recycling and Sustainability Unit. Large experience in testing and development of recycling operations for the treatment of plastic wastes and massive consume wastes. Large experience as responsible of European Projects as L-FIRE (Long Fibre Recycling, From Optical cables, Lines and Ropes, FP6), ECOLIFE II (Eco-efficient life cycle technologies, from product to service systems, FP6), SEES (Sustainable Electrical & Electronic System for the Automotive Sector, FP6) among other.

Partner nº 7: Technische Universität Berlin (TUB), non profit public body, Germany.

TUB is one of the leading institutions in the field of electronic packaging worldwide, developing and implementing new concepts for the assembly of miniaturized, highly integrated electronic systems. The Research Center focuses on the following topics:

- Development of environmental and sustainability strategies for electronics and implementing these in technology projects
- Material restrictions for electronics and related transition management
- Recycling and reuse networks for waste electrical and electronic equipment

TUB is specialized in product design aspects of electronics, complemented with a thorough background in environmental engineering, which allows taking into account environmental considerations, such as optimisation for end-of-life, directly for product development guidance (eco-design, life cycle assessments). Environmental projects in the past include "European Lead Free soldering NETWORK – ELFNET" and "Removal of Hazardous

Substances in Electronics: Processes and Techniques for SMEs – GreenRoSE” (European FP projects), and the ReUse project, which established a network of local enterprises for refurbishment and recycling of IT equipment (www.reuse-computer.de). Currently the FP7 large-scale integrating project “ZeroWIN - Towards Zero Waste in Industrial Networks” is under contract negotiations and likely to begin early 2009. TUB is co-organizer of the worldwide leading conference “Electronics Goes Green”, hosted in Berlin in a 4-years cycle since 2000.

Main role in the project:

TUB will participate in the mapping and evaluation of current research and network in the target countries. They will collaborate in the evaluation of the legal background in the target countries providing their expertise on material bans for electronics as a complementary policy strategy to e-waste regulations. TUB will have an important role in the identification of best practices under task 3.1 with regards to the experiences made in the European context under the Restriction of hazardous Substances “RoHS”. Furthermore, TUB will participate in the proposal of policy guidelines and recommendations developed under work package 4, as well as in the evaluation under work package 5 of the measures proposed.

Personnel involved:

Dipl.-Ing. Andreas Middendorf is with TUB and Fraunhofer IZM since 1995. He is responsible for the development and implementation of methods and demonstrators for the estimation of lifetime of electronic appliances. He investigates technological aspects which combine the electronics design with environmental engineering techniques. This includes environmental assessments through LCA et al., especially for the evaluation of recycling attributes, as well as environmental oriented product evaluation. He carried out courses on EcoDesign for electronic companies.

Dipl.-Ing. Karsten Schischke is with TUB and Fraunhofer IZM since 2000. He managed the EU 2005 EcoDesign Awareness Raising Campaign for Electrical and Electronics SMEs. For a couple of EuP Preparatory Studies and the review of RoHS exemption requests he acts as technical expert. Other recent projects he worked for include the GreenRoSE project, a regional German project to network the actors in microsystems technology education and an EU- AsiaProEco project to promote sustainable consumption and production in South-East Asia. He coordinates the Task Force “ReDesign” of the global initiative “Solving the E-waste Problem” (StEP).

Partner n° 9: Enda Tiers Monde (ENDA), NGO, Senegal.

ENDA is an international NGO created in 1972, established in Dakar, Senegal, and initially funded as a joint programme of UNEP (United Nations Environment Programme), the African Institute of Economic Development and Planification (IDEP) and the Swedish Organisation for the International Development.

ENDA is committed to poverty reduction goals, and carries out development projects in Asia, Latin America, the Caribbean, Africa and Europe. ENDA approach is based on:

- Initiatives at local level, with local means of actions, especially with the informal sector,
- valorising locally available resources by recycling and re-using, finding sustainable ways for a human development respecting the environment ;
- Research-action and policy dialogue at all levels (local representatives, national governance, international conferences, etc) with various partners (from the local communities to the UN agencies, in particular UN Habitat, UNEP and UNDP).
- Implementing locally international conventions on environment, particularly on climate change and desertification.

ENDA has a 20 year experience in waste management (both solid and liquid) in Southern countries, especially in Senegal, Colombia, Madagascar and Ethiopia. ENDA also led a

multi-country project, PRECEUP (Programme d'économie environnementale urbaine et populaire), supported by the European Commission, in the 1990s, aiming at developing local initiatives on urban environment management in 9 countries of Africa, Asia and South America.

Main role in the project:

ENDA will coordinate the identification of relevant stakeholders in the target countries. They will also lead and coordinate, jointly with IAGU, the work team for work package 2: 'Analysis and Evaluation of current situation in the target countries'. Under this work package ENDA will lead the regional assessment of the SWM situation in the target countries and will have an important role in the rest of the tasks. ENDA will organize a participatory workshop in Dakar, and will participate in the elaboration of policy guidelines and recommendations under work package 4. Furthermore, ENDA will evaluate the future scenario of SWM in the target countries considering the measures proposed during the project, and assist the municipality of MATAM in the case study held under work package 5.

Personnel involved:

Amadou Diallo is the coordinator of Enda Ecopole. He coordinated research studies on waste and Popular Economy (Economie Populaire), including *Le Set Setal; Les petits métiers à Dakar*. In the field of waste, he is currently coordinating the following projects: training on good environmental practices for informal e-waste recyclers, promotion of responsible food consumption in popular areas in Dakar, socio-economic study in Mbeubeuss, the main dumping site in Dakar.

Partner n° 11: Regional Council of Matam (MATAM), nonprofit public body, Senegal.

Matam is a region of the North East of Senegal with a population of 496207 inhabitants. The Regional Council Matam is a local authority with legal personality and financial autonomy. The Council has the general mission of economic, social, cultural, educational, environmental and health development of the population of the region. As many regions in Africa, Matam suffers directly the consequences of the lacks and barriers for a sustainable management of waste in Western Africa.

Main role in the project:

The authorities of the Regional Council of Matam, developers and implementers of waste management strategies in their own territory, will be involved in the definition of the criteria and subsequent evaluation of policy background, governance, socio-economic structure, main barriers for the implementation of ISWM, as well as the identification of key stakeholders. They will participate in the identification of requirements for the implementation of ISWM systems, collaborating in the development of the guide for selection adapted ISWM systems, and the guide their implementation. MATAM also collaborate in the proposal of policy guidelines and recommendations. MATAM will be responsible of developing a case study in which the authorities will analyze the feasibility of implementing the measures proposed during the project time frame in their own territory, the results of this work will be presented in a seminar during the Final Conference.

Personnel involved:

Mr. Abdoulaye Drame is engineer on Agricultural Works, he is currently the President of the Regional Council of Matam, and has wide experience in environmental research and development. Mr. Drame was, during 4 years, the head of the laboratory of soil chemistry for the "Institut Sénégalais de Recherche Agricole" working for the recovery of soil for rice crops. He also was the head of the "laboratoire de fertilité des sols de la vallée du fleuve Sénégal" measuring the impact of soil in relation to dams in Diama and Manantali. As Technical Adviser to the SAED (Société Nationale d'Aménagement et d'Exploitation des Terres du Delta), Mr. Drame is responsible of monitoring development projects in North Senegal.

Partner n° 12: Institut Africain de Gestion Urbaine (IAGU), NGO, Senegal.

The African Institute of Urban Management (IAGU) is an International NGO, created in 1987, specialising in research and development, technical support, training and information. Its mission is to support the West and Central African municipalities and local authorities to extend their planning and management capacities in order to improve local governance, promote sustainable management of the environment and combat poverty. The intervention areas are: Environmental planning and management, Urban agriculture, Household and hazardous waste, urban development, strategic planning and local governance; Social policies and poverty alleviation and urban environmental health. The main activities are research development, capacity development for urban management actors, Technical support and monitoring evaluation of urban development projects, Achievement of technical, socio-economic and environmental feasibility studies of projects in urban area.

Main role in the project:

IAGU will participate in the definition of criteria for the identification of key stakeholders, and for the evaluation of socio-economic situation and policy background in the target countries. They will also lead and coordinate, jointly with IAGU, the work team for work package 2: 'Analysis and Evaluation of current situation in the target countries'. Under this work package, IAGU will be responsible of the identification of key stakeholder, and will collaborate in regional assessment of the SWM situation, mapping of the current research and network, evaluation of the legal background and socio-economic structure, and detection of main barriers for ISWM. They will participate in the elaboration of the guide for selection of adapted ISWM systems, and the guide for the implementation of ISWM systems. They will also collaborate in the proposal of policy guidelines and recommendations. IAGU will organize a capacity building workshop in Dakar.

Personnel involved :

Dr. Oumar Cisse is Civil Engineer; he earned an MA in Environment studies and a Ph D in Urban Planning from The University of Montreal. Dr. Oumar Cissé is the Executive Secretary of the African Institute for Urban Management (IAGU) since 1997. Researcher in the field of urban environment, Dr. Cisse is specialized in issues related to urban waste. He offers professional training in urban environment, as a part-time lecturer at the University of Montreal's Institute of Urban Planning. He is also an Associate Professor at the International Senghor University in Alexandria, Egypt since April 2007

Coordinator and trainer for francophone Africa of the "solid waste management training in Africa" financed by the World Bank Institute in partnership with the regional centre of the Basel Convention (Pretoria) and the international firm Golder Associates (2006). Dr. Cisse is the author of the book "*L'argent des déchets – l'économie informelle à Dakar (2007, Karthala)*" where he deeply surveys the informal waste recycling activities in the city of Dakar.

Ms. Salimata Seck Wone is specialised in Biology and Environment. She has a Postgraduate Degree in Environmental and Industrial Bio-toxicology (University of Lille 2, France) and a Postgraduate Degree in Hydrology specialised in Water-related health issues (University Paris V René Descartes, France). She currently works as Programme Manager at the African Urban Management Institute (IAGU, Dakar, SENEGAL).

Ms. Wone is in charge of the Waste Management Programme and carried out several activities related to dangerous wastes, including an Inventory of dangerous wastes in the Comoros, Niger and the Republic of Guinea. She also carried out a training on hospital waste management at Abass NDao Hospital in Dakar, with the support of the Government of Luxembourg.

Partner n° 13: Zoomlion Ghana Limited (ZOOM), company, Ghana.

Zoomlion Ghana Limited is a waste management company on the environmental landscape of Ghana. ZOOM is committed to the provision of services which prevent environmental pollution and safeguarding public health, such as solid waste pre-collection, street sweeping,

drain cleaning, liquid waste collection and haulage to disposal sites. Their mission is to offer environmental sanitation services, by the introduction and utilization of simple but modern technologies and methods of waste management at affordable and competitive rates.

ZOOM has also exchanged ideas with international waste management companies like TEDCOR (PTY) Ltd, South Africa. This is a south-south technical cooperation and capacity building programme for delivering quality and affordable solutions based on technical innovations. Staffs of ZOOM have also had the opportunity of exchanging ideas with personnel from experienced waste management companies like Wasteman Pambilli also of South Africa, Nehlsen of Germany, Hubei of China, Ashock Leyland and Mahindra , truck companies in India. ZOOM is committed to building long-lasting relationships with private sector customers (industry, etc), Ministries, Departments and Agencies of Central Government, and the communities served with its services.

Main role in the project:

ZOOM will play the role of Regional Manager in IWWA. They will participate in the regional assessment of the SWM situation in target countries, providing its deep knowledge of the situation in Ghana. They will also identify key stakeholders in Ghana and will collaborate in the evaluation of SWM practices. ZOOM will provide support on the evaluation of policy background, socio-economic structure and governance, as well as in the identification of main barriers hindering the implementation of ISWM systems. ZOOM will participate in the development of decision-making tools developed in the project: guide for selection of adapted ISWM, guide for their implementation, as well as policy guidelines and recommendations. They will also organize the Final Conference in Accra and will participate in symposia and conferences where project results will be disseminated.

Personnel involved:

Mr. Lawrence Laryea is Master in Science Water and Sanitation by the Kwame Nkrumah University of Science And Technology (Accra, Ghana). As Operations Manager of ZOOM, he has the responsibility for the followings areas of operation: Solid waste collection services (Communal and Door to Door services), Liquid waste collection services, Pest Control Services, Janitorial Services, and Landfill Site Management, among other.

Mrs. Florence Larbi is the General Manager of Zoomlion Ghana Ltd, she has responsibility for the followings areas of operation of Zoomlion Ghana Ltd: As Operations Manager of ZOOM, he has the responsibility for the followings areas of operation: Solid waste collection services (Communal and Door to Door services), Liquid waste collection services, Pest Control Services, Janitorial Services, and Landfill Site Management, among other.

Partner n° 15: Kwame Nkrumah University of Science and Technology (KNUST), non profit public body, Ghana.

Kwame Nkrumah University of Science and Technology (KNUST) was established in 1961 as a technical College, and later converted to a technical University. KNUST offers courses in all areas of Engineering and the social sciences as well as the natural sciences. The university has academic links with numerous universities and research institutions worldwide, including Europe. The college of Engineering has undertaken numerous research projects both nationally and regionally, participating with some European institutions. KNUST is member of the consortium of the FP6 project, NETSSAF.

Main role in the project:

KNUST will strongly participate in all the tasks of work package 1, setting up the project framework. They will support in the regional assessment of the SWM situation in the target countries. KNUST will be responsible of mapping the current research and network, and will collaborate on identifying key stakeholders, evaluating policy background, governance and socio-economic structure, and detecting main barriers and obstacles for ISWM. Furthermore, KNUST will support in the selection of best practices from non OECD countries, as well as in

the identification of requirements for the implementation of ISWM systems and in elaboration of the guide for implementation and the guide for selection of adapted ISWM systems. KNUST will also participate in the development of policy guidelines and recommendations. They will strongly support ZOOM in the organization of the Final Conference. Moreover, KNUST will organize a capacity building workshop in Ghana, in order to train key stakeholders in the main tools developed under the project time frame.

Personnel involved:

Dr. Moses Mensah is lecturer of the Department of Chemical Engineering in KNUST. PhD from the Technical University of Berlin (Germany), he is member of the National Committee of Environmental Management in Ghana. In addition, Dr. Mensah works as Waste, Environmental and Quality Management Consultant collaborating with several African companies such as Zoomlion Ghana Ltd. He is member of CODATA (Committee on Data for Science and Technology), an interdisciplinary Scientific Committee of the International Council for Science (ICSU).

Partner n° 16: Basel Convention Regional Coordinating Centre for Africa (BCRC), non profit public body, Nigeria.

Basel Convention Regional Coordinating Centre for Africa is a national institution with a regional mandate for training, capacity building, and research in the field of control of trans-boundary movement of hazardous wastes and their disposal. The Centre has mandate to assist African governments to implement the 1989 Basel Convention and the Ban Amendment effectively. In this regard it coordinates the activities of the other three Basel Convention centres in Africa namely BCRC (Egypt) for Arab Speaking Countries, BCRC (Senegal) for French speaking African Countries and BCRC (South Africa) for English speaking African countries. The Centre has focussed on electronic waste, e-waste (inventory, laboratory analysis, environmental impact and modelling of material flow in the supply chain etc); Used Lead Acid Batteries (ULAB), Used Tires, Health Care Waste as well as the recycling of used oils. The centre collaborated with the Basel Action Network (BAN) of USA in producing the famous film: Bridging the Digital Divide - Exporting Arm to Africa. The Centre has also developed a template for the development of a private – public partnership for used oil management in Africa. Recycling of hazardous slag from auto battery manufacture into ceramic tiles and building bricks have also been accomplished by the centre apart from organising regional and national meetings for the Basel Convention and Rotterdam Convention respectively.

Main role in the project:

BCRC will collaborate on setting the project framework under work package 1. They will participate in the regional assessment of the SWM situation in the target countries, map and evaluate the current research and network, evaluate SWM practices, evaluate the legal background, governance and socio-economic structure, and detect main barriers for ISWM. Moreover, BCRC will support in the selection of best practices from non OECD countries, in the identification of requirements for the implementation of ISWM systems and in the elaboration of the guide for their implementation. BCRC will also participate in the development of policy guidelines and recommendations. They will leaders of the work under work package 5, being also responsible of evaluate the environmental effects of the changes proposed during the project time frame for the target countries. They will also collaborate on evaluating the socio-economic effects of the changes proposed.

Prof. Oladele Osibanjo is Professor of Analytical and Environmental Chemistry, and Head of Department of Chemistry in the University of Ibadan, Nigeria; with about 20 years international experience on hazardous waste and chemical issues and e-waste. He is the Director/ Chief Executive of the Basel Convention Regional Coordinating Centre for Africa. He was Chairman of United Nations Joint Agencies Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) 1994-1996. He was awarded Zayed International Prize for the Environment as a Lead Author in MILLENNIUM ECOSYSTEM ASSESSMENT

REPORT 2005, Volume 1 ECOSYSTEM HUMAN WELL-BEING, Current State and Trends. He was the Regional Coordinator for Africa 2001-2003 in the GEF/UNEP Project on the Regional Based Assessment of Persistent Toxic Substances.

Mr. Innocent Chidi Nnorom is completing his PhD work on the Toxicity and Impact of E-Waste in the Environment. He collaborates with Dr. Osibanjo in the research of e-waste environmental implications. He is also a Lecturer in Chemistry at Abia State University, Nigeria.

Partner n° 17: Environmental Law Research Institute (ELRI), non profit private organization, Nigeria.

Environmental Law Research Institute (ELRI) is a non profit organization devoted to applied environmental research and policy analysis with the view to produce reports and policy recommendations on critical areas of environmental governance and protection. ELRI is a regionally recognized, non-partisan institution working to strengthen environmental protection by improving law and governance within Nigeria and Sub Saharan Africa.

ELRI proffers insightful and impartial analysis on environmental issues to policy makers, including government officials, environmental and business leaders, academics, administrative authorities, and the media. They are currently on the Committee for the analysis and review of Lagos State Waste Management Act. ELRI is an affiliate of Environment and Health in Communities of Africans (ENHICA) International Foundation Inc. USA, and is on the accredited list of the World Bank and UNEP Civil Society Forum; ELRI is also listed on the Green Pages of the global directory for environmental technology (www.eco-web.com).

Main role in the project:

ELRI will collaborate on setting the project framework under work package 1, definition of criteria for subsequent evaluations. They will participate in the regional assessment of the SWM situation, identification of key stakeholders and detection of main barriers for ISWM, being responsible of the evaluation of legal background, governance and socio-economic structure. They will support in the identification of non-technological requirements for implementation of ISWM, as well as in the elaboration of the guide for selection of adapted ISWM systems, and the guide for their implementation. Furthermore, ELRI will lead and coordinate the activities under work package 4, also participating in the proposal of policy guidelines and being responsible of developing a set of recommendations for National and Regional Action Plans in each target country. ELRI will organize a capacity building workshop in Nigeria. Moreover they will write, jointly with ICANDO, an article and give a specific seminar during the Final Conference regarding policy guidelines and recommendations.

Personnel involved:

Dr. Lanre Fagbohun teaches Environmental Law and International Environmental Law and Policy at the Undergraduate and Postgraduate levels in the Faculty of Law of the Lagos State University, Lagos, Nigeria. His practice, research and writing are focused on environmental litigation indigenous rights and toxic pollution control. He is currently the Executive Director of ELRI. He is the Resource Person for the United Nations Development Programme and the National Assembly of the Federal Republic of Nigeria.

Dr. Fagbohun is a member of Nigerian Bar Association, Nigerian Association of Law Teachers, International Bar Association, Association of International Petroleum Negotiators and a Fellow of the Salzburg Global Seminars, Austria. Dr. Fagbohun has co-edited several books amongst which is a 25 Chapter book on "*Environmental Law and Policy*".

Ms. Olubunmi Moses holds a degree in law LLB (Hons.) and is a Solicitor & Advocate of the Supreme Court of Nigeria. She also holds an Advanced Diploma in Commercial Law & Practice; Advanced Diploma in Office Practice & Management, and a Diploma in Secretarial

Studies & Administration. Her professional career started with the British Council Nigeria where she served for 16 years as a key member of the Nigeria Governance Project Team. She elected to take early retirement on November, 2007, and joined the Environmental Law Research Institute as the Programme Director. She is also a member of the Nigerian Bar Association and an accredited member of Corporate Affairs Commission.

Partner n° 19: University of Abobo Adjamé (UAA), non profit public body, Côte d'Ivoire.

The University of d'Abobo-Adjamé (UAA) is pioneer in developing approaches of adaptation to the socio-economical environment in Western Africa, especially Science and technology related with water and waste management. Their research focuses, among others, on the "human activities and the overall environmental management", including different kinds of wastes from industrial, agricultural and urban sources as origin of the contamination of air, water and soil which affect the region of Western Africa. These questions are studied by the unit of Formation and Research in Science and Environmental management (UFR-SGE), who carries out 3 topics of research: (1) management of renewable and natural resources, urbanization, industrialization and environment, (2) new and renewable energies, and (3) environment and health.

Main role in the project:

UAA will collaborate on setting the project framework under work package 1, defining the criteria for subsequent evaluations. They will participate in the regional assessment of the SWM situation, mapping of current research and network, evaluation of socio-economic structure, governance and legal background, and identification of key stakeholders. They will support in the elaboration of the guide for selection of adapted ISWM systems. Furthermore, UAA will participate in the proposal of policy guidelines recommendations for National and Regional Action Plans. UAA will organize two workshops in Côte d'Ivoire (participatory workshop in task 6.1, and capacity building workshop in task 6.2).

Personnel involved:

Dr. Gustave Aboua is senior lecturer and researcher at university of Abobo-Adjamé. He conducted several studies in the field of environmental sociology and gained Research grant from University Laval where he graduated PhD in 1999. Expert of AEO (Africa Environmental Outlook) of UNEP-Nairobi, Dr. Aboua published articles on Public Participation in development projects in Africa in scientific reviews. Recently, Dr. Aboua was the national coordinator of NETSSAF Project (supported by European Union under the 6th Framework Programme).

Prof. Tondo Jérôme, is Associate Professor at the Abobo-Adjamé university since 2007. He is expert on soil and pedology He undertook several research in the agro-agricultural field financed by GEF: International Funds for Science (FIS/IFS on the agro-ecological Potentialities of leguminous plants of cover and impact on the operation of the grounds and the diversity of macro invertébrés of the grounds from 2002 to 2006; Also he led the project on "Conservation and Sustainable Management of Below-Ground Biodiversity (Csm-bgbd) Financing by GEF/UNEP from 2003 to 2009. Under IWWA initiative, he's contribution will be focused on the analysis of the impacts of waste on soils as well as the systems of soils regeneration.

Partner n° 20: Centre for Environment and Development for the Arab Region and Europe (CEDARE), private non profit organization, Egypt.

CEDARE is an international inter-governmental organization whose strategic objective is to promote the advancement of "environmental action for development" through investment in human capital, releasing potential creative energies with the aim of building qualified human cadres, capable of assimilating the concepts and requirements of the age, and capable of leading the development process, especially in the fields of sustainable development.

CEDARE has previously cooperated with the European Commission, international and national organizations in implementing waste management projects and research on national and regional level experience such as EC-SMAP I "Urban Mediterranean Solid Waste Management Programme", "Strategic Framework for Enhancing the Solid Waste Recycling Sector in Egypt" within the METAP "Regional Project on Solid Waste Management in the Mashreq and Maghreb Countries", Urban Waste Expertise Programme - UWEP Plus, and E-waste Management status in the Arab Region.

Main role in the project:

CEDARE will be responsible of selection and evaluation of best practices from non OECD countries on account of their experience in the Arab Region. They will collaborate in the identification of technological and non-technological requirements for the implementation of ISWM systems, and will participate in the elaboration of policy guidelines and recommendations for National and Regional Action Plans. In this sense, CEDARE will propose recommendations for the involvement of a wide range of stakeholders including those actors that are not frequently considered in the implementation of policy measures such as the informal sector and Micro and Small Enterprises. Moreover, CEDARE will participate in the evaluation of the changes proposed during the project time frame. CEDARE will also act as a project multiplier with the participation in symposia and conferences where IWWA results will be disseminated.

Personnel involved:

Dr. Hossam Allam is the Regional Programme Manager of CEDARE. Dr. Allam has over 15 years of international experience in promoting the use of information and communication technologies for sustainable development (ICT-D). He holds a Ph.D. degree in Computing from the University of Plymouth, UK and M.Sc. degree in Computer and Information Science, with an emphasis on Management Information Systems, University of New Haven, USA. He has a B.Sc. degree in computer and automatic control engineering from Ain Shams University, Egypt.

His professional experience includes planning, developing and implementing strategies for the smooth and effective running of the SCP programme of work, for the regional, sub-regional, and national projects. He has been involved previously in EC-SMAP II project that was responsible for developing the capacity of solid waste management of Alexandria City in Egypt.

Partner nº 21: Influential Inputs cc T/A Icando (ICANDO), SME, South Africa.

ICANDO is an environmental management and training company that specialises in environmental impact assessments, waste facility permitting, environmental compliance monitoring, auditing and facilitating environmental policy, strategy and capacity development processes. It is also a Sector Education and Training Authority/South African Qualifications Authority accredited training provider for unit standards in Environmental Practice at various levels. It has undertaken national and international projects on Integrated Waste Management aspects, particularly strategies and action plans, reviews, pilot projects and capacity development in countries that include Botswana, Swaziland, Tanzania, Yemen and Philippines. Experience at national, provincial and local levels of government includes managing the capacity development aspects of the South Africa National Waste Management Strategy Implementation project at national and local level where demonstration projects, policy, and standard procedural guidelines were developed.

Main role in the project:

ICANDO will collaborate in the selection and evaluation of best practices from non OECD countries on account of their experience in East and South Africa and Asia. They will be responsible of the elaboration of the "Guide for implementation of suitable ISWM systems", Deliverable 3.3 under work package 3. They will support in the elaboration of policy guidelines and recommendations developed in work package 4. In this sense, ICANDO will

provide its practical experience as training and consulting company in solid waste management ensuring that the policy options of work package 4 are adapted to authorities at different levels (local, regional and national), and cover key aspects of solid waste management in a way that useful and feasible solutions are provided.

They will have an important role in the socio-economic evaluation of the changes proposed within the project under work package 5. On account of their experience, ICANDO will assess the measures proposed in terms of their appropriation by the target countries. Furthermore they will write, jointly with ELRI, an article and give a specific seminar during the Final Conference regarding policy guidelines and recommendations.

Personnel involved:

June Lombard is a registered professional natural scientist, certified environmental assessment practitioner and environmental educator. She has experience in preparing waste management policies and strategies at regional, sub-regional and local level, as well as for industry. She has facilitated public participation processes for many, varied environmental and waste management projects and coordinated a range of Environmental Management projects. She is a Senior Fellow and Past President of the Institute of Waste Management of Southern Africa and a member of the e-Waste Association of South Africa as well as the International Association of Impact Assessment SA.

Susan Dittke holds a Masters degree in Chemical Engineering. She has extensive practical experience in developing and running various industrial Cleaner Production and communal integrated waste management programmes. She has expertise in a large and diverse range of pollution, resource/waste management and sustainability issues. She is a member of the Institute of Waste Management of Southern Africa and the e-Waste Association of South Africa.

Partner nº 22: Centre for Environmental Impact Analysis (CEIA) Ghana.

CEIA is a non-governmental organisation that promotes research projects, workshops and training activities for different sectors of Africa's populace. These are within various environmental fields including Waste Management and Recycling, Chemicals, Climate Change, Environmental Risk Assessment, Mining and Oil issues. In the implementation of these initiatives, the CEIA has been supported by international agencies such as the UN, OECD, Oxfam and Care International.

CEIA has a vast experience in the implementation of projects in waste and chemicals management within communities in some parts of Ghana and other African countries. In this regard, CEIA has carried out risk assessments on the effects of waste on human and ecological health; liaised with policy makers, NGOs and other affected parties on amendments to chart the way forward.

Main role in the project:

CEIA will have an important in the analysis and evaluation of the current situation in target countries, especially with regards to the legal and governmental context, to the identification of stakeholders, as well as to SWM practices and technologies. They will provide support in the mapping of current research and network in the target countries. CEIA will be responsible of analyzing the future scenario and socio-economic effects of the proposed solutions on the region. They will be the leading organisation of WP6, coordinating the efforts and expertise of the partners involved in order to disseminate the project results and build local capacities of relevant stakeholders.

Personnel involved:

Samuel Obiri is the Founder and Executive Director of CEIA. He has a BSc in Chemistry and is doing his PhD in Environmental Chemistry. He has conducted risk assessment regarding the effect of different kinds of waste on human and ecological health; implemented waste

management projects in Ghanaian communities and worked with policymakers on amending aspects of waste management laws in Ghana.

Dr. Yvonne Idun is a Senior Consultant at CEIA. She holds a BA in Law and French from the University of Ghana, a Certificate in French Language from the École de Langues Accord, Paris, France, an LLM in Law of International Trade and a PhD in International Environmental Law from the University of Cape Town, South Africa. She has conducted substantive research in waste management with a particular focus on developing countries (while borrowing and bending lessons from some developed countries); trained diverse sectors of the populace in Africa, the Middle and Far East, Latin America and the Caribbean on waste management and recycling; On the basis of needs assessment and research relating to these countries, prepared policy proposals for governments and other parties. Published extensively and disseminated information in this area.

B 2.3 Consortium as a whole

In order to run a highly efficient and successful network project, careful consideration has been given to its composition. The proposed consortium is well balanced and will allow for the maximum integration of knowledge, expertise and experience between partners. 18 members were selected to result in a consortium with complementarily expertise in different disciplines: (1) appropriate waste management technological systems, (2) policy, planning and governance, and (3) Local development and capacity building, so that the Consortium could be classified in 3 expert groups:

- Technological systems: TTZ, BIOAZUL, EMPA, SLU, GAIKER, TUB, KNUST, ZOOM.
- Policy, planning and governance: ELRI, BCRC, UAA, CEDARE, ICANDO, OEKO.
- Local development and capacity building: ENDA, MATAM, IAGU, CEIA, ELRI.

During the project time frame different activities and decision making tools will be developed within the fields mentioned above. The 3 expert groups will participate in all these activities of the project, giving a multidisciplinary approach. However members of each expert group will lead and coordinate the activities in the field they are experts. This will make possible a complementary between the partners so that technological and organizational solutions proposed will be assured by the establishment of policy framework and strategies. In addition capacity building and involvement of relevant stakeholders will allow that different groups of interests in the SWM chain are taken into account in the proposal of measures, as well as properly capacitated in the developed tools.

Therefore, the joint work of these technologies, organizational and regional development innovators will permit to reach the objectives proposed by the consortium, due to the accumulated know-how and expertise of the group and the complementation existing among the fields of knowledge.

All the institutions from technological fraction of the consortium are pioneers in their areas in the field of sustainable management of resources, particularly in the application of waste management concepts in poor urban, peri-urban and rural areas. These partners have been allocated with the major workload in work package 3, devoted to select best practices and develop decision making tools for the selection and implementation of suitable ISWM systems, being TTZ the work package leader. This technological group involves experts of different waste streams: GAIKER and ZOOM are experts in the recycling of plastics, BIOAZUL, SLU and KNUST are experts in treatment of organic residues, and EMPA and TUB are experts in e-waste. All of them will collaborate providing specific measures for those waste streams.

The group of experts in policy, planning and governance comprises 7 partners: 1 higher education institution, 3 research centres experts in legal and socio-economic aspects of waste management, 2 international organizations and 1 consulting company. They will be in charge of leading the work under work package 4, devoted to the proposal of policy

guidelines and recommendations that will assure the implementation and maintenance of the solutions proposed in work package 3. ELRI and OEKO will lead the tasks under this work package, being ELRI work package leader.

The third group, experts in local development and capacity building, will be key players in reaching the objectives of IWWA, not only by means of their own scientific resources, and knowledge about the situation in the target countries, but also by their capability of truly reach the public by the use of appropriate means of communication and adapted mechanisms. They will have an important role in the regional analysis of the SWM situation under work package 2, being ENDA and IAGU work package leaders, providing their experience in the target countries, and including in the evaluation the interests of different groups that participate in the SWM process and which are not represented in traditional assessments, particularly the informal sector. CEIA will be work package 6 leader. ELRI, which belongs to two expert groups, will be responsible of the capacity building workshops due to their experience not only in legal environmental issues, but also in facilitating legal know-how to relevant stakeholders, in particular authorities and policy makers. The 3 expert groups will be involved in the evaluation of measures proposed in this Coordination Action under work package 5, but this group will have the higher work load and BCRC will be work package leader. The community of MATAM will play an important role since they have a closer experience with the management solid waste. They will evaluate, in a theoretical case study under work package 5, the measures proposed in this Coordination Action in order to determine their feasibility in the municipality.

Furthermore, it was considered essential the integration of already existing thematic international networks and foundations into the consortium, promoting from the beginning positive synergies among the relevant actors in the African scene:

- CEDARE enters to form part of IWWA initiative, bringing a handful of already gained knowledge and understanding in solid waste management projects representing several countries of Africa. CEDARE has previously cooperated with the European Commission, international and national organizations in implementing waste management projects and research on national and regional level experience such as EC-SMAP I "Urban Mediterranean Solid Waste Management Programme", "Strategic Framework for Enhancing the Solid Waste Recycling Sector in Egypt" within the METAP "Regional Project on Solid Waste Management in the Mashreq and Maghreb Countries", Urban Waste Expertise Programme - UWEP Plus, and E-waste.

▪

IWWA consortium is truly trans-national in character, made up of 18 partners coming from 10 different African and European nations: Côte d'Ivoire, Egypt, Germany, Ghana, Nigeria, Senegal, Spain, South Africa, Sweden, and Switzerland. All the African partners are facing the problem of lack of sustainable waste management systems. Most of the members have been involved in research and coordination projects before, many of which are directly relevant to the aims of this project. Some of the members have also worked together in previous projects:

- TTZ and BIOAZUL are members of a recent approved solid waste management initiative under FP7 funding scheme, ISSOWAMA, which aims to implement Integrated Solid Waste Management assessment methods in Asia. This project will start in April 2009, and the experience gained will be valuable know-how transferred to the members of the IWWA Consortium.
- TTZ, BIOAZUL, SLU, MATAM, KNUST, and UAA collaborated in the recently finished FP6 Coordination Action, NETSSAF, with regards to sustainable sanitation technologies for Western Africa.
- EMPA and TUB participate in the Step Initiative, as mentioned above.

This will enhance cohesion with existing projects and networks, minimise overlap of research objectives, and maximise the potential and efficiency of international effort for the implementation of integrated solid waste management concepts in West Africa.

As the official language of Senegal and Côte d'Ivoire is French, the consortium is comprised of partners who are at least proficient in French. Most of the European partners will be able to communicate in both English and French, facilitating uninhibited communication within the consortium. Further, the majority of the African partners are fluent in English and French, and these factors combined will lead to fluid channels of communication throughout the duration of the project.

Sub-contracting:

The design of the internet platform and website of the project will be subcontracted by TTZ to achieve an effective platform that can provide a high quality framework for the interconnections of the international experts and stakeholders (3000 euro).

BIOAZUL, as responsible of the design and printing of mass dissemination material (i.e. promotional leaflets and posters) will subcontract this activity to professional designers (2500 euro).

Subcontracts will be awarded to the bid offering best value for money, under conditions of transparency and equal treatment. Therefore, all subcontracts executed in the project will assure the performance of the following criteria:

- The criteria and conditions of submission and selection are clear and identical for any legal entity offering a bid.
- There is no conflict of interest in the selection of the offers.
- The selection must be based on the best value for money given the quality of the service proposed (best price-quality ratio).
- The criteria defining "quality" must be clear and coherent according to the purpose of the task to subcontract, in order to provide a good analysis of the ratio price/quality.

Finally, a sub-contract is also foreseen in the budget of TTZ for the services of independent consultants (e.g. from UNU-EHS).

The remuneration of independent consultants as sub-contractors is based on the delivery of specified tasks/ products / outputs, within an agreed total amount of 22,617 €, which are included as subcontracting costs in TTZ's budget.

The role of external consultants in IWWA can be summarized as follows:

1. Attend the mid-term and final project meetings.
2. Act as external advisor and critical reviewer for Work Package 1, especially in the definition of Criteria for the evaluation of the regional socio-economic situation and policy background.
3. Act as external advisor and critical reviewer for Work Package 2. In this case, the consultant will contribute by bringing its expertise in environmental, policy, economic and social evaluation of WEEE management systems, by providing inputs for the identification of current research activities being carried out outside IWWA's consortium, by giving information related to WEEE stakeholders and by reviewing the Analysis of the main barriers and obstacles for the implementation of ISWM.
4. Act as external advisor for Task 3.1 and Task 3.4 with regards to the waste composition of WEEE in Western Africa and as a reviewer of Deliverable 3.4 "Guide for implementation of ISWMS".

5. Act as peer reviewer under Work Package 4.
6. Act as an external advisor in the prognosis of environmental and socio-economic effects of ISWMS in target regions, to be carried out under Work Package 5.
7. Participate as required in e-conferences and thematic panel discussions.

The essential requirements for the role of independent consultants include long and thorough expertise in waste management in developing countries, especially with regards of WEEE and particularly in Africa; a deep familiarity and understanding of the ISWM concept; experience with case study preparation and evaluation; an understanding of methodological approaches and assessment tools, and of their advantages and limitations; the ability to write and review reports to a high standard in the English language; and experience of networking in international and multidisciplinary projects.

Subcontracted consultants must also have: a) high expertise in providing support to policy and decision makers with authoritative research and information on diverse aspects of ISWMS, including the economic and social dimensions of ISWMS; b) on open transfer of technologies and best practices related to the implementation of ISWM systems.

B 2.4 Resources to be committed

IWWA (Project number 244188)

	TTZ	BIOAZUL	EMPA	SLU	OEKO	GAIKER	TUB	ENDA	MATAM
Coordination activities									
Personnel	59.400,00 €	45.240,00 €	72.625,00 €	45.530,00 €	65.461,50 €	27.632,50 €	32.500,00 €	36.100,00 €	21.000,00 €
Justification	10 person-months at 5940€/month	9.75 person-months at 4640€/month	8,75 person-months at 8300€/month	7,25 person-months at 6280€/month	9,75 person-months at 6714€/month	8,75 person-months at 3158€/month	6,50 person-months at 5000€/month	19 person-months at 1900€/month	21 person-months at 1000€/month
Consumables	1.000,00 €	750,00 €	300,00 €	300,00 €	300,00 €	300,00 €	300,00 €	2.200,00 €	2.200,00 €
Justification	Document and dissemination material sending. Office supplies. Vaccines	Document and dissemination material sending. Sending of project leaflets among Europe. Office supplies. Vaccines	Document and dissemination material sending. Office supplies. Vaccines	Document and dissemination material sending. Office supplies. Vaccines	Document and dissemination material sending. Office supplies. Vaccines	Document and dissemination material sending. Office supplies. Vaccines	Document and dissemination material sending. Office supplies. Vaccines	1000€ - for organisation of participatory workshop in Senegal (2-3 days), 300 € - for document and dissemination material sending. Office supplies. Visa costs.	1900€ - for organisation of working session in Matam. 300 € - for document and dissemination material sending. Office supplies. Visa costs.
Travel and Subsistence	13.000,00 €	10.000,00 €	8.000,00 €	8.000,00 €	8.000,00 €	8.000,00 €	8.000,00 €	8.500,00 €	7.500,00 €
Justification	2 people attending the kick-off meeting in Accra (3000€), payment of the kick off meeting in Accra (3000€), 2 people attending the midterm meeting in Senegal (3000€), 2 people attending the final conference and meeting in Ghana (3000€). 500€ for meetings as coordinator with EC and partners	3 meetings: 2 people attending Kick-off meeting in Accra (3000€), 2 people attending the midterm meeting in Senegal (3000€) and the final meeting-conference in Ghana (3000€) Payment of dinner at the Kick-off meeting in Accra (1000 €)	3 meetings: 2 people attending Kick-off meeting in Accra (2000€), 2 people attending the midterm meeting in Senegal (3000€) and the final meeting-conference in Ghana (3000€)	3 meetings: 2 people attending Kick-off meeting in Accra (2000€), 2 people attending the midterm meeting in Senegal (3000€) and the final meeting-conference in Ghana (3000€)	3 meetings: 2 people attending Kick-off meeting in Accra (2000€), 2 people attending the midterm meeting in Senegal (3000€) and the final meeting-conference in Ghana (3000€)	3 meetings: 2 people attending Kick-off meeting in Accra (2000€), 2 people attending the midterm meeting in Senegal (3000€) and the final meeting-conference in Ghana (3000€)	3 meetings: 2 people attending Kick-off meeting in Accra (2000€), 2 people attending the midterm meeting in Senegal (3000€) and the final meeting-conference in Ghana (3000€)	3 meetings: 2 people attending the kick-off meeting in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and midterm meeting organisation in Senegal (1500€). National trips to attend workshops (1000€).	3 meetings: 2 people attending the kick-off in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and 2 people attending the midterm meeting in Senegal (500€). National trips to attend workshop (1000€)
Subcontract	25.617,42 €	2.500,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Justification	3000€ for the official website of the project (design and maintenance) and 22,617.42€ for the subcontracting of external independent consultants	Professional design and printing of 1 poster and 2 leaflets (1200 copies of each)	-	-	-	-	-	-	-
Indirect Costs requested (7 %)	5.138,00 €	3.919,30 €	5.664,75 €	3.768,10 €	5.163,31 €	2.515,28 €	2.856,00 €	3.276,00 €	2.149,00 €
Total coordination	104.155,42 €	62.409,30 €	86.589,75 €	57.598,10 €	78.924,81 €	38.447,78 €	43.656,00 €	50.076,00 €	32.849,00 €
Management activities									
Personnel	26.730,00 €	18.560,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Justification	4,5 person-months at 5940€/month	4 person-months at 4640€/month	-	-	-	-	-	-	-
Subcontract	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Justification	-	-	-	-	-	-	-	-	-
Indirect Costs requested (7 %)	1.871,10 €	1.299,20 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Total management	28.601,10 €	19.859,20 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Total Direct costs	125.747,42 €	77.050,00 €	80.925,00 €	53.830,00 €	73.761,50 €	35.932,50 €	40.800,00 €	46.800,00 €	30.700,00 €
Total Indirect costs requested (7%)	7.009,10 €	5.218,50 €	5.664,75 €	3.768,10 €	5.163,31 €	2.515,28 €	2.856,00 €	3.276,00 €	2.149,00 €
TOTAL EC requested contribution	132.756,52 €	82.268,50 €	86.589,75 €	57.598,10 €	78.924,81 €	38.447,78 €	43.656,00 €	50.076,00 €	32.849,00 €

IWWA (Project number 244188)

	IAGU	ZOOM	CEIA	KNUST	BCRC	ELRI	UAA	CEDARE	ICANDO	Total
Coordination activities										
Personnel	45.262,50 €	22.100,00 €	20.500,00 €	24.750,00 €	42.674,57 €	24.777,32 €	27.000,00 €	31.500,00 €	26.250,00 €	670.303,39 €
Justification	17,75 person-months at 2550€/month	13 person-months at 1700€/month	10,25 person-months at 2000€/month	24,75 person-months at 1000€/month	26,50 person-months at 1610,36€/month	22,25 person-months at 1113,59€/month	18 person-months at 1500€/month	7 person-months at 4500€/month	5,25 person-months at 5000€/month	245,50
Consumables	2.200,00 €	15.300,00 €	2.200,00 €	2.200,00 €	2.200,00 €	2.200,00 €	4.100,00 €	300,00 €	300,00 €	38.650,00 €
Justification	1900€ - for organisation of capacity building workshop in Senegal (2-3 days). 300€ - for document and dissemination material sending. Office supplies. Visa costs.	15000 € for the organisation of the Final conference. 300€ document and dissemination material sending. Office supplies. Visa costs.	1900€ - for organisation of participatory workshop in Ghana (2-3 days). 300€ for Document and dissemination material sending. Office supplies. Visa costs.	1900€ - for organisation of capacity building workshop in Ghana (2-3 days). 300€ - for document and dissemination material sending. Office supplies. Visa costs.	1900€ - for organisation of capacity building workshop in Nigeria (2-3 days). 300€ - for document and dissemination material sending. Office supplies. Visa costs.	1900€ - for organisation of participatory workshop in Nigeria (2-3 days). 300€ for document and dissemination material sending. Office supplies. Visa costs.	3800€ for organisation of capacity building (2-3 days) and participatory workshops (2-3 days) in Côte d'Ivoire. 300€ for document and dissemination material sending. Office supplies. Visa costs.	Document and dissemination material sending. Office supplies. Visa costs.	Document and dissemination material sending. Office supplies. Visa costs.	-
Travel and subsistence	7.500,00 €	7.500,00 €	3.500,00 €	7.500,00 €	9.000,00 €	9.000,00 €	9.000,00 €	8.000,00 €	8.000,00 €	148.000,00 €
Justification	3 meetings: 2 people attending the kick-off meeting in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and midterm meeting attendance in Senegal (500€). National trips to attend workshop (1000€)	3 meetings: 2 people attending the kick-off in Accra (4000€), 2 people attending the midterm meeting in Senegal (2000€) and final conference-meeting in Ghana (500€). National trips to attend workshop (1000€)	2 meetings: 2 people attending the midterm meeting in Senegal (2000€) and final conference - meeting in Ghana (500€). National trips to attend workshops (1000€)	3 meetings: 2 people attending the kick-off in Accra (4000€) 2 people attending the midterm meeting in Senegal (2000€) and final conference-meeting in Ghana (500€). National trips to attend workshop (1000€)	3 meetings: 2 people attending the kick-off in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and 2 people the midterm meeting in Senegal (2000€). National trips to attend workshop (1000€)	3 meetings: 2 people attending the kick-off in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and 2 people attending midterm meeting in Senegal (2000€). National trips to attend workshop (1000€)	3 meetings: 2 people attending the kick-off in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and 2 people attending the midterm meeting in Senegal (2000€). National trips to attend workshop (1000€)	3 meetings: 2 people attending the kick-off in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and 2 people attending the midterm meeting in Senegal (2000€)	3 meetings: 2 people attending the kick-off in Accra (4000€), 2 people attending the final conference-meeting in Ghana (2000€) and 2 people attending the midterm meeting in Senegal (2000€)	-
Subcontract	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	28.117,42 €
Justification	-	-	-	-	-	-	-	-	-	-
Indirect Costs requested (7 %)	3.847,38 €	3.143,00 €	1.834,00 €	2.411,50 €	3.771,22 €	2.518,41 €	2.807,00 €	2.786,00 €	2.418,50 €	59.986,74 €
Total coordination	58.809,88 €	48.043,00 €	28.034,00 €	36.861,50 €	57.645,79 €	38.495,73 €	42.907,00 €	42.586,00 €	36.968,50 €	945.057,55 €
Management activities										
Personnel	0,00 €	5.950,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	51.240,00 €
Justification	-	3,5 person-months at 1700 €/month	-	-	-	-	-	-	-	12,00
Subcontract	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Justification	-	-	-	-	-	-	-	-	-	-
Indirect Costs requested (7 %)	0,00 €	416,50 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	3.586,80 €
Total management	0,00 €	6.366,50 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	54.826,80 €
Direct costs	54.962,50 €	50.850,00 €	26.200,00 €	34.450,00 €	53.874,57 €	35.977,32 €	40.100,00 €	39.800,00 €	34.550,00 €	936.310,81 €
Indirect costs requested (7%)	3.847,38 €	3.559,50 €	1.834,00 €	2.411,50 €	3.771,22 €	2.518,41 €	2.807,00 €	2.786,00 €	2.418,50 €	63.573,54 €
TOTAL EC requested contribution	58.809,88 €	54.409,50 €	28.034,00 €	36.861,50 €	57.645,79 €	38.495,73 €	42.907,00 €	42.586,00 €	36.968,50 €	999.884 €

B3. Impact

B 3.1 Strategic impact

IWWA initiative aims at:

- Bringing together relevant Western African and European stakeholders on solid waste management in order to establish a permanent cooperation strategy among them.
- Raising awareness on Integrated Sustainable Waste Management in African developing countries and providing tools to authorities and decision makers that help them in the selection and implementation of adapted Integrated Solid Waste Management Systems (ISWMS).
- Improving health conditions of waste management workers and urban dwellers and thus promoting their economy and quality of life.
- Improving know-how and best management practices of relevant African stakeholders (municipalities, authorities, decision makers, waste processing industry, etc) on appropriate and cost-effective solid waste treatment.
- Overcoming existing and potential socio-economic barriers for the implementation of the new proposed systems.
- Creating stronger links between waste management operations and the manufacturing products from recycled materials, and demonstrating how the organisations in charge of waste management can be more closely linked with both industry and consumers.
- Integration of the informal sector (Community Based Organizations, itinerant waste buyers, scavengers, micro and small enterprises, etc) in the assessment of policy recommendations and preparation of local tools and solutions.
- Linking local waste processors and regulators in solid waste management networks.
- Providing guidelines and recommendations for the development of National and Regional Action Plans.

The specific areas where IWWA initiative will have direct impacts are:

Environmental impacts:

Reducing pollution: Technological and organizational solutions will be assessed, including requirements and resulting pressures/ benefits on the environment. These activities can play a major role in reducing impacts on air, land and water, as the application of the know-how will make possible to lower the exposure of soils, rivers, lakes and ground waters to pollution from waste.

Conservation of natural resources: Through the decision tools developed and disseminated in IWWA, selection and implementation of technologies and systems that increase recovery rate of valuable materials and increase energy efficiency will be promoted.

Awareness raising and capacity building:

Enhancing the stakeholders' knowledge: IWWA has planned regional workshops to disseminate in a broad level the compiled knowledge through this platform, to introduce in the existing networks new relevant actors, and to raise the capacity of the stakeholders to introduce and sustain environmentally sound practices and technologies. These activities will enable the different national and local stakeholders to further spread the knowledge acquired, and also to implement future waste treatment projects on their own.

Economic and social impacts:

Increase in employment, reduction of poverty: IWWA will contribute to the generation of employment, as all the waste treatment processes demand high manpower. Furthermore, engineers and planners will have a new field of activity with a high market potential, having also the option of establishing new waste treatment businesses. These activities support the creation of small enterprises (e.g. services for the construction of waste treatment facilities) in African countries. Creating effective profit opportunities for SMEs in the environmental sector will lead to sustainable poverty abatement.

Health improvement: The work environment of formal and informal workers in the waste management sector includes serious health risks, and the tools and recommendations developed under IWWA initiative will lead to improved health for workers. Moreover, social, hygienic and environmental benefits of a better waste treatment to general public are direct in any community.

At a national level, the integration of ISWM to National Waste Plans will contribute to a **more efficient use of financial resources**, both from taxes and from international development funds. This will contribute to a better economic situation and both directly and indirectly to the achievement of the UN Millennium Development Goals

Contribution to Policy Development:

IWWA will contribute to the formation of a policy background that creates an enabling environment for ISWM. IWWA recognises that waste management policy is not isolated, but strongly linked to other sectors such as environment, energy and trade, and these links will be considered when developing of guidelines and recommendations.

The involvement of local authorities and policy makers in capacity building and dissemination activities will help overcoming institutional barriers and raise awareness among higher governmental levels in the promotion of waste treatment technologies and systems. Synergies and interactions among the members of the African waste treatment Network will be strengthened through the participatory inter-institutional approach of IWWA project, as the stakeholders will be trained in alternative models of public-private-non-governmental partnerships.

Finally, the international co-operation which will be accomplished through the IWWA Co-ordination Action, will allow Europe to achieve a better position to both share its expertise and to contribute to capacity building and technology transfer in Africa.

B 3.2 Spreading excellence, exploiting results, disseminating knowledge

IWWA has a comprehensive extension and dissemination strategy, intended to reach four different target audiences: **local communities, local and national authorities, specialised scientific community** and **general public**. Therefore, the members of IWWA will first carefully conduct a multidisciplinary recognition of the current situation in rural, urban and peri-urban areas of West Africa through the evaluation and assessment of the existing local conditions, identifying as well the key stakeholders. As a result, the IWWA project will develop four important tools:

- The Guide for selection of adapted ISWM systems.
- The Guide for implementation of ISWM systems
- Guidelines for implementation of policy strategies in ISWM
- Policy briefs for the development of National and Regional Action plans in Côte d'Ivoire, Ghana, Nigeria and Senegal

These four instruments, will be the main source of information for dissemination, however in order to conduct an effective extension plan, the members of IWWA consortium will identify and design extension activities sensitive to each group of potential stakeholders:

- **Local Communities:** aiming to reach local communities (organisations, rural associations of women and indigenous, rural cooperatives, development NGOs, municipalities, local authorities, local schools, small and micro enterprises, waste pickers). Possible means of dissemination will be the community radio, local newspapers and awareness campaigns. Two workshops will also take place in each target country representing the consortium, in which local communities facing solid waste crisis of West Africa will be invited to participate.
- **National And Local Authorities:** to build the necessary capacities for the local authorities and disseminate and exploit through them the findings of the project. In this sense, a set of activities will be planned, in the form of capacity building workshops.
- **Specialised scientific community:** many of the members of IWWA carry out extension activities of high quality for the promotion and implementation of Integrated Solid Waste Management systems across the region, such is the case of ZOOM, KNUST, UAA, ENDA, CEIA, and ELRI. Therefore, addressing the young scientist in the target countries, the possibilities of establishing new training activities in these fields will be explored, for instances, by the formulation of specialised courses at university level. Existing links and cooperation networks among members of the consortium will be used to disseminate results in conferences, scientific workshops and research publications. .
- **General Public:** IWWA will be the vehicle to spread world-wide their findings in order to attract interest and new stakeholders for concrete implementation projects. This mass dissemination strategy will be based on the following instruments:
 - IWWA **web-page** and a database platform for a mass dissemination and advertising with the all information related to the project,
 - two different project **leaflets**,
 - articles** in related journals aiming at the scientific community,
 - Final IWWA Conference** in Accra (Ghana),
 - other **symposia** and **conferences** in which IWWA will participate.

Management of intellectual property:

The results of IWWA will be property of all partners (bearing in mind the provisions laid down in the grant agreement and in the consortium agreement, explained below), access rights to those results will be royalty-free when a partner needs them for carrying out a specific task assigned to it. Access rights for the further exploitation or further research of the results of IWWA will also be royalty-free if a partner needs them for using its own foreground.

The dissemination activities proposed in IWWA aim at ensuring that results from the project are disseminated as swiftly as possible, being the general manager (TTZ) responsible for assuring that they are compatible with the protection of intellectual property rights, with confidentiality obligations and with the legitimate interests of the owner(s) of the foreground. All dissemination activities will be reported in the plan for the use and dissemination of foreground and BIOAZUL, as administrative manager, will define standards to assure that the Community financial support is highlighted in all dissemination activities. The expected **direct or indirect utilisation** of the project results in further research activities other than those covered by the project, or for developing, creating and marketing a product or process, or for creating and providing a service, will also be reported in the plan for the use and dissemination of foreground.

To assure proper management of the intellectual property in IWWA, specific provisions covering the **foreground** (ownership, transfer, protection, use and dissemination), as well as **access rights** (background, principles, access rights for implementation and use), will be laid down in the section “**rules on dissemination and use, and access rights**” of the **consortium agreement**, which will be prepared in Month 1, signed by all partners and monitored by the general project coordinator (TTZ). TTZ will also supervise the compliance

of such provisions and determine mechanisms to ensure any future IPR provision officially notified by the EC is included in the Description of Work (Annex I of the grant agreement) and/or in the consortium agreement.

The main issues to be included in the “**rules on dissemination and use, and access rights**” of the **consortium agreement** are the following:

- Access to the **background** to be needed for the purposes of the project.
- The allocation and terms of exercising the **joint ownership** of the results of the project (foreground).
- The specific obligations of the partners in case **transferring** ownership of foreground to third parties is necessary, defining appropriate safeguards and bearing the authorisation from the Commission in case the third party is established in a third country not associated with the FP7.
- The **time-limit for the prior notice** to the rest of the partners, as well as the necessary information concerning an envisaged new owner of the foreground to assure the other partners can exercise their access rights.
- The **time-limit for objecting** to any transfer of ownership, when a partner demonstrates that their access rights would be adversely affected.
- The rules for the adequate and effective protection of the foreground capable of **industrial or commercial application**, having due regard to
- The legitimate and commercial interests of all partners.
- Access rights for implementation (background needed for the purposes of the project) and access right for use.