



REPUBLIC OF GHANA

# **MINISTRY OF ENVIRONMENT, SCIENCE, TECHNOLOGY AND INNOVATION**

## **SECTOR MEDIUM-TERM DEVELOPMENT PLAN (2014 – 2017)**

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## **LIST OF ACRONYMS**

<b>BNARI</b>	<b>Biotechnology and Nuclear Agriculture Research Institute</b>
<b>CSIR</b>	<b>Council for Scientific and Industrial Research</b>
<b>EIA</b>	<b>Environmental Impact Assessment</b>
<b>EPA</b>	<b>Environmental Protection Agency</b>
<b>F&amp;A</b>	<b>Finance and Administration</b>
<b>GAEC</b>	<b>Ghana Atomic Energy Commission</b>
<b>GCLME</b>	<b>Guinea Current Large Marine Ecosystem</b>
<b>GEMP</b>	<b>Ghana Environment Management Programme</b>
<b>GIS</b>	<b>Geographic Information System</b>
<b>GSC</b>	<b>Ghana Science Congress</b>
<b>IGF</b>	<b>Internally Generated Funds</b>
<b>M&amp;E</b>	<b>Monitoring and Evaluation</b>
<b>MASTESS</b>	<b>Mathematics, Science and Technology Scholarship Scheme</b>
<b>MDA</b>	<b>Ministries, Departments and Agencies</b>
<b>MESTI</b>	<b>Ministry of Environment, Science, Technology and Innovation</b>
<b>MoF</b>	<b>Ministry of Finance</b>
<b>MTDP</b>	<b>Medium Term Development Plan</b>
<b>NDPC</b>	<b>National Development Planning Commission</b>
<b>NEP</b>	<b>National Environment Policy</b>
<b>NNRI</b>	<b>National Nuclear Research Institute</b>

<b>PoA</b>	<b>Programme of Action</b>
<b>PPME</b>	<b>Policy Planning, Monitoring and Evaluation</b>
<b>R&amp;D</b>	<b>Research and Development</b>
<b>RAMSRI</b>	<b>Radiological and Medical Sciences Research Institute</b>
<b>RPI</b>	<b>Radiation Protection Institute</b>
<b>RSIM</b>	<b>Research, Statistics and Information Mangement</b>
<b>S&amp;T</b>	<b>Science and Technology</b>
<b>SDF</b>	<b>Skills Development Fund</b>
<b>SEA</b>	<b>Strategic Environmental Assessment</b>
<b>SKA</b>	<b>Square Kilometre Array</b>
<b>STI</b>	<b>Science, Technology and Innovation</b>
<b>SWOT</b>	<b>Strengths, Weaknesses, Opportunities and Threats</b>
<b>TCPD</b>	<b>Town and Country Planning Department</b>
<b>UNEP</b>	<b>United Nations Environment Programme</b>
<b>UNFCCC</b>	<b>United Nations Framework Convention on Climate Change</b>
<b>WASCAL</b>	<b>West Africa Science Centre for Climate Change</b>

## **EXECUTIVE SUMMARY**

### **Methodology**

- Obtained NDPC Guidelines for preparation of SMTDP
- Following the guidelines, composition of SMTDP Preparation team
- Team outlined strategy /roadmap for plan preparation indicating the steps in the guidelines responsible team member, source(s) of information and estimated time frame.
- Team drew up templates to obtain inputs from MESTI agencies and directorates
- Distributed templates to agencies/ directorates with deadlines for submission of inputs
- Team came up with outline of SMTDP following NDPC guidelines
- Team plans retreat, with NDPC in attendance to meet with Agencies/Directorates to incorporate latter's inputs to SMTDP
- Completed a 1<sup>st</sup> draft of SMTDP
- Validation by Agencies/Directorates
- Presentation to management.
- Final draft of SMTDP

## **CHAPTER 1: PROFILE/CURRENT SITUATION/BASELINE**

### **INTRODUCTION**

The Ministry was reconstituted in January 2009, and named Ministry of Environment, Science and Technology (MEST); under Executive Instrument (E.I.) 7 Civil Service (Ministries) Instrument, 2009. However in 2013, the Ministry was renamed Ministry of Environment, Science, Technology and Innovation (MESTI), under Executive Instrument (E.I.) 1 Civil Service (Ministries) Instrument, 2013.

#### **1.1 Mission**

The Ministry of Environment, Science, Technology and Innovation (MESTI) exists to promote sustainable development by deepening and strengthening market driven Research and Development (R&D) for sound Environmental governance, Science, Technology and Innovation through intensive awareness creation, collaboration and partnership.

#### **1.2 Vision**

MESTI envisages to attain sustainable development through the utilization of Science, Technology and Innovation for wealth creation and sound environmental governance in a modern and competitive economy.

#### **1.3 Goal**

Ensure accelerated socio-economic development of the nation through the formulation of sound policies and a regulatory framework to promote the use of appropriate environmentally friendly, scientific, and technological practices.

#### **1.4 Functions**

The core functions of the Ministry are:

- Provision of leadership and guidance for the Environment, Science, Technology and Innovation within the broad sector of the economy through sound policy formulation and implementation;
- Ensuring the establishment of regulatory framework and setting of standards to govern the activities of science and technology and the management of the environment for sustainable development;
- Promotion of activities needed to underpin the standards and policies required for planning and implementation of sound scientific and technological development activities;
- Ensuring the coordination, supervision, monitoring and evaluation of activities of Environment, Science, Technology and Innovation while fulfilling national benefits-sharing commitments;
- Setting out the parameters required for programmes on environment, science, technology and human settlement in consultation with the National Development Planning Commission (NDPC) in guiding the Districts Assemblies as planning authority at the local level;
- Analyzing and coordinating all planned programmes as well as budgets in the environment, science, technology and innovation sector of the economy for purposes of achieving a single integrated management system;
- Initiating, simulating and coordinating research including the continuous development and review of policies, laws, rules and regulations in the environment, science, technology and innovation sector of the economy; and
- Ensuring effective environmental management and governance, in line with the functions of the Act 490, with the EPA as the main implementing agency and the MESTI playing an oversight, coordination and facilitating role.

### **1.5 Performance Review**

**Table 1.1: Performance Review (2010 – 2013)**

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
Infrastructure And Human Settlements Development	Promote sustainable, spatially integrated and orderly development of human settlements	Spatial Planning and Human Settlement	Human Settlements Policy formulated and adopted	Statement of intent on spatially integrated hierarchy of urban and rural settlements in place	Draft Human Settlements Policy formulated by NDPC for further discussion	Draft policy still under discussion	Policy study report submitted to NDPC for formulation of Policy	Policy study report submitted to NDPC for formulation of Policy	On-going
			Spatial planning models developed and adopted	Spatial Planning models used by all MMDAs	Draft models subjected to stakeholder consultation	National Spatial Planning Models completed	Spatial planning model guidelines published and distributed	50 additional copies of the published Spatial planning model guidelines distributed.	
			Spatial Planning standards formulated and adopted	75% of MMDAs and MDAs use new Planning Standards	Draft standards subjected to stakeholder consultations	National Spatial Planning Standards completed	Spatial Planning standards published and distributed	82 additional copies of the published spatial planning standards have been distributed	
			MMDAs applying GIS in spatial planning	120	15	11	14	75 – due to the street naming activity	
			Urban development policy formulated	Na	Draft Urban Policy subjected to stakeholder	National Urban Development	Urban Development policy approved,	Unspecified number of Urban	



THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
					consultation	Policy formulated	published and distribution ongoing	Development policy document distributed	
			Land Use and Spatial Planning law passed into law	50% of MMDAs applying law effectively	Draft bill subjected to stakeholder consultations	Land Use and Spatial Planning Bill at Cabinet	Land Use and Spatial Planning Bill approved by cabinet	Land Use and Spatial Planning Bill reviewed based on comments from AG's Department	
			Reform of land bills completed	75% of MMDAs apply LIs	Draft LIs subjected to stakeholder consultations	Process on drafting of Lands Bill and production of requisite LIs stalled	Consultancy for drafting of Lands Bill and production of requisite LIs awarded	Consultancy for drafting of Lands Bill and production of requisite LIs commenced and it's 20% complete	
			Medium Term development plans with land use planning integrated	Na	50% of MTDPs prepared by MDAs and MDAs incorporate spatial component	Guidelines on spatial planning completed	Principles for integrating spatial planning into medium term development planning guidelines documented	Spatial planning elements incorporated into the guidelines for medium term development planning	
			Establishment of the Town & Country Planning Authority	TCPA fully operational	TCPA Business Plan produced	Proposal for establishment of TCPA at Cabinet as part of the Land Use and Spatial Planning Bill	Proposal for establishment of TCPA approved as part of the land Use and Spatial Planning bill at cabinet	Comments from AG's Department on establishment of TCPA submitted for onward	

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
								delivery to Cabinet	
	Promote the application of Science, Technology and Innovation to all Sectors of the Economy	Research and Development	R&D expenditure per GDP (%)	1.25%	0.5	0.5	0.5	0.5	
			Number of businesses/industries assisted to adopt R&D in production	200	75	80	105	120	
			Number of publications on research findings	225	100	215	223	230	
			Number of research findings adopted by industry	200	20	30	35	40	
			Rate of adoption of improved locally-packaged technologies by MSMEs (%)	NA	15%	20%	28%	30%	
			Number of technologies developed and adopted by MSMEs	NA	5	8	10	10	
		Implementation of the Better Ghana ICT Project	No of laptops procured No. of laptops distributed to schools No. of laptops distributed to students	Distribute 60,000 laptops to Secondary and tertiary institutions Schools.	N/A	8,111 laptops procured 8,111 laptops distributed to schools and individual students	108,000 laptops procured 47,542 laptops distributed to schools and individual students	No Laptops procured 35,000 laptops distributed to schools	Programme had a lot of implementation challenge and needs to be reviewed for sustainability
		Organization of the 1st Ghana Science Congress	No. of Exhibitors No. of Awards Conference report and communiqué issued	Plan and Organize 2 <sup>nd</sup> GSC	Constituted a Planning Committee for the 1 <sup>st</sup> GSC Launch 1 <sup>st</sup> GSC	1 <sup>st</sup> GSC organized successfully for 30 exhibitors 34 scientists and institutions awarded	No Activity was undertaken	No Activity was undertaken	Issues of funding needs to be addressed to successfully organize the 2 <sup>nd</sup> GSC

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
		Implementation of Ghana Skills and Technology Development	Functional STI Directorate established Office Accomodation provided for STI directorate No. of Staff engaged at the STI directorate No of staff trained No. of National STI reports prepared No. of selected activities implemented in the STI development plan No of function technology development and marketing centers established No. of r & d industrial linkages created. No. of research outputs commercialized	5 r & d institutions selected Report on design and bill of quantity of STI building prepared.  2 STI staff trained	Project Implementation Plan launched and Project Appraisal Documents drafted by STI directorate World Bank, COTVET established at MEST  Learning Exchange between Ghana and South Africa on STI policy successfully undertaken	GSTDP official signs S & T Agreement with DST, South Africa MESTI 3- year Plan of Action on GH-SA agreement prepared	MESTI, Ghana 3- year Plan of Action on GH-SA agreement prepared	Consultant engaged to design and prepare BoQ for STI building  5 r & d institutions selected to undertake activities to create industrial linkages and commercialize research output  Organize Joint Gh-SA R & D symposium on Biotechnology and ICT	Delay in implementing activities is attributed to the limited human capacity at the STI directorate
		Implementation of the Action Plan of the policy on the use of local materials in the construction industry.	No. of Masons trained in use of local building material National Training Centre established No of Government building projects utilizing local building materials No. clay brick and tile	Implement phase II activities	Policy and Action plan drafted, submitted and approved by cabinet	Phase 1 activity Initiated.  2 stakeholders and steering committee meetings organized	Phase 1 activity completed. 3 stakeholders and steering committee meetings organized  1 review meeting	Partial Funds for phase 2 disbursed to lead implanting institutions. Phase 2 activities initiated by 8	Late release of funds affected programme implementation period.

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
			factories established/revamped nationwide No. of Jobs created No. database on local material resources created.				organized to review phase 2 activity and budget. Phase 2 workplan developed	institutions.	
		Implementation of the Mathematics, Science and Technology Scholarship Scheme (MASTESS)	No. of Beneficiaries Increased in enrolment of needy but brilliant student in science programmes	10,000 beneficiaries nationwide	3,543 beneficiaries nationwide	2,803 new beneficiaries	2,560 new beneficiaries	No activity was undertaken	Lack of funds hampered the implementation of the project in 2013.
		Development and Implementation of National Science, Technology and Innovation Policy and Development Plan	STI policy and Development Plan approved by cabinet and Launched No. of STIP and STIDeP printed and Distributed No. of Programmes and projects of STIDeP implemented	5 STIDeP programmes implemented	STIP and STIDeP drafted. 3 stakeholders meeting conducted to review documents	3 stakeholders meeting conducted to review and finalize the STIP and STIDeP. STIP and STIDeP approved by Cabinet and Launched	10,000 copies of STIP and STIDeP printed 5,000 copies of documents distributed. 3 programmes of STIDeP initiated - Launch the National STI Fund with a seed money of 1 Million Ghana Cedis	No. specific programme of STIDeP initiated due to lack of funds.	The need to mainstream STI into national development plan is very important for the successful implementation of the STI Policy and STI Development Plan.
		African Square Kilometer	No. of African SKA Partner meetings	Complete the conversion of	Participated in one Working	- Attend two SKA WG and SC	Constitute an Interim	- Support the	Limited funding and lack of

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
		Array Project	attended. No. of SKA related projects/activities implemented nationally.	the 32metre Vodafone antennae at Kuntunse into a radio telescope.  Build the capacity of technical staff to manage and operate the telescope	Group meeting of African SKA partner country meeting in south Africa  Host an SKA an African SKA working Group and Steering Committee meeting in Accra Undertake visits to National SKA proposed site at the Kwahu Plains  Organize 2 National SKA technical committee meetings	meetings in Botwana and South Africa. - Initiate discussions and request to re-use redundant Vodafone antennae at Kuntunse with Vodafone Ghana. - Initiate the process of establishing a National Space Agency to support the implementation of space programmes such as SKA. - Lead the development of the Communication Strategy for the Africa SKA Bid. - Organize 2 National SKA technical committee meetings.	Committee to develop the framework for establishing a National Space Agency at GAEC - Participate in 2 SKA WG and SC meetings in South Africa - Launch the Ghana Space science and Technology Center - Sign an MOU with Vodafone for the acquisition of the redundant telescope at Kuntunse - Liaise with South Africa to initiate the conversion of the antennae at Kuntunse	training of technical staff of the GSSTI - Participate in 2 African SKA WG and SC meetings in South Africa - Plan, Organize and host the African Leadership Conference successfully - Initiate discussion with International space companies and cabinet on establishing a satellite	public awareness hampers the implementation of key activities

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
								receiving ground station in Ghana	
		Establish 2 National Science and Technology Theme Park	Reports on Feasibility studies of the parks. Report of Site plan and business plan Total land area secured World class technology centers constructed and launched No. of R & D output commercialized Increase in Ghanaian industry productivity Improved National Innovation System	Launch and operate the 2 National Technology Parks	Initiated Discussions on the framework of establishing 2 S & T parks with key stakeholders	Participated in STP training in South Korea Develop framework for establishing Ghana's STP. Organize Ministerial study tour of STPs in South Korea	Organized meetings with NDPC on the implementation of the National STP project Organize 4 Implementation Committee meetings on the National STP	No activity was undertaken due to lack of funds.	There is a need to ensure that priority is given to this project at the Cabinet level and funds are provided for the successful implementation
<b>SUSTAINABLE NATURAL RESOURCE MANAGEMENT</b>	<b>Ensure that the practices of the oil and gas industry are consistent with international standards on environmental sustainability</b>	Environmental protection and management	Oil spill risk assessment performed and contingency plan developed;  (a) Risk assessments carried out  (b) Contingency plan developed	100% completed	Draft Regulations on Oil Pollution Prevention and Response Preparedness in progress  Oil Spillage Response Centre established at EPA	Draft regulations subject to stakeholder review workshop  Establishment of Laboratory at a discussion stage	Risk assessments carried out but subject to review  Contingency plan developed but subject to review	Oil spill risk assessment carried out and contingency plan developed but subject to stakeholders review	Final document to be prepared in 2014
	Manage waste, reduce pollution and	Environmental protection and management	Reduction in concentrations of air pollutants from oil and	Pollutants, including PM10, CO, NO <sub>2</sub> , SO <sub>2</sub> and	Baseline air quality data collated for urban centres of oil	Baseline study on air quality data was	Not yet done but the on- going laboratory	Pollutants, including PM10, CO,	On-gong

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
	noise		gas production areas	Ozone in all urban centres of oil & gas producing centres monitored and analysed.	and gas producing areas in progress	initiated	establishment will also serve that purpose	NO <sub>2</sub> , SO <sub>2</sub> and Ozone in all urban centres of oil & gas producing centres monitored and analysed.	
	Ensure the restoration of degraded natural resources	Environmental protection and management	Proportion of companies compliant with EA and EMP permit conditions	70%	48.5% of companies were monitored to be EA and EMP compliant	50%	55%	65% of companies monitored were EA and EMP compliant	Improvement in EA and EMP compliance protects the environment from deterioration
	Strengthen and develop local level capacity to participate in the management of governance of natural resources		Number of manufacturing companies covered by AKOBEN performance rating	100	45	100	100	100	Considerable improvement in companies covered by AKOBEN -on-going
	Promote sustainable extraction and use of mineral resources		Number of mining companies operating in line with environmental legislations (AKOBEN Rating)	25	16	16	16	19	On-going
	Strengthen and		Percentage of District	100%	10%	50%	65%	78.7%	On-going

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
	develop local level capacity to participate in the management of governance of natural resources		plans with envtal proprieties integrated based on SEA						
	Enhance natural resource management through community participation	celebrate 4 international environmental days by end of June 2013	Minutes, celebrated Day	To celebrate 16 Environmental days	Celebrated 4 environmental days	Celebrated 4 environmental days	Celebrated 4 environmental days	Celebrated 4 environmental days	Aside logistics issues the Ministry was able to celebrate all 16 events
		Organization of Environmental Journalist Awards	Event Organized, awards	To have celebrated annually an award for Environmental journalists	-	-	-	-	For budgeting and funding constraints, we have not been able to organize any award for the period under review
		Provide media coverage for Minister and Dep. Minister's activities	Reports, Publications	To provide media coverage for the minister and his deputies as and when	26 media events were organized for the minister and his deputies	25 media events were organized for the minister and his deputies	30 media events were organized for the minister and his deputies	20 media events were organized for the minister and his deputies	Target achieved



THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
				requested (a total of 101 media coverage were organized)					
		Production of brochures, half yearly journals documentari es and other publications on MESTI programs, projects and activities.	Publications, Printing	To print brochures, half yearly journals documentaries and other publications on MESTI programs, projects and activities as and when needed.				3,000 copies of three different kinds of brochures were printed. Also, 1,000 copies of calendars were printed	Target achieved in respect of 2013
		Organize 4 Meet-The-Press Series	Event organized	To organize 4 Meet-The-Press Series	1 Meet-The-Press Series was organized	1 Meet-The-Press Series was organized	1 Meet-The-Press Series was organized	1 Meet-The-Press Series was organized	Target achieved
		Organize 4 Policy Fair programs	Event organized	to organize 4 policy fair programs	1 Policy Fair was organized	1 Policy Fair was organized	1 Policy Fair was organized	1 Policy Fair was organized	Target achieved
	Strengthen and develop local level capacity to participate in the management and governance of natural resources	TRAINING AND DEVELOPMENT	Admission Letter, Report, Certificate	Na	12	19	13	5	Training and development for some Senior and Junior staff
		PROMOTIONS	Reports of interviews	Na	7	12	2	10	Promotion conducted for some Senior

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
									and Junior staff
		RECRUITMENT	No. of staff recruited Interviews organized	Na	3	0	0	0	Recruitment to the Project Management Unit and PPMED
	Enhance policy and regulatory framework and effective coordination among Government agencies to improve	Preparation of MESTI-MDA annual budget	Approved annual budget estimates document	4	1	1	1	1	<b>Target achieved</b>
		Preparation and submission of annual Progress report	APR submitted to OHCS, NDPC	4	1	1	1	1	<b>Target achieved</b>
		Organization of Mid-year reports	Mid-year review	4	0	1	1	0	<b>50% achieved due to lack of funds</b>
		Policy review workshop for MESTI-MDA							
		Preparation of the action document	Validated Annual plan	4	1	1	1	1	<b>Target achieved</b>

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
		action plan							
		Monitoring of Local building materials projects at FORIG & BRRI	Monitoring reports	N/A	Not undertaken as project started in 2012	Not undertaken as project started in 2012	1	1	Target achieved
		Monitoring of the Ghana Environmental Management (GEMP) tree Planting project	Monitoring reports	4	1	1	1	1	Target achieved
		Monitoring of coastal development project	Monitoring reports	4	1	1	1	1	Target achieved
		Monitoring of Better Ghana Agenda ICT project	Monitoring reports	N/A		1	1	1	Target achieved
		Preparation of draft	SMTDP document	1	1				INADEQUATE TECHNICAL

THEMATIC AREA	POLICY OBJECTIVE	PROGRAMME	Indicators	Target	LEVEL OF ACHIEVEMENTS				REMARKS
					2010	2011	2012	2013	
		Sector Medium Term Developmen t Plan (2010 – 2013)							<b>STAFF IN THE MINISTRY DUE TO RECONSTITUT ION OF THE MINISTRY IN 2009</b>

### 1.7 Budgetary Allocations

Over the planning period (2010 - 2013), the budget release always fell short of the budget approved, except in 2012; when government had to implement the Single Spine pay policy, including paying the arrears to workers who had been migrated onto the pay policy. The implementation of the operations of the Ministry were affected as not all targets were met due to the short falls and late release of funds.

**Table 1.2: Annual Budgetary Allocations (2009 – 2014)**

YEAR	APPROVED BUDGET	ACTUAL RELEASE	EXPENDITURE	
			PLANNED	ACTUAL
2009	113,045,554.00	49,256,099.00	113,045,554.00	49,256,099.00
2010	131,529,124.00	101,682,826.00	131,529,124.00	101,100,944.00
2011	177,443,578.00	115,779,132.00	177,443,578.00	115,211,383.00
2012	123,247,875.00	298,089,110.00	298,089,110.00	295,050,145.00
2013	139,995,861.00	250,186,016.00	252,054,935.00	252,054,935.00
2014	245,955,307.00	100,698,094.00	245,955,307.00	100,698,094.00

## **1.8 Compilation of the Profile of Sector of the MDA (Step 3)**

### **Structure of the Ministry (HEAD QUARTERS)**

The Ministry of Environment, Science, Technology and Innovation (MESTI) is a central government Agency established to promote sustainable development by deepening and strengthening market driven Research and Development (R&D) for sound Environmental governance, Science, Technology and Innovation through intensive awareness creation, collaboration and partnership. The Ministry has six (6) Directorates,- the 4 line Directorates specified by the Civil Service Law, 1933 (PNDCL 327) – (Finance and Administration Directorate, Human Resource Management Directorate, Policy, Planning, Monitoring and Evaluation Directorate, and Research, Statistics and Information Management Directorate.) – and two (2) technical directorates- the Environment Directorate and the Science, Technology and Innovation Directorates. . The Ministry is headed by a Minister, who is supported by two Deputy Ministers. There is a Chief Director who is the administrative head, supported by six (6) Directors heading each of the directorates.

#### **Finance and Administration Directorate (F&A)**

This Directorate handles the administrative business of the Ministry by ensuring that services and facilities necessary to support the efficient performance of the functions of the Ministry are available. It pursues the interest of the Ministry in all financial transactions relating to revenue and expenditure and ensures good financial administration by the implementing agencies. The F&A directorate has under it the Accounting Unit which deals with general accounting and management of the Ministry's approved Budget.

#### **Human Resource Management Directorate (HRD)**

The Human Resource Development and Management Directorate ensures the availability of the requisite and adequately trained manpower for the effective operations of the Environment, Science and Technology sector of the economy through modern human resource planning and management. It has the managerial responsibility of ensuring that the environment, science and technology Institutes produce the requisite manpower skills for the effective performance of the sector. It therefore liaises with the Office of the Head of Civil Service, the Public Services

Commission and the Scholarship Secretariat as well as local and international training institutions for the realization of their objectives. The Directorate also ensures that approved personnel policies of the Ministry on employment, personnel records, and training are translated into good management practices and effectively carried out.

#### **Research, Statistics and Information Management (RSIM)**

The Function of the RSIM Directorate is to provide the needed ingredients for policy formulation and decision-making through collection and analysis of data, operations, research and documentation. The directorate projects the image of the Environment, Science and Technology sector both within and outside the country by disseminating information through its Public Relations and Information Unit on government policies, activities and procedures. RSIM does this by providing relevant feedback which serves as information to the government and the general public on the impact of government policies and the general performance of the sector.

#### **Policy, Planning, Budgeting, Monitoring and Evaluation (PPBME)**

This directorate is responsible for the development of comprehensive and sustainable policies, legislations, plans, programmes and resource flow to the sector in collaboration with the relevant stakeholders. The PPBME directorate caters for the design and application of monitoring and evaluation systems for purposes of assessing the operational effectiveness of the Ministry, its implementing departments and agencies as well as the activities of other key stakeholders in meeting the sector's short, medium and long-term objectives and targets. The directorate is also responsible for the preparation of budgets for the Ministry and its Agencies.

#### **Environment Directorate.**

This Directorate provides Technical Support in the initiation and implementation of Policies, Programmes and Projects and the necessary legislative reforms to ensure effective environmental governance and natural resource management to enhance national development. This it does by liaising with the relevant agencies such as the EPA and TCPD.

#### **Science, Technology and Innovation Directorate (STI)**

The STI Directorate provides technical assistance and promotes the application of Science, Technology and Innovation in all sectors of the economy. The Directorate collaborates with the PPME and RSIM Directorates to formulate STI policies, communicate, coordinate and monitor programmes and activities of Agencies and Departments of the Ministry at various levels of implementation specifically that of GAEC and CSIR.

#### **The four (4) Agencies / Department Operating under the Ministry**

The Ministry has three (3) Agencies and one (1) Department under it – the Ghana Atomic Energy Commission (GAEC), the Centre for Scientific and Industrial Research (CSIR), the Environmental Protection Agency (EPA) and the Town and Country Planning Department (TCPD)

#### **The Council for Scientific and Industrial Research (CSIR)**

The Council for Scientific and Industrial Research (CSIR-Ghana) is the leading national scientific and technological Institution mandated to carry out research into science and technology issues that pertain to national development. Presently the Council exercises control over the following Institutes:

- Animal Research Institute, Accra
- Building and Road Research Institute, Fumesua, Kumasi
- Crops Research Institute, Fumesua, Kumasi
- Food Research Institute, Accra
- Forestry Research Institute of Ghana, Fumesua, Kumasi
- Institute of Industrial Research, Accra
- Institute for Scientific and Technological Information, Accra
- Oil Palm Research Institute, Kusi-Kade
- Plant Genetic Resources Research Institute, Bunso
- Savanna Agricultural Research Institute, Nyankpala, Tamale
- Science and Technology Policy Research Institute, Accra
- Soil Research Institute, Kwadaso, Kumasi; and
- Water Research Institute, Accra.



The CSIR is to become the force for accelerated social and economic development of Ghana through examining, exploring and creating Science and Technology catalysts for public and private wealth creation.

The goal of CSIR is to ultimately develop capacities for contributing to industrial and agricultural productivity, food security, expand opportunities for productive employment, community renewal, environmental conservation, income generation and poverty reduction for national development.

The core functions of CSIR are, among others, to:

- Pursue the implementation of government policies on scientific research and development;
- Advise the sector Minister on scientific and technological advances likely to be of importance to national development;
- Encourage coordinated employment of scientific research for the management, utilization and conservation of the natural resources of Ghana in the interest of development; and
- Encourage in the national interest, scientific and industrial research of importance for development of agriculture, health, medicine, environment, technology and other service sectors and to this end to encourage close linkages with the productive sectors of the economy.

## **1. The Environmental Protection Agency (EPA)**

The goal of the **EPA** is to ensure better use of ecosystem services and natural resources, for purposes of poverty reduction and sustainable development; and also to enhance the application of Act 490 and its regulations, to reduce environmental impacts, control environmental degradation and enhance restoration of degraded resources.

The core functions of the EPA include:

- Coordinate the activities of bodies concerned with aspects of the environment;
- Collaborate with national, foreign and international agencies relevant for the environmental act;
- Issue environmental permits and notices;
- Prescribe relevant standards and guidelines ;
- Ensure compliance with EPA act and with environmental impact assessment procedure;
- Conduct investigations into environmental issues and advise the Minister;
- Promote relevant studies, research, surveys and analyses;
- Initiate and pursue education for public awareness on the environment;

- Develop comprehensive database on the environment;
- Conduct training programmes and publish information on the environment;
- Impose and collect environmental protection levies.

## **2. The Town and Country Planning Department (TCPD)**

The Town and Country Planning Department (TCPD) was established in 1945 and charged with the responsibility of planning and management of growth and development of cities, towns and villages in the country. It therefore seeks to promote sustainable human settlements development based on principles of efficiency, orderliness, safety and healthy growth of communities. TCPD plans, manages and promotes harmonious, sustainable and cost effective development of human settlements in the country and in accordance with sound environmental and planning principles. The Department performs the following key functions:

- Planning and management of physical development and growth of human settlements in the country;
- Preparation of spatial and land use plans and administration of controls to ensure that human settlements function as healthy places for residence, work, and recreation; and
- Provision of various forms of planning services to public institutions as well as private individuals and organizations.

Currently, the Department operates at three territorial levels,- the national, regional and district levels. The national office is part of the Ministry of Environment, Science and Technology whilst the regional and district offices are part of the Regional Coordinating Councils and the District Assemblies respectively.

**TABLE 1.2 : STAFF DISTRIBUTION BY SEX (SUMMARY)**

<b>SEX</b>	<b>MESTI HQ</b>	<b>CSIR</b>	<b>GAEC</b>	<b>EPA</b>	<b>TCPD</b>	<b>TOTAL</b>
<b>MALE</b>						
<b>FEMALE</b>						
<b>TOTAL</b>						

TABLE 1.3: STAFF CATEGORISATION/AGE DISTRIBUTION

AGE RANGE	20-30 YEARS		31-40 YEARS		41-50 YEARS		51-60 YEARS		60 YEARS+		TOTAL	
MESTI HQ	JNR. STAFF	SNR. STAFF	JNR. STAFF	SNR. STAFF	JNR. STAFF	SNR. STAFF	JNR. STAFF	SNR. STAFF	JNR. STAFF	SNR. STAFF	JNR. STAFF	SNR. STAFF
MALE	1	8	1	3	8	7	4	6	0	1	14	25
FEMALE	4	5	3	9	2	9	1	5	0		10	28
SUB-TOTAL	5	13	4	12	10	16	5	11	0	1	24	53
No. REQUIRED												
CSIR												
MALE												
FEMALE												
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
No. REQUIRED												
GAEC												
MALE												
FEMALE												
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
No. REQUIRED												
EPA												
MALE												
FEMALE												
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
No. REQUIRED												
TCPD												
MALE												
FEMALE												
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0	0

**TABLE 1.4: EDUCATIONAL BACKGROUND**

SEX	NO QUALIFICATION	MSLC / SSCE	PROFESSIONAL	1st DEGREE	2nd DEGREE	PHD
MALE	4	5	11	12	5	2
FEMALE	0	3	15	14	5	0
TOTAL	4	8	26	26	10	2
MALE						
FEMALE						
TOTAL	0	0	0	0	0	0
MALE						
FEMALE						
TOTAL	0	0	0	0	0	0
MALE						
FEMALE						
TOTAL	0	0	0	0	0	0
MALE						
FEMALE						
TOTAL	0	0	5	0	0	0
MALE	4	5	11	12	5	2
FEMALE	0	3	15	14	5	0

TABLE 1.5: NO OF YEARS OF SERVICE

MDA	SEX	DURATION OF SERVICE (YRS)					
		0 - 5	6 - 10	11 - 15	16 - 20	21 - 25	> 25
MESTI HQ	MALE	24	15				
	FEMALE	26	12				
	TOTAL	50	27	0	0	0	0
No. OF YEARS OF SERVICE							
CSIR	MALE						
	FEMALE						
	TOTAL	0	0	0	0	0	0
No. OF YEARS OF SERVICE							
GAEC	MALE						
	FEMALE						
	TOTAL	0	0	0	0	0	0
No. OF YEARS OF SERVICE							
EPA	MALE						
	FEMALE						
	TOTAL	0	0	0	0	0	0
No. OF YEARS OF SERVICE							
TCPD	MALE						
	FEMALE						
	TOTAL	0	0	5	0	0	0
No. OF YEARS OF SERVICE							
	MALE	24	15	0	0	0	0

**1.8.1 Characteristics of the Sector of the MDA.**

\*\*\* General summary of profile

**1.8.2 Analysis of Cross cutting issues**

The table below indicates the status of cross-cutting issues.

\* (The analysis should identify the key gender issues affecting the development of the sector).

<b>CROSS-CUTTING ISSUES</b>	<b>MDA</b>				
	<b>MESTI HQ</b>	<b>CSIR</b>	<b>GAEC</b>	<b>EPA</b>	<b>TCPD</b>
<b>HIV / AIDS WORKPLACE POLICY DOCUMENT</b>	<b>Not available</b>				
<b>GENDER POLICY DOCUMENT</b>  <b>**NDPC to clarify</b>					
<b>ENVIRONMENT / &amp; GREEN ECONOMY</b>					
<b>DECENTRALISATION</b>					
<b>CULTURE</b>					
<b>SCIENCE, TECHNOLOGY AND INNOVATION (STI)</b>					
<b>SECURITY</b>					
<b>DISASTER</b>					
<b>INEQUALITIES</b>					
<b>WATER SECURITY</b>					

## CHAPTER 2: PRIORITIZATION OF DEVELOPMENT ISSUES

### 2.1 Priorities

TABLE 2.1: PRIORITIZATION MODEL

PROGRAMME	CRITERIA				TOTAL SCORE	RANK
	NATIONAL IMPACT	SPATIAL IMPACT	SOURCE OF PROGRAMME	SOURCE OF FUNDING		
PROGRAMME 1						
PROGRAMME 2						
PROGRAMME 3						
PROGRAMME 4						

\***SPATIAL IMPACT:** e.g. Nationwide/ Selected Region etc.

\* **NATIONAL IMPACT:** e.g. Employment generation, economic enhancement, educational, health, poverty reduction etc. /

\* **SOURCE OF PROGRAMME:** e.g. Cabinet Decision, International Agreement, Civil Society, Executive etc.)

\* **SOURCE OF FUNDING:** eg. GoG, UNEP, CIDA, DEVELOPMENT PARTNERS

### 2.2 Transition from GSGDA 2010-2013 to NMTDPF 2014-2017

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**Table 2.2: Transition from GSGDA 2010-2013 to NMTDPF 2014-2017 (Refer to Pages 9 and 10 of NMTDP Guide)**

NMTDPF 2010-2013		NMTDPF 2014-2017	
THEMATIC AREA	DEVELOPMENT ISSUES	THEMATIC AREA	DEVELOPMENT ISSUES
<b>ACCELERATED AGRICULTURAL MODERNISATION AND SUSTAINABLE NATURAL RESOURCE MANAGEMENT</b>	<ul style="list-style-type: none"> <li>• Negative impact of some farm practices and mining technologies</li> <li>• Negative impact of mining on host communities</li> <li>• Conflict between mining and forest resource conservation</li> <li>• Destruction of the environment, pollution by illegal miners</li> <li>• Illegal felling of trees weak institutional and regulatory framework for natural resource management and environmental governance</li> <li>• Poor enforcement of regulations and laws governing the environment and for the management of natural resource</li> </ul>	<b>ACCELERATED AGRICULTURAL MODERNISATION AND SUSTAINABLE NATURAL RESOURCE MANAGEMENT</b>	<ul style="list-style-type: none"> <li>• Degradation of the nation's forests</li> <li>• Inefficient use and management of natural resources</li> <li>• Inadequate awareness of climate change and its impact</li> <li>• Weak institutional and regulatory framework for natural resource management and environmental governance especially at the district level</li> <li>• Weak integration of biodiversity issues in development decision making especially at the local level</li> <li>• Inadequate financial resources for biodiversity activities including climate-related conventions</li> <li>• Limited human resource capacity in Climate Change issues</li> <li>• Weak sub-regional network</li> </ul>



	<ul style="list-style-type: none"> <li>• Lack of awareness of the negative impact of improper disposal of waste i.e. solid, liquid, e-waste on the environment</li> <li>• Lack of awareness of the negative impact of noise pollution on the health of citizens</li> <li>• Lack of strategies that encourage the participation of all key stakeholders in the sustainable management of natural resources</li> <li>• Lack of awareness on climate change and its impact</li> <li>•</li> </ul>		
<b>INFRASTRUCTURE AND HUMAN SETTLEMENTS DEVELOPMENT</b>	<ul style="list-style-type: none"> <li>• Low level of Science, Technology and Innovation culture in all aspects of the society</li> <li>• Ineffective implementation of national policy to promote the</li> </ul>	<b>INFRASTRUCTURE AND HUMAN SETTLEMENTS DEVELOPMENT</b>	<ul style="list-style-type: none"> <li>• Low level of Science, Technology and Innovation culture in all spheres of life.</li> <li>• Weak institutional framework and infrastructure to promote the development and application of STI in the country.</li> <li>• Inadequate funding for research and development (R&amp;D) activities</li> <li>• Weak linkage between the research</li> </ul>

	<p>development of appropriate technology to support agriculture and small to medium scale enterprises</p> <ul style="list-style-type: none"> <li>• Weak commercialization of scientific research results</li> <li>• Inadequate knowledge and information for end-users on available science and technological innovations</li> <li>• Inadequate S&amp;T facilities</li> </ul>		<p>institutions and industry</p> <ul style="list-style-type: none"> <li>• Weak institutional framework and infrastructure to promote the development and application of STI in the country</li> <li>• Inadequate funding for research and development (R&amp;D) activities</li> <li>• Weak linkage between the research institutions and industry</li> <li>• Absence of a Human Settlements Policy to guide the comprehensive growth and development of human settlements.</li> <li>• Ineffective and inefficient spatial/land use planning and implementation particularly in the urban areas</li> <li>• Inadequate human and institutional capacities for land use planning</li> </ul>
<b>OIL AND GAS DEVELOPMENT</b>	<ul style="list-style-type: none"> <li>• Inadequate baseline information on environmental impact of the operations in oil and gas industry</li> <li>• Inadequate baseline information on environmental impact of the operations in oil and gas industry</li> </ul>	<b>Oil and gas development</b>	<ul style="list-style-type: none"> <li>• Inadequate baseline information on environmental impact of the operations in oil and gas industry</li> <li>• Inadequate baseline information on environmental impact of the operations in oil and gas industry</li> <li>• Challenges of ensuring environmental sustainability in the oil and gas industry</li> </ul>

	<ul style="list-style-type: none"> <li>• Challenges of ensuring environmental sustainability in the oil and gas industry</li> <li>• Weak support for STI infrastructure (R&amp;D institutions)</li> <li>• Inadequate funding for R&amp;D activities</li> <li>• Low recognition of STI and R&amp;D</li> <li>• Weak institutional framework to promote the development and application of science and technology in the country</li> <li>• Weak linkage between the research institutions and industry</li> <li>• Ineffective and inefficient spatial/land use planning and implementation</li> <li>• Inadequate land use planning coverage in the urban areas.</li> </ul>		
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<p><b>TRANSPARENT AND ACCOUNTABLE GOVERNANCE</b></p>		<p><b>TRANSPARENT AND ACCOUNTABLE GOVERNANCE</b></p>	<ul style="list-style-type: none"> <li>• Weak evidence-based development policy formulation</li> <li>• Inefficient and ineffective implementation of development policies and plans</li> <li>• Ineffective monitoring and evaluation of the implementation of development policies and plans</li> <li>• Inadequate access to public information by media, civil society and general public</li> </ul>
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## **Chapter 3: Development Goal, Adopted Objectives and Strategies**

### **3.1 Development Goals**

The MESTI Development Goals adopted from the NMTDPF 2014 – 2017 are as follows:

- 1. Accelerated Agriculture Modernization and Sustainable Natural Resource Management;**
- 2. Infrastructure and Human Settlement;**
- 3. Oil and Gas Development.**
- 4. Transparent and Accountable Governance**

### **3.2 Adopted Objectives**

The Policy Objectives derived from the Development Goals in the NMTDPF 2014 – 2017 are as follows:

1. Ensure sustainable management of natural resources
2. Strengthen institutional and regulatory frameworks for sustainable natural resource management
3. Improve the policy and institutional framework for effective coastal resource management
4. Reduce loss of biodiversity
5. Enhance capacity to adapt to climate change impacts
6. Mitigate the impacts of climate variability and change
7. Promote green economy
8. Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental sustainability
9. Promote the application of Science, Technology and Innovation in all sectors of the economy
10. Strengthen the institutional framework to promote the development of research and its application
11. Strengthen policy formulation, development planning, and M&E processes for equitable and balanced spatial and socio- economic development
12. Improve transparency and access to public information
13. Promote sustainable extraction and use of mineral resources
14. Promote effective waste management and reduce noise pollution
15. Enhance natural resources management through community participation
16. Ensure that energy is produced and utilized in an environmentally-sound manner
17. Promote a sustainable, spatially integrated and orderly development of human settlements
18. Streamline spatial and land use planning system
19. Strengthen the human and institutional capacities for effective land use planning and management
20. Integrate land use, transport planning, development planning and service provision

21. Create open spaces and establish green belts across the country especially in urban areas
22. Promote redistribution of urban population and spatially integrated hierarchy of urban settlements
23. Establish an institutional framework for effective coordination of human settlements development

The tables below show the link between the adopted objectives and strategies of the Sector linked to the relevant Thematic Areas of the NMTDPF

**TABLE 3.1: Adopted Objectives, Strategies & Programmes**

**TABLE 3.1.1 PROGRAMME 1. MANAGEMENT & ADMINISTRATION**

<b>ADOPTED POLICY OBJECTIVES</b>	<b>ADOPTED STRATEGIES</b>	<b>PROGRAMMES</b>	<b>SUB-PROGRAMMES</b>
<b>Ensure sustainable management of natural resources</b>	Promote the adoption of the principles of green economy in national development planning	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Strengthen institutional and regulatory frameworks for sustainable natural resource management</b>	Enhance policy and regulatory framework and coordination among key Government agencies and other stakeholders to improve the management of the environment and natural resources.	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Improve the policy and institutional framework for effective coastal resource management</b>	Coordinate and harmonize relevant policies and programmes with regional and international bodies as well as ECOWAS	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Establish a coastal zone commission with strong stakeholder participation	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Establish an Integrated Marine and Coastal Management Framework at all levels	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Promote an institutional arrangement for the coordination of Marine and Coastal resource management	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Reduce loss of biodiversity</b>	Facilitate the collaboration in/and harmonization of biodiversity in related agreements.	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>

	Review and implement a national strategy to deal with invasive alien species	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Establish marine protected areas along the coast	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Protect important wetlands especially in the western corridor	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Develop and implement a system of payment of ecosystem services	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Promote research, public education and awareness on biodiversity and ecosystem services	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Enhance capacity to adapt to climate change impacts</b>	Enhance national capacity to respond to climate change through the establishment of a Climate Change Centre	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Mitigate the impacts of climate</b>	Intensify research and promote awareness of	<b>MANAGEMENT &amp;</b>	<b>1.1 GENERAL</b>



<b>variability and change</b>	climate change	<b>ADMINISTRATION</b>	<b>ADMINISTRATION</b>
	Implement alternative livelihoods strategies to minimize impacts of climate change on the poor and vulnerable especially women	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Promote energy efficiency in all aspects of social and economic life (put all activities related to NAMA's under this)	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Adopt climate sensitive waste management practices	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Promote green economy</b>	Develop a long-term national Low Carbon Growth (LCG) model for effective decision making	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Develop coordinated response to climate change challenges through linkages between research, industry and Government	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental sustainability</b>	Develop adequate capacity of environmental management and regulatory institutions to monitor and enforce regulations for sustainable management of the oil and gas industry	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Develop and enforce the use of spatial plans along the oil belts especially in the Western Region	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
	Strengthen research into environmental	<b>MANAGEMENT &amp;</b>	<b>1.1 GENERAL</b>

	impacts associated with the oil and gas industry	ADMINISTRATION	ADMINISTRATION
<b>Promote the application of Science, Technology and Innovation in all sectors of the economy</b>	Promote Science, Technology and Innovation development at all levels of Production	MANAGEMENT & ADMINISTRATION	1.1 GENERAL ADMINISTRATION
	Promote the diffusion and transfer of technology	MANAGEMENT & ADMINISTRATION	1.1 GENERAL ADMINISTRATION
	Promote the establishment of innovation and incubation centers	MANAGEMENT & ADMINISTRATION	1.1 GENERAL ADMINISTRATION
	Promote the establishment of national Science and Technology Theme Parks to provide world-class facilities for electronics, precision engineering, ICT and bio-technology.	MANAGEMENT & ADMINISTRATION	1.1 GENERAL ADMINISTRATION
<b>Strengthen the institutional framework to promote the development of research and its application</b>	Adequately resource the Science and Technology Endowment Fund to support research activities in tertiary and research institutions	MANAGEMENT & ADMINISTRATION	1.1 GENERAL ADMINISTRATION
	Build appropriate linkages between research and production to ensure that research outputs are utilized	MANAGEMENT & ADMINISTRATION	1.1 GENERAL ADMINISTRATION
	Facilitate the use of the platform of the annual “Ghana Science Congress” for development of relevant technologies to support agriculture, small and medium scale enterprises and	MANAGEMENT & ADMINISTRATION	1.1 GENERAL ADMINISTRATION

	climate change mitigation		
	Provide a forum for collaboration among research institutions	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 GENERAL ADMINISTRATION</b>
<b>Strengthen policy formulation, development planning, and M&amp;E processes for equitable and balanced spatial and socio-economic development</b>	Institutionalize the coordination of development policy formulation, planning, monitoring and evaluation (M&E) at all levels especially among sector agencies	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.4 POLICY, PLANNING, BUDGETING, MONITORING &amp; EVALUATION</b>
<b>Improve transparency and access to public information</b>	Modernize information management systems of MDAs	<b>MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.5 Statistics, Research, Information Management and Public Relations</b>

**TABLE 3.1.2 PROGRAMME 2: RESEARCH & DEVELOPMENT**

<b>Adopted Policy Objectives</b>	<b>Adopted Strategies</b>	<b>PROGRAMME</b>	<b>SUB-PROGRAMME</b>
<b>Reduce loss of biodiversity</b>	Review and implement a national strategy to deal with invasive alien species	<b>RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b> <b>2.2 Nuclear Science and Technology</b>
	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	<b>RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b>
<b>Enhance capacity to adapt to</b>	Increase resilience to climate change impacts	<b>RESEARCH &amp;</b>	<b>2.1 Scientific and Industrial</b>

climate change impacts	through early warning systems	DEVELOPMENT	Research 2.2 Nuclear Science and Technology
	Enhance national capacity to respond to climate change through the establishment of a Climate Change Centre	RESEARCH & DEVELOPMENT	2.1 Scientific and Industrial Research 2.2 Nuclear Science and Technology
Promote green economy	Create the knowledge base and build technical, human and financial capacity needed to achieve long-term objective of LCG	RESEARCH & DEVELOPMENT	2.1 Scientific and Industrial Research 2.2 Nuclear Science and Technology
Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental	Develop adequate capacity of environmental management and regulatory institutions to monitor and enforce regulations for sustainable management of the oil and gas industry	RESEARCH & DEVELOPMENT	2.1 Scientific and Industrial Research 2.2 Nuclear Science and Technology
Promote the application of Science, Technology and Innovation in all sectors of the economy	Promote Science, Technology and Innovation development at all levels of Production	RESEARCH & DEVELOPMENT	2.1 Scientific and Industrial Research 2.2 Nuclear Science and Technology 2.3 Commercialization of Research
	Promote the diffusion and transfer of technology	RESEARCH & DEVELOPMENT	2.1 Scientific and Industrial Research 2.2 Nuclear Science and Technology 2.3 Commercialization of Research
	Promote the establishment of innovation and incubation centers	RESEARCH & DEVELOPMENT	2.1 Scientific and Industrial Research 2.2 Nuclear Science and Technology

			<b>2.3 Commercialization of Research</b>
	Build appropriate linkages between research and production to ensure that research outputs are utilized	<b>RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b> <b>2.2 Nuclear Science and Technology</b> <b>2.3 Commercialization of Research</b>
	Provide a forum for collaboration among research institutions	<b>RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b> <b>2.2 Nuclear Science and Technology</b> <b>2.3 Commercialization of Research</b>
<b>Strengthen the institutional framework to promote the development of research and its application</b>	Build appropriate linkages between research and production to ensure that research outputs are utilized	<b>RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b> <b>2.2 Nuclear Science and Technology</b> <b>2.3 Commercialization of Research</b>
	Facilitate the use of the platform of the annual “Ghana Science Congress” for development of relevant technologies to support agriculture, small and medium scale enterprises and climate change mitigation	<b>RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b> <b>2.2 Nuclear Science and Technology</b> <b>2.3 Commercialization of Research</b>
	Provide a forum for collaboration among research institutions	<b>RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b> <b>2.2 Nuclear Science and Technology</b> <b>2.3 Commercialization of Research</b>
<b>Strengthen policy formulation, development planning, and M&amp;E</b>	Institutionalize the coordination of development policy formulation, planning,	<b>RESEARCH &amp;</b>	<b>2.1 Scientific and Industrial Research</b>

processes for equitable and balanced spatial and socio-economic development	monitoring and evaluation (M&E) at all levels especially among sector agencies	DEVELOPMENT	2.2 Nuclear Science and Technology 2.3 Commercialization of Research
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**TABLE 3.1.3 PROGRAMME 3: ENVIRONMENTAL PROTECTION AND MANAGEMENT**

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	PROGRAMME	SUB-PROGRAMME

Ensure sustainable management of natural resources	Revise and enforce Ghana's Mining and Environmental Guidelines	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement
Strengthen institutional and regulatory frameworks for sustainable natural resource management	Intensify capacity building in the application of the Strategic Environmental Assessment (SEA) in the planning process	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement
<b>Reduce loss of biodiversity</b>	Review and implement a national strategy to deal with invasive alien species	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement
	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement
<b>Enhance capacity to adapt to climate change impacts</b>	Increase resilience to climate change impacts through early warning systems	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement
	Enhance national capacity to respond to climate change through the establishment of a Climate Change Centre	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement
<b>Promote green economy</b>	Create the knowledge base and build technical, human and financial capacity needed to achieve long-term objective of LCG	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement
	Develop a long-term national Low Carbon Growth (LCG) model for effective decision	ENVIRONMENTAL PROTECTION AND MANAGEMENT	3.1 Environmental Compliance and Enforcement

	making		
<b>Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental</b>	Strengthen research into environmental impacts associated with the oil and gas industry	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b>
	Develop adequate capacity of environmental management and regulatory institutions to monitor and enforce regulations for sustainable management of the oil and gas industry.	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b>
	Strengthen emergency preparedness to manage disasters in the oil and gas industry.	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b>
<b>Promote sustainable extraction and use of mineral resources</b>	Enforce compliance of relevant regulations and guidelines on small scale mining	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b>
	Strengthen compliance and enforcement of relevant regulations and guidelines on environmental impact of small scale mining	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b>
<b>Promote effective waste management and reduce noise pollution</b>	Promote the education of the public on the effects of noise pollution on the health of citizens	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b> <b>3.2 Environmental Education, Information and Communication</b>
	Intensify enforcement of regulations on noise	<b>ENVIRONMENTAL</b>	<b>3.1 Environmental</b>



	pollution and control	<b>PROTECTION AND MANAGEMENT</b>	<b>Compliance and Enforcement</b> <b>3.2 Environmental Education, Information and Communication</b>
	Encourage waste segregation at source in major market centers	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b> <b>3.2 Environmental Education, Information and Communication</b>
	Public education on waste segregation and management	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b> <b>3.2 Environmental Education, Information and Communication</b>
<b>Enhance natural resources management through community participation</b>	Develop and implement communication and public participation strategy for natural resource management	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.2. Environmental Education, Information and Communication</b>
	Develop and implement gender equity modules for natural resource management	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	
	Promote active involvement of community stakeholders in the development of natural resource management plans	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	
	Effectively disseminate information on	<b>ENVIRONMENTAL PROTECTION AND</b>	

	legislation on the environment especially in the local languages	<b>MANAGEMENT</b>	
	Ensure capacity building of existing governance structures at the local level such as unit committees in natural resource management	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	
<b>Mitigate and impact of climate variability and change</b>	Promote energy efficiency in all aspects of social and economic life	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.2. Environmental Education, Information and Communication</b>
<b>Ensure that energy is produced and utilized in an environmentally-sound manner</b>	Ensure effective disposal of all hazardous substances and materials associated with the production, transportation and use of energy	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b>
	Promote environmental protection awareness programmes	<b>ENVIRONMENTAL PROTECTION AND MANAGEMENT</b>	

**TABLE 3.1.4 PROGRAMME 4: HUMAN SETTLEMENTS AND SPATIAL PLANNING**

<b>ADOPTED POLICY OBJECTIVES</b>	<b>ADOPTED STRATEGIES</b>	<b>PROGRAMME</b>	<b>SUB-PROGRAMME</b>
<b>Ensure that practices in the oil and</b>	Develop and enforce the use of spatial plans	<b>HUMAN SETTLEMENTS</b>	<b>4.1 Human Settlement and</b>

gas industry are consistent with Ghanaian and international standards of environmental	along the oil belts especially in the Western Region	<b>AND SPATIAL PLANNING</b>	Land Use Research and Policy Geographic Information Systems Development
<b>Promote a sustainable, spatially integrated and orderly development of human settlements</b>	Promote a sustainable, spatially integrated and orderly development of human settlements	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Formulate a Human Settlements Policy (including Land Development) to guide settlements	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Promote through legislation and public education the use of green technologies in the planning and development of human settlements	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
<b>Streamline spatial and land use planning system</b>	Implement relevant planning models, simplified operational procedures and planning standards for land use	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Expand the use of Geographic Information System (GIS) and GPS in spatial/land use planning at all levels	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.2 Geographic Information Systems Development</b>
<b>Strengthen the human and institutional capacities for effective land use planning and management</b>	Strengthen the institutional capacity to manage human settlements and land use and spatial planning nationwide	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Create Regional Mobile Planning Teams as a	<b>HUMAN SETTLEMENTS</b>	<b>4.1 Human Settlement and</b>

	stop-gap measure to address critical shortage of professional staff especially at the district level	<b>AND SPATIAL PLANNING</b>	<b>Land Use Research and Policy</b>
<b>Integrate land use, transport planning, development planning and service provision</b>	Accelerate the development of national integrated land use and spatial plan	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
<b>4.1 Create open spaces and establish green belts across the country especially in urban areas</b>	Ensure the involvement of land owners and local community as stakeholders in the preparation of urban plans and in the management of protected areas	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Promote the creation of green belts to check unrestricted sprawl of urban areas	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Enforce existing land use planning regulation	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
<b>Ensure that energy is produced and utilised in an environmentally-sound manner</b>	Promote the use of improved wood fuels burning equipment for cooking in households and other commercial activities	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Promote environmental protection awareness programmes	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Support and actively participate in	<b>HUMAN SETTLEMENTS</b>	<b>4.1 Human Settlement and</b>

	international efforts to ensure sustainable delivery of energy and mitigate negative environmental impacts and climate change	<b>AND SPATIAL PLANNING</b>	<b>Land Use Research and Policy</b>
	Encourage entities engaged in activities in the energy sector to explore and access international environmental financial mechanisms and markets to overcome investment, technology and other relevant barriers	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Ensure effective disposal of all hazardous substances and materials associated with the production, transportation and use of energy	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Promote environmental protection awareness programmes	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
<b>Promote redistribution of urban population and spatially integrated hierarchy of urban settlements</b>	Create and develop new growth points as counter-magnets to fast growing cities especially in the poorer regions	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Facilitate the implementation of the National Urban Policy and Action Plan as well as the Street Naming and Property Address System	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Facilitate the establishment of a hierarchy of urban centres for specific functions and level of services throughout the country	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>

	Ensure mixed use development and densification policy in urban areas	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Ensure mixed use development and densification policy in urban areas	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Mainstream security and disaster prevention into urban planning and management systems	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Create awareness on the greening of human settlements	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Design a framework for the establishment of a new hierarchy of urban centres	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Promote accelerated growth of medium-sized towns to large urban centres	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Link all district capitals to regional capitals by all-weather roads	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Formulate and implement national, regional and district spatial development framework for implementation	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
<b>Establish an institutional framework for effective</b>	Establish a land use and spatial planning authority as National Human Settlements	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and</b>

<b>coordination of human settlements development</b>	Commission to coordinate the activities of all institutions involved in housing development		<b>Policy</b>
	Facilitate the passage of the land use and spatial planning bill into law	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Facilitate the passage of planners registration council bill into law	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Promote effective inter-agency collaboration between relevant infrastructure service delivery agencies	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>
	Enhance the capacities of institutions for effective planning of human settlements	<b>HUMAN SETTLEMENTS AND SPATIAL PLANNING</b>	<b>4.1 Human Settlement and Land Use Research and Policy</b>

## Chapter 4: Development Programmes and Sub-Programmes of MESTI

### Programmes & Sub-Programmes

The Sector has four (4) Programmes and thirteen (13) Sub-Programmes implemented by the Ministry and its Agencies as indicated in Table 4.1 below.

**TABLE 4.1 Programmes and Sub-Programmes**

PROGRAMME	SUB-PROGRAMME	IMPLEMENTING AGENCIES
<b>3. MANAGEMENT &amp; ADMINISTRATION</b>	<b>1.1 General Administration</b> <b>1.2 Finance</b> <b>1.3 Human Resource</b> <b>1.4 Policy Planning, Budgeting, Monitoring &amp; Evaluation</b> <b>1.5 Statistics, Research, Information &amp; Public Relations</b>	<ul style="list-style-type: none"><li>• MESTI HQ</li></ul>
<b>4. RESEARCH &amp; DEVELOPMENT</b>	<b>2.1 Scientific and Industrial Research</b> <b>2.2 Nuclear Science and Technology</b> <b>2.3 Commercialization of Research</b>	<ul style="list-style-type: none"><li>• CSIR</li><li>• GAEC</li></ul>
<b>5. ENVIRONMENTAL PROTECTION &amp; MANAGEMENT</b>	<b>3.1 Environmental Compliance and Enforcement</b> <b>3.2 Environmental Education, Information and Communication</b>	<ul style="list-style-type: none"><li>• EPA</li></ul>
<b>5. SPATIAL PLANNING &amp; HUMAN SETTLEMENT</b>	<b>5.1 Human Settlement and Land Use Research and Policy</b> <b>5.2 Geographic Information Systems Development</b>	<ul style="list-style-type: none"><li>• TCPD</li></ul>

### 5.3 Programme of Action (2014 – 2017)

The Sector will require an estimated GHS ..... to carry out its detailed programmes for the planning period 2014 – 2017.



**TABLE 4.2: PROGRAMME OF ACTION (2014 – 2017)**

**TABLE 4.2.1: PROGRAMME (1): MANAGEMENT & ADMINISTRATION**

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ACTIVITIES	LOCATIO N	TIME FRAME				INDICATIVE BUDGET			IMPLEMENTING AGENCIES	
					2014	2015	2016	2017	GoG	IGF	Donor	Lead	Collaborati ng
Ensure sustainable management of natural resources	Enhance policy and regulatory framework and coordination among key Government agencies and other stakeholders to improve the management of the environment and natural resources.	<b>1.1 GENERAL ADMINISTRAT ION</b>	Environmental policy integration and management		X	X	X	x	291, 992, 000		332, 829, 000		
			Climate change policy and programmes		X	X	X	x	261, 984, 000		178, 112, 000		
			Green Economy Activities		X	X	X	x	291, 702, 000		194, 468, 000		
			Environmental protection and Education		X	X	X	x	300, 000				
			Assessment and Disposal of Hazardous Materials		X	X	X	x	30, 204				
			Natural Resource and Environmental Governance Activities		X	X	X	x	184, 480, 000		56, 320, 000		

			Sanitation and waste management activities		X	X	X	x	60,670				
			land use and spatial planning		X	X	X	x		10,656,512			
<b>Promote the application of Science, Technology and Innovation in all sectors of the economy</b>	Promote Science, Technology and Innovation development at all levels of Production	<b>1.1 GENERAL ADMINISTRATIVE</b>	<b>Development and promotion of the application of Science and Technology.</b>	nationwide	X	X	X	x	190,860,000		15,500,000	MESTI-STI	MOE, District Assemblies, , Scholarship Secretariat, GET Fund, World Bank, MOF, DST-SA, COTVET_PS U, World Bank, MOF, NDPC, Universities , R & D institutions , MOTI,
	Strengthen the appropriate institutional framework to promote the development of science and technology research	<b>1.3 Human Resource</b>	<b>Human Resource Database</b>	Sector-wide	X	X	X	X	120,000			MEST-HRM	ALL MESTI DIRECTORAT AES, OHCS, MSD
			<b>Scheme of Service</b>	Accra	X	X	X	X	600,000			MEST	ALL MESTI DIRECTORAT AES, OHCS, MSD
			<b>Recruitment, Placement and</b>	Sector-	X	X	X	X	80,000			MEST	ALL MESTI DIRECTORAT

			<b>Promotions</b>	wide									AES, OHCS, MSD
			<b>Personnel and Staff Management</b>	Sector-wide	X	X	X	X	240,000			MEST	ALL MESTI DIRECTORATES, AES, OHCS, MSD
			<b>Manpower Skills Development</b>	Sector-wide	X	X	X	X	170,000			MEST	ALL MESTI DIRECTORATES, AES, OHCS, MSD
<b>Strengthen policy formulation, development planning, and M&amp;E processes for equitable and balanced spatial and socio-economic development</b>	Institutionalize the coordination of development policy formulation, planning, monitoring and evaluation (M&E) at all levels especially among sector agencies	<b>1.4 POLICY, PLANNING, BUDGETING, MONITORING &amp; EVALUATION</b>	<b>Planning and Policy Formulation</b>	Accra	X	X	X	X	980,000			MESTI-PPMED	CSIR, GAEC, EPA, TCPD, MESTI, OHCS, NDPC, Directorates
			<b>Publication and dissemination of Policies and Programmes</b>	Nation-wide	X	X	X	X	678,000			MESTI-PPMED	CSIR, GAEC, EPA, TCPD, MESTI, MoI Directorates, NDPC
			<b>Policies and Programme Review Activities</b>	Sector-wide	X	X	X	X	760,000			MESTI-PPMED	CSIR, GAEC, EPA, TCPD, MESTI Directorates, NDPC
			<b>Management and Monitoring Policies, Programmes and</b>	Sector-wide	X	X	X	X	5,294,000			MESTI-PPMED	CSIR, GAEC, EPA, TCPD, MESTI Directorate

			Projects										s, Mining / Telecom Companies , MLNR,
			Budget Preparation Activities	Accra	X	X	X	X	840,000			MESTI- PPMED	MOF, CSIR, GAEC, EPA, TCPD, MESTI Directorate s
			Budget Performance Reporting	Sector- wide	X	X	X	X	80,000			MESTI- PPMED	CSIR, GAEC, EPA, TCPD, MESTI Directorate s
Improve transparency and access to public information	Modernize information management systems of MDAs	1.5 Statistics, Research, Information Management and Public Relations	Research and Development	Accra	X	X	X	X	687,000			MESTI- RSIM	All other Directorate s, Agencies under MESTI
			Software Acquisition and Development	Accra	X	X	X	X	160,000			MESTI- RSIM	MESTI- Procurement, MoC
			Software Licensing and support	Accra	X	X	X	X	135,00			MESTI- RSIM	MESTI- Procurement, MoC
			Technology Transfer	Accra	X	X	X	X	110,000			MESTI- RSIM	MESTI- HRM
			Media Relations	Nationw ide	X	X	X	X	170,000			MESTI- RSIM	All other Directorate s, Agencies under

													MESTI
			Information, Education and Communication	Nationw ide	X	X	X	X	310,000			MESTI- RSIM	All other Directorate s, Agencies under MESTI
			Public, Campaigns and program	Nationw ide	X	X	X	X	210,000			MESTI- RSIM	All other Directorate s, Agencies under MESTI

**TABLE 4.2.2: PROGRAMME (2): RESEARCH & DEVELOPMENT**

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB-PROGRAMMES	ACTIVITIES	LOCATION	TIME FRAME				INDICATIVE BUDGET			IMPLEMENTING AGENCIES	
					2014	2015	2016	2017	GoG	IGF	Donor	Lead	Collaborating
<b>Promote the application of Science, Technology and Innovation in all Sectors of the Economy</b>	. Apply Science and Technology and Innovation to promote agricultural development	Scientific and Industrial Research	1.0 Promoting Commercial Agriculture  1.1.1 Rice Production	Kumasi and Tamale	√	√	√	√	1000,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-SRI
			1.1.2 Development of production guides for commercial rice farmers	Kumasi and Tamale	√	√	√	√	800,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-SRI
			1.1.3 Promote the use of water management structures, e.g. SAWAH technology and farm gate rice processing	Kumasi and Tamale	√	√	√	√	500,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-SRI
			1.2 Mango Production  1.2.1 Provision of grafted mango seedlings and certified planting materials	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-PGRRI
			1.2.2 Training of commercial farmers, extension agents and NGOs on good agricultural practices for increased productivity in mango production	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-PGRRI

			1.2.3 Promote Agro-processing and production of fruit juice.	Tamale, Kumasi, Bunso and Accra	√	√	√	√	600,000.00			CSIR	MOFA CSIR-FRI
			1.2.4 Promote solar drying of mango fruits for local consumption and exports.	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00			CSIR	MOFA CSIR-FRI
			1.3 Vegetable Production  1.3.1 Development of high yielding disease and pest tolerant varieties of pepper and eggplant for local and export markets.	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00			<b>CSIR</b>	MOFA CSIR-SARI CSIR-CRI CSIR-PGRRI
			1.4 Production of improved planting materials for oil palm and coconut  1.4.1 Development of improved planting materials (seed and seedling) for Oil Palm and Coconut	Kusi - Kade Sekondi-Takoradi, Bunso	√	√	√	√	600,000.00			CSIR	MoFA CSIR - OPRI CSIR – PGRRI
			1.5 Poultry and Livestock Production  1.5.1 Promote technologies for increasing meat and egg production output and nutrition.	Tamale and Accra	√	√	√	√	500,000.00			CSIR	MoFA CSIR-ARI

			1.5.2 Promote the use of locally produced vaccines for livestock and poultry production	Tamale and Accra	√	√	√	√	600,000.00				CSIR	MoFA CSIR-ARI
			1.6 Fishery and Aquaculture  1.6.1 Promote sustainable management of capture fishery (marine and fresh water)  1.6.2 Enhance fish preservation and management of post-harvest loses  1.6.3 Intensify the promotion of improved oven for smoking fish called FRISMO	Akosombo and Accra	√	√	√	√	600,000.00				CSIR	CSIR-WRI
			2.0 Water and Sanitation  2.1.1 Promote Rain water harvesting technology for schools and small communities	Accra, Kumasi and Tamale	√	√	√	√	600,000.00				CSIR	CSIR-WRI WRC
			2.1.2 Drilling of boreholes for rural communities	Tamale	√	√	√	√	500,000.00				CSIR	CSIR-WRI WRC
			2.1.3 Bio-sanitation toilets for schools and communities	Accra	√	√	√	√	600,000.00				CSIR	CSIR-WRI WRC EPA
			2.1.4 Biological control of mosquitoes against malaria	Accra	√	√	√	√	250,000.00				CSIR	CSIR-WRI WRC



	<b>Facilitate the development of appropriate technologies to support agriculture and rural small and medium scale enterprises</b>		3. Road Materials Management  3.1.1 Employ expertise for road material investigations in the five major cities in Ghana	Tamale, Kumasi, Takoradi, Sekondi and Accra	√	√	√	√	250,000.00			CSIR	CSIR – BRRRI
			3.1.2 Promote the use of wooden bridges using lesser known wood species.	Kumasi	√	√	√	√	250,000.00			CSIR	CSIR – FORIG CSIR – BRRRI
			4.0 Rural Electrification project  4.1.1 Promote the use of lesser known wood species for electric poles	Kumasi, Koforidua, Takoradi	√	√	√	√	150,000.00			CSIR	CSIR – FORIG
			4.2.1 Bio-fuels (from agricultural waste) for generators	Kumasi	√	√	√	√	150,000.00			CSIR	CSIR – IIR
			4.2.2 Hybrid solar/wind energy systems for households	Kumasi	√	√	√	√	200,000.00			CSIR	CSIR – IIR
			5.0 Housing Program  5.1.1 Use of local building materials and fast track construction techniques for affordable housing delivery	Kumasi, Accra, Koforidua	√	√	√	√	250,000.00			CSIR	CSIR-BRRRI Metropolitan and District Assemblies
			6.0 ICT/STI Policy and Plant genetics	Accra	√	√	√	√	150,000.00			CSIR	CSIR – STEPRI

			resources										
			6.1.1 Facilitation of STI policy research for national development										
			6.1.2 Packaging and dissemination of scientific research results to end users	Accra	√	√	√	√	250,000.00			CSIR	CSIR-INSTI
			6.2.1 Intensify the characteriza-tion and conservation of plant genetic resources and their protection and distribution nationwide	Bunso	√	√	√	√	250,000.00				CSIR-PGRRI

**TABLE 4.2.3: PROGRAMME (3): ENVIRONMENTAL PROTECTION AND MANAGEMENT**

Adopted Policy Objectives	Adopted Strategies	Sub-Programme	Annual Activities / Projects	Location	Time Frame				Indicative Budget (2014 estimates)			Implementing Agencies	
					2014	2015	2016	2017	GoG	IGF	Donor	Lead	Collaborating
Ensure sustainable management of natural resources	Revise and enforce Ghana's Mining and Environmental Guidelines	SP 3.1	Review the existing guideline for the mining	Mining communities	X	X				5m		EPA	MC
					X	X	X	X		3m		EPA	MC
			Undertake AKOBEN Performance rating of all mining operations in Ghana		X	X	X	X		800,000		EPA	MC
			Organize seminars for small scale miners on the environment										
Strengthen institutional and regulatory frameworks for sustainable natural resource	Intensify capacity building in the application of the Strategic Environmental Assessment (SEA) in the planning	SP 3.1	Conduct SEA for sectoral plans and large programmes	Nation wide	X	X	X	X			10m	EPA	MDAs,
			Conduct SEA for District development plans		X	X	X	X			15m	EPA	MMDAs

managemen t	process												
<b>Reduce loss of biodiversity</b>	Review and implement a national strategy to deal with invasive alien species	<b>SP 3.1</b>	Develop policy on biodiversity business offset scheme	Nation -wide		X	X				500,000	EPA	FC, MOFA
			Develop coastal ozone management regulation	Accra	X	X				250,000	250,000	EPA	MESTI
			Develop policy on Invasive Species	Accra	X	X				100,000	70,000	EPA	MOFA
			Develop Environmental Guidelines for aquaculture	Accra		X	X			50,000	70,000	EPA	Fisheries
			Revised sector guideline for forest and wood industry	Accra		X	X			50,000	70,000	EPA	FC
			Develop policy on payment of Environmental services	Accra	X	X	X			100,000	70,000	EPA	MMDAs
			Develop Guidelines for managing Confined Field	Accra		X				30,000	30,000	EPA	MOFA

			Trials of GMOs										
			Revised Standards for Biodiversity Offsets			X					30,000	EPA	MESTI
	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	SP 3.1	Continue the implementation of MAB project	MAB communities	X	X	X	X			5m	EPA	FC
			Continue the implementation of Sustainable Land and water management project	Northern, Upper East and West Regions	X	X	X	X			16m	EPA	RCCs
			100% coverage of EA in forestry sector	Nation-wide	X	X	X	X	5m		5m	EPA	FC
			100% application processed within set time frame	Nation-wide	X	X	X	X		10m		EPA	FC
			AKOBEN performance rating for plantation and aquaculture sector	Nation-wide	X	X	X	X		10m		EPA	FC, Fisheries

			Reduce water weed infestation on the Kpong Head pond	Kpong	X	X	X	X		1m		EPA	GWCL
			Develop value chain for water weeds	Accra		X			20,000		30,000	EPA	MOFA
		3.2	Implement the communication plan of whales	Accra		X	X		70,000		70,000	EPA	Fisheries, MOFA
		3.2	Document inventory on water weeds in the black Volta	Black Volta	X	X	X	X	50,000		50,000	EPA	VRA
Enhance capacity to adapt to climate change impacts	Increase resilience to climate change impacts through early warning systems	SP 3.1 3.2 3.2	Educate citizens on climate change and early warning system  Celebrate World Day to Combat Drought and Desertification  Revised National Action Plan to Combat Desertification	Nation-wide  Selected places  Nation-wide	X  X	X  X	X  X	X  X		2m  1.5m  100,000		EPA  EPA  EPA	NDPC, MESTI  MESTI  NDPC
	Enhance national capacity to respond to	SP 3.1	Integrate climate change adaptation in policies and	Nation-wide	X	X	X	X		2.4m		EPA	MDAs, MMDAs

	climate change through the establishment of a Climate Change Centre		plans of MMDAs										
			Phase out Ozone Depletion Substances (ODS)	Nation-wide	X	X	X	X			10m	EPA	MESTI
<b>Promote green economy</b>	Create the knowledge base and build technical, human and financial capacity	<b>SP 3.1</b>	Construct a green city office complex at Damfa	Damfa	X	X	X	X		25m		EPA	
		<b>3.2</b>	Damfa for EPA Head Office	Accra		X	X			1m		EPA	MESTI HQ
		<b>3.1</b>	Staff capacity development to promote long term objectives of LCG	Nation-wide	X	X	X	X		10m		EPA	MMDAs
		<b>3.1</b>	Environmental Impact Assessment (EIA)	Nation-wide	X	X	X	X		5m		EPA	
			Administration	Tema	X	X	X	X		2m		EPA	
			Chemicals compliance and management										
		<b>3.1</b>	Monitor to ensure cleaner production of companies										
		<b>3.1</b>	Implement Green Economy	Nation-wide	X	X	X	X	140,000		280,000	EPA	MESTI

			Project										
<b>Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental</b>	Strengthen research into environmental impacts associated with the oil and gas industry	<b>SP 3.2</b>	Undertake research on Environmental Impact on oil and gas industry  Documentary on relevant environmental issues	Nation-wide	X	X	X	X		300,000  200,000		EPA  EPA	Research institutions  Media
	Develop adequate capacity of environmental management and regulatory institutions to monitor and enforce regulations for sustainable management of the oil and gas industry.	<b>SP 3.1</b>	Refresher course for Prosecutors  Judiciary sensitization on environmental issues  Police sensitization on environmental issues  EIA training for Judges	Nation-wide	X	X  X  X		X  X  X		80,000  80,000  70,000  100,000		EPA	Judicial Service, GPS
	Strengthen emergency preparedness to manage disasters in the oil and gas industry.	<b>SP 3.1</b>	Emergency response/investigation into environmental incidents/complaints  Procure equipment and	Nation-wide	X  X	X  X	X	X		400,000  500,000		EPA  EPA	GPS  MESTI



			vehicle for emergency response team										
<b>Promote sustainable extraction and use of mineral resources</b>	Enforce compliance of relevant regulations and guidelines on small scale mining	<b>SP 3.1</b>	Investigation of Complaints of small scale mining	Nation-wide	X	X	X	X	100,000	400,000		EPA	MC
	Strengthen compliance and enforcement of relevant regulations and guidelines on environmental impact of small scale mining	<b>3.1</b>	Environmental Quality/Monitoring (Compliance Monitoring)	Nation-wide	X	X	X	X	100,000	400,000		EPA	MC
			Environmental Impact Assessment (EIA) Administration of mining operations		X	X	X	X		500,000		EPA	MC
			Permitting of mining companies		X	X	X	X		200,000		EPA	MC
<b>Promote effective waste management and reduce noise pollution</b>	Promote the education of the public on the effects of noise pollution on the health of citizens	<b>3.2</b>	Hot spot noise assessment	Nation-wide	X	X	X	X		100,000		EPA	ISD
			Noise sensitization for identified groups		X	X	X	X		200,000		EPA	NCCE, ISD

	Intensify enforcement of regulations on noise pollution and control	<b>3.1</b>	Environmental quality monitoring – air, noise, water, effluent  Investigate noise complaints and prosecute offenders	Nation-wide	X	X	X	X		400,000		EPA	GSA
	Encourage waste segregation at source in major market centres	<b>3.2</b>	Survey to establish database on waste management system in MMDAs	Greater Accra	X	X	X	X	200,000			EPA	MMDAs
	Public education on waste segregation and management	<b>3.2</b>	Educate market women and schools on waste segregation at source	Nation-wide	X	X	X	X		500,000		EPA	GES
<b>Enhance natural resources management through community participation</b>	Develop and implement communication and public participation strategy for natural resource management	<b>3.2</b>	Develop national education strategy for teaching in formal and informal sectors	Accra	X	X				200,000		EPA	Research institutions

	Develop and implement gender equity modules for natural resource management	3.2	Integrate gender in environmental awareness raising, capacity building and environmental education activities	Nation-wide	X	X	X	X		200,000		EPA	Media
		3.2	Train EPA staff in gender mainstreaming	Accra		X		X		100,000		EPA	
	Promote active involvement of community stakeholders in the development of natural resource management plans	3.2	Organize in-service training for teacher trainees on natural resource management	Nation-wide	X	X	X	X		500,000		EPA	GES
			Collaborate and support selected NGOs, CBOs and environmental clubs and schools outreach programmes on the environment	Nation-wide	X	X	X	X		300,000		EPA	NGOs, GES, CBOs
	Effectively disseminate information on legislation on the	3.2	Sensitize national and local Journalists on environmental	Nation-wide	X	X	X	X		500,000		EPA	Media

	environment especially in the local languages		reporting										
		3.2	Produce environmental information in local languages	Nation-wide		X	X			350,000		EPA	Media
		3.2	Publish documentaries on the environment in local languages	Nation-wide	X	X	X	X		200,000		EPA	Media
		3.2	Coverage of environmental issues/programmes in national and local media	Nation-wide	X	X	X	X		500,000		EPA	Media
	Ensure capacity building of existing governance structures at the local level such as unit committees in natural resource management	3.2	Create 50 District Offices	Nation-wide	X	X	X	X		2m		EPA	MMDAs
		3.2	Procure vehicles and logistics for District offices	All created District offices	X	X	X	X		3m		EPA	MESTI
		3.2	Recruit technical and support staff for New District Offices	District offices			X	X		10,000		EPA	MESTI
		3.2	Training of staff and members of MMDAs on environmental	Nation-wide	X	X	X	X		2m		EPA	MMDAs

			priority areas										
		<b>3.2</b>	Meeting with MMDAs on environmental issues	Nation-wide	X	X	X	X		1m		EPA	MMDAs
		<b>3.2</b>	Provide office facilities and equipment	All EPA Offices	X	X	X	X		2m		EPA	MMDAs
<b>Ensure that energy is produced and utilized in an environmentally-sound manner</b>	Ensure effective disposal of all hazardous substances and materials associated with the production, transportation and use of energy	<b>3.1</b>	Develop Final disposal site of PCBs	Accra	X	X					1m	EPA	Consultant
	Promote environmental protection awareness programmes	<b>3.2</b>	Establish Ghana Environmental Information Network – State of the Ghana Environmental Report Process Organize environmental	Accra	X	X	X	X	1m	1m	1m	EPA	NITA

			awareness programmes and activities										
			Celebrate National and Regional World Environment Days										

5.4 MESTI SWOT ANALYSIS



TABLE 4.3: SWOT MATRIX

STRATEGY	PROGRAMME	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS

## Chapter 5: Annual Action Plan of the MDA (*Step – 13*)



**TABLE 5.1: ANNUAL ACTION PLAN (2014)**

**TABLE 5.1.1 ANNUAL ACTION PLAN (2014) FOR PROGRAMME ONE (1): MANAGEMENT AND ADMINISTRATION**

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ACTIVITIES	LOCATIO N	TIME FRAME				INDICATIVE BUDGET			IMPLEMENTING AGENCIES	
					1st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GoG	IGF	Donor	Lead	Collaborating
<b>Ensure sustainable management of natural resources</b>	Promote the adoption of the principles of green economy in national development planning	<b>SP 1.1</b>	Mainstreaming of green economy principles into sector and district development plans		X	X	X	X	GH 54,000		GH 36,000	MESTI-ENV.	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement Green Economy Assessment (Quantitative) for Green Economy scoping		x	x	x	x	GH 48,000		GH 32,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop Green Economy Indicators for implementation at all levels	Nation-wide	x	x	x	x	GH 51,000		GH 34,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Conduct Green Economy Fiscal study	Nation-wide	X	X	X	X	GH 72,300		GH 48,200	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

			Develop and implement Green Economy Action Plan at all levels	Nation-wide	X	X	X	X	GH120,000		GH80,000	MESTI	
			Implementation of SLWMP in the three northern regions										
			Capacity building for integrated spatial planning		x	x	x	x			900,000	MESTI	SADA
			Implement sustainable land and water management practices including CREMA & Sustainable forest		X	X	X	X			5,000,000	MESTI	MoFA, EPA, Forestry Commission
			Monitoring and coordinating of activities		X	X	X	X			150,000	MESTI	
<b>Strengthen institutional and regulatory frameworks for sustainable natural resource management</b>	Enhance policy and regulatory framework and coordination among key Government agencies and other stakeholders to improve the management of the environment	<b>SP 1.1</b>											

	and natural resources.												
	Operationalize National Biosafety Authority (NBA)	Accra	x	x	x	x	5,000,000			MESTI	PSC, NBA Board		
	Implement Appeals Tribunal for Biosafety Authority	Accra	x	x	x	x	200,000			NBA	MESTI, media house, Min. of Com.		
	Conduct Biosafety Related training	Accra, Kumasi, Tamale, Takoradi	x	x	x	x	100,500			NBA	MESTI, Academic institutions		
	Produce Biosafety Guidelines and forms	Accra	x	x	x	x	300,500			NBA	MESTI, TAC, IBC		
	Process Biosafety Applications for permits	Accra	x	x	x	x	160,500			NBA	MESTI, TAC, IBC		
Improve the policy and institutional framework for effective coastal resource management	Coordinate and harmonize relevant policies and programmes with regional and international bodies as well as ECOWAS	SP 1.1	Establish a coordination structure with linkages to regional and international bodies as well as ECOWAS	Ghana		x	x	x	125,000		10,000,000	MESTI	EPA, MFA, UNIDO, UNEP, GEF, GCLME coordination unit
	Establish a coastal zone	SP 1.1	Operationalize the headquarters	Accra		x	x	x	150,000			MESTI	EPA, MFA, UNIDO, UNEP,

	commission with strong stakeholder participation		agreement for the Guinea Current Commission (GCC)										GEF, GCLME coordination unit
	Establish an Integrated Marine and Coastal Management Framework at all levels	<b>SP 1.1</b>	Engage stakeholders in the regional and district levels to agree on components of the management framework	4 coastal regions (26 districts)		x	x	x	37,500			MESTI	MLGRD, TCDP, EPA, Ministry of Fisheries and Acquaculture, Fisheries commission, Marine Productivity & Biodiversity centre UG,
			Establish regional and district marine and coastal management framework in 4 coastal regions	4 coastal regions (26 districts)		x	x	x	75,000			MESTI	MLGRD, TCDP, EPA, Ministry of Fisheries and Acquaculture, Fisheries commission, Marine Productivity & Biodiversity centre UG, Dept. of Fisheries and Aquatic sciences
	Promote an institutional arrangement for the coordination of Marine and Coastal resource management	<b>SP 1.1</b>	Enact a legislation to internalize the provisions of the Guinea Current Commission	Accra	x	x	x	x	112,500			MESTI	EPA, MFA, UNIDO, UNEP, GEF, GCLME coordination unit

<b>Reduce loss of biodiversity</b>	Facilitate the collaboration in/and harmonization of biodiversity in related agreements.	<b>SP 1.1</b>	Organize 4 meetings of the planning committee	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>100, 000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, MLNR, MOTI, MJAG
			Recruit consultant to work on the harmonization	<b>Accra</b>	<b>x</b>	<b>x</b>	<b>x</b>		<b>120,000</b>			MESTI	NBC, NPA
			Organize 5 workshops for harmonizing agreements.	<b>Accra, Kumasi</b>			<b>X</b>	<b>X</b>	<b>160, 000</b>			MESTI	EPA, GAEC, MOFA, MOE,
			Organize workshops to Validate biodiversity agreement.				<b>X</b>	<b>X</b>	<b>160, 000</b>			MESTI	EPA, GAEC, MOFA, MOE,
	Review and implement a national strategy to deal with invasive alien species	<b>SP 1.1</b>	Organize 3 workshops on gap analysis	<b>Accra, Takoradi, Kumasi, Bolgatan ga</b>	<b>X</b>	<b>X</b>			<b>250, 000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
			Engage consultant to conduct review	<b>Accra</b>	<b>x</b>	<b>x</b>			<b>120,000</b>			MESTI	NBC, NPA
			Hold stakeholder consultations on the revised strategy	<b>Accra, Kumasi</b>		<b>x</b>	<b>x</b>		<b>200,000</b>			MESTI	<b>NBC</b>

		Monitoring	National			X	X	290,000			MESTI	EPA, GAEC, MOFA, MOE, Universities	
	Establish marine protected areas along the coast	SP 1.1	Stakeholder consultations	Takoradi, Volta, Accra	X	X			150,000			MESTI	NBC, EPA, MLNR, MOFAD, Universities
			Engage consultant to survey and identify sites	Accra	X	X	X	X	350,000			MESTI	NBC, EPA, GAEC, MLNR, MOH Universities
		Training	Accra, Takoradi, Ho		x	x	x	350,000			MESTI	NBC, national consultant.	
	Protect important wetlands especially in the western corridor	SP 1.1	Community education	Western Region (4 districts)	X	X	X	X	877,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs
			Enact DAs and MMDAs by-laws	Takoradi and 4 other District capitals	X	X	X	X	1,150,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs, RCCs
			Monitoring and enforcement	Western Region	X	X	X	X	1,000,000			MESTI	NBC, GAEC, MOE, Universities
	Develop and implement a	SP 1.1	Hire consultants	Accra	X	X	X	X	1,300,000			MESTI	NBC, EPA, GAEC, MOFA, MOE,

	system of payment of ecosystem services												Universities
			Stakeholder consultation	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>290,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
			Monitoring and enforcement	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>1,000,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE,
	Promote research, public education and awareness on biodiversity and ecosystem services	<b>SP 1.1</b>	Meetings/ conferences/ workshops	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>380,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Universities
			Produce education materials	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>690,000</b>			MESTI	NBC, EPA, GAEC, Univeristies
			Public engagements	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>1,150,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	<b>SP 1.1</b>	Meetings and conferences	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>550,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, RCCs, MMDAs
			Community engagements	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>720,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs

			Support DAs. and MMDAs to enact by-laws	Five selected districts	X	X	X	X	1,850,000			MESTI	NBC, EPA, GAEC, MOFA, NBC, MOE, MMDAs
			Monitoring & Evaluation	Nation-wide	X	X	X	X	1,120,000			MESTI	NBC, EPA, MLNR, MLGRD
Enhance capacity to adapt to climate change impacts	Enhance national capacity to respond to climate change through the establishment of a Climate Change Centre	SP 1.1	Develop coordinating structures for the implementation of the National climate change policy strategy		X	X	X	X	63,700		42,480	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Institutionalize roles and responsibility for MMDAs to implement NCCPS		X	X	X	X	54,000		36,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Development of NCCPS M&E plan to monitor MMDAs for the implementation of the NCCPS		X	X	X	X	90,000		60,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement communication strategy for the NCCPS		X	X	X	X	111,000		74,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF



			Design and implement pro-poor climate interventions for vulnerable communities		X	X	X	X	114,000		76,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Train and build capacity of staff of MDAs to support climate change activities		X	X	X	X	114,000		76,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Support and Monitor implementation of NCCPS at sector and district levels		X	X	X	X	144,000		96,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
<b>Mitigate the impacts of climate variability and change</b>	Intensify research and promote awareness of climate change	<b>SP 1.1</b>	Support and Monitor R&D component of NCCPS at sector and district levels		X	X	X	X	144,000		96,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Implement alternative livelihoods strategies to minimize impacts of climate change on the poor and	<b>SP 1.1</b>	Collaborate with relevant MDAs to implement smart agriculture component of NCCPS		X	X	X	X	102, 000		11m US\$ GH 68,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

	vulnerable especially women												
	Promote energy efficiency in all aspects of social and economic life  (put all activities related to NAMA's under this)	<b>SP 1.1</b>	Develop National Appropriate Mitigation Actions for priority sectors of the NCCP		X	X	X	X	48,000		32,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and promote NAMA investor Guide to attract investments for mitigation actions		X	X	X	X	60,000		40,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Collaborate with relevant MDAs to implement REDD+ readiness activities		X	X	X	X	78,000		52,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop communication strategy for NAMA implementation		X	X	X	X	100,000		66,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Adopt climate sensitive waste	<b>SP 1.1</b>	Develop and implement		X	X	X	X	315,000		210,000	MESTI	EPA, NDPC, MOF, MOFA,

	management practices		Waste to Energy NAMAs										MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement Sanitation Standards		X	X	X	X	315, 000		210,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
Promote green economy	Develop a long-term national Low Carbon Growth (LCG) model for effective decision making	SP 1.1	Develop a green economy model for Ghana		X	X	X	X	75,000		50,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR
			Develop and implement low carbon development strategy framework		X	X	X	X	37,500		25,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR
	Develop coordinated response to climate change challenges through linkages between research, industry and Government	SP 1.1	Establish governance structure for implementation of climate change activities		X	X	X	X	120,000		80,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR

			Strengthen linkages between research, industry and government for implementation of NCCP		X	X	X	X	120,000		8,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR, Universities
Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental sustainability	Develop adequate capacity of environmental management and regulatory institutions to monitor and enforce regulations for sustainable management of the oil and gas industry	SP 1.1	<p>Review Environmental Assessment Guidelines for onshore oil and gas management</p> <p>-Review of draft Environmental Assessment Guidelines for onshore for circulation</p> <p>-First review of Draft guidelines (internal stakeholders – MESTI/EPA)</p> <p>-Second Review of Draft Guidelines (External stakeholders)</p> <p>-Printing of Guidelines</p>	Accra	x	x					15, 101.81	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
			Review Waste Regulations for	Accra							15,101.81	MESTI,	Min. of Finance, Min. of Energy

			controlling onshore and offshore waste management in the oil and gas sector  -Stakeholders review workshop for Environmental Assessment Regulations  -Stakeholders review workshop for Waste Regulations  -Training in permitting of Offshore Chemicals									EPA	& Petroleum, Petroleum Commission, Ghana national petroleum corporation
			Develop an oil & gas specific waste management program to feed into the national Waste Management Policy framework  - Develop draft programme  -Engage Stakeholder	Accra/Takoradi		x	x	x			50,640	MESTI, EPA	Min. of Finance, Min. of Energy & Petroleum, Petroleum Commission, Ghana national petroleum corporation

			consultations - Seek Cabinet Endorsement - Seek Parliament approval										
			Organize Training for relevant MDAs on permitting, monitoring and controlling of Offshore Chemicals	Takoradi / Accra	x						7,550.91	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
	Develop and enforce the use of spatial plans along the oil belts especially in the Western Region	<b>SP 1.1</b>	Develop spatial plan for two Districts in the Western Regions - Training of TCPD staff to undertake the exercise	Takoradi	x						418,905.31	MESTI, Town & Country Plan. Dept,	District Assemblies in Western region
			Develop Regional Plans to promote effective resource allocation across all Regions - stakeholder consultations across all regions	All regions		x	x	x			88,620	MESTI, Town & Country Plan. Dept, National Devt Planning Commission	All MMDAs in the country

			<p>Develop National Spatial Framework for all regions in Ghana</p> <p>-stakeholder consultations across the country</p> <p>- Organize sensitization workshop for Parliamentary Select committee on Environment, Lands and Natural Resources</p> <p>-Seek Cabinet approval</p> <p>-Seek parliamentary approval</p> <p>- launch of the National Spatial Framework</p> <p>- public education about the plans by the media</p>	All regions		x	x	x			1,439,250	MESTI, Town & Country Plan. Dept, National Devt Planning Commission	All MMDAs in the country
			<p>Prepare District Spatial Plans to guide development in all Districts</p>	216 Districts		x	x	x			318,150	MESTI, Town & Country Plan. Dept, National	All MMDAs in the country

			Assemblies									I Devt Plannin g Commis sion	
			Prepare Structural Plans to guide investments in all Districts Assemblies	216 Districts		x	x	x			190,132.5	MESTI, Town & Country Plan. Dept, Nationa I Devt Plannin g Commis sion	All MMDAs in the country
			Prepare local Plans to guide settlement planning across the country	216 Districts		x	x	x			209,070	MESTI, Town & Country Plan. Dept, Nationa I Devt Plannin g Commis sion	All MMDAs in the country
	Strengthen research into environmental impacts associated with the oil and gas industry	<b>SP 1.1</b>	Organize Field work for Sensitivity Mapping (Version 2)	Takoradi /cape coast/Ac cra	x	x	x				53,611.426	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
			Develop first draft of Western	Accra/Ta koradi/c	x	x	x				11,892.70	MESTI,	Min. of Finance, Min. of Energy,



			and Central regional operational Oil Spill contingency plans for Stakeholders  -Review meeting with EPA selected staff on draft operational plans for the 2 Regions  Workshop for 2 Regions (Western and Central)  Support for students to carry a research work in waste management	ape coast								EPA	Petroleum Commission, Ghana national petroleum corporation
			National oil Spill Contingency plan revised  - Undertake Internal Stakeholder meetings  Engage external Stakeholders in a review workshop	Accra/Takoradi		x	x				101,280	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
Promote the application of Science, Technology and	Promote Science, Technology and Innovation	1.1 GENERAL ADMINISTRATIVE	Continue the distribution of laptops under the Better Ghana ICT	number of laptops distributed	X	X	X	X	100,000			MESTI	MOE

Innovation in all sectors of the economy	development at all levels of Production	Project	ed									
		Organize Annual Stakeholders meetings to review the implementation of the MASTESS Programme	Report.	X				50,000			MESTI	MOE,
		Print, advertise and Distribute MASTESS Application Forms			X	X		37,500			MESTI	District Assemblies, MOE
		Review application Forms and Select Beneficiaries	List of beneficiaries			X		125,000			MESTI	MOE, Scholarship Secretariat
		Disburse Funds				X		3,750,000			Scholarship secretariat	MESTI, MOE, GETFund,
		Construct and launch the STI office Complex	Report, Fully furnish office complex	x	X	X	X			1,000,000	MESTI/COTVET	World Bank, MOF
		Organize National Research and Strategic Development Plans Seminar	reports on seminars and workshops			X		30,000			MESTI	MOE, NDPC, Universities, R & D institutions
		Identify and coordinate	Nationwi		X						MESTI-	MESTI- STI Directorate,

			technology and innovations relevant for national development	de								STI	GAEC, CSIR
			Identify and coordinate technology and innovations relevant for national development	Nationwide								RSIM	MESTI- STI Directorate, GAEC, CSIR
	Promote the diffusion and transfer of technology	1.1 GENERAL ADMINISTRATIO N	Organize ICT capacity training workshop for staff on the use of Information Management System	Accra		X						MESTI-RSIM	Min. of Communication,
			Organize Capacity training programs for ICT staff	Accra	X							MESTI-RSIM	MESTI-HRM
	Promote the establishment of innovation and incubation centers	1.1 GENERAL ADMINISTRATIO N	Establish the Innovation Secretariat	Secretariat established.				X	1,000,000			MESTI	MOTI, MOF, NDPC, MOE
Strengthen the institutional framework to promote the development of research and its application	Adequately resource the Science and Technology Endowment Fund to support research activities in	1.1 GENERAL ADMINISTRATIO N	Organize national Stakeholders meetings on the establishment of the National STI Fund	report	X				50,000			MESTI	MOE, NDPC, MOF, R & D institutions
			Engage a Consultant to	STI Fund		x			50,000			MESTI	MOF,MOE

	tertiary and research institutions		draft the STI fund manual	Manual									
			Organize National STI Fund Board meetings	Minutes of meetings	X	X	X	X	50,000			MESTI	
	Build appropriate linkages between research and production to ensure that research outputs are utilized	1.1 GENERAL ADMINISTRATIO N	Implement the Phase 2 of the Action Plan on the use of local building industry in the construction industry	progress reports	x	X	X	X	2,000,000			MESTI	CSIR,MOTI,GEC, MWRWH,MDPI, GSA,ARC
			Organize Annual Stakeholders meeting to review the Action Plan on the Policy of the Use of Local Building Materials in the Construction Industry	reports			X		50,000			MESTI	
			Support 5 R & D Institutions to establish and operation centers for developing and marketing technologies	Report, functional centers in 5 institutions	x	X	X	X			5,000,000	MESTI/ COTVET	GTUC, UG, CSIR, GAEC, K-Poly, World Bank, MOF
	Provide a forum for collaboration among research	1.1 GENERAL ADMINISTRATIO	Participate in series of annual international	Reports, of all conferen	x	X	X	X	125,000			MESTI	

	institutions	N	conference related to STI	ces attended									
			Support the activities of the National Contacts Points (NCPs) of the EU Horizon 2020 programme	Reports, Agreements,	x	X	X	X	75,000			MESTI	CSIR-STEPRI, EU Commission
Strengthen policy formulation, development planning, and M&E processes for equitable and balanced spatial and socio-economic development	Institutionalize the coordination of development policy formulation, planning, monitoring and evaluation (M&E) at all levels especially among sector agencies	1.4 POLICY, PLANNING, BUDGETING, MONITORING & EVALUATION	Prepare MESTI Annual Action Plan (AAP)	Koforidua	X				12,000	0	0	MESTI-PPMED	CSIR, EPA, MESTI Directorates
			Organise MESTI MDA Annual Progress Report validation workshop and dissemination	Accra	X				15,000	0	0	MESTI-PPMED	CSIR, EPA, MESTI Directorates, NDPC, media houses
			Organise Mid-year review workshop	Accra			X		25,000	0	0	MESTI-PPMED	CSIR, EPA, MESTI Directorates
			Undertake quarterly progress report compilation, validation and budget monitoring	Accra	X	X	X	X	36,000	0	0	MESTI-PPMED	CSIR, EPA, MESTI Directorates
			Undertake quarterly M & E data collection	Accra	X	X	X	X	2,000	0	0	MESTI-PPMED	CSIR, EPA, MESTI Directorates

			Undertake monitoring of mining companies	Brong-Ahafo, Western, Ashanti and Eastern Regions	X	X	X	X	52,000	0	0	MESTI-PPMED	Mining companies, EPA, MC, MLNR
			Undertake monitoring of Telecom companies	Accra	X	X	X	X	20,000	0	0	MESTI-PPMED	Telcos, RSIM Directorate
			Monitor the implementation of MESTI projects and programmes	Nation-wide	X	X	X	X	96,000	0	0	MESTI-PPMED	MESTI Directorates
			Monitor 2 projects each from the of 4 Agencies	Nation-wide	X	X	X	X	80,000	0	0	MESTI-PPMED	CSIR, GAEC, EPA, TCPD
			Preparation of Sector Annual Budget	Accra			X	X	50,000	0	0	MESTI-PPMED	MoF, CSIR, GAEC, EPA, TCPD
Improve transparency and access to public information	Modernize information management systems of MDAs	1.5 Statistics, Research, Information Management and Public Relations	Acquire modern tools and technology to enhance information flow to the public e.g. Website, software and hardware tools.	Accra	X							MESTI-RSIM	MESTI-Procurement, MoC
			Production of brochures, half yearly journals documentaries	Accra			X					MESTI-RSIM	All other Directorates, Agencies under

			and other publications on MESTI programs, projects and activities.										MESTI
			Provide media coverage for Minister and Dep. Ministers activities	Nationwide	X	X	X	X	20,000			MESTI-RSIM	All other Directorates, Agencies under MESTI
			Organize Meet-The-Press Series	Accra		X			10,000			MESTI-RSIM	All other Directorates, Agencies under MESTI, MoC
			Organize Policy Fair	Accra		X						MESTI-RSIM	All other Directorates, Agencies under MESTI, MoC

**TABLE 5.1.3 ANNUAL ACTION PLAN (2014) FOR PROGRAMME THREE (3): ENVIRONMENTAL PROTECTION AND MANAGEMENT**

Adopted Policy Objectives	Adopted Strategies	Sub-programmes	Annual Activities	Location	Time Frame				Indicative Budget			Implementing Agencies	
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GoG	IGF	Donor	Lead	Collaborating
Ensure sustainable management of natural resources	Revise and enforce Ghana's Mining and Environmental Guidelines	Environmental Compliance and Enforcement	Review the existing guideline for the mining	National	X	X	X	X			2m	EPA	MC
Strengthen institutional and regulatory frameworks for sustainable natural resource management	Intensify capacity building in the application of the Strategic Environmental Assessment (SEA) in the planning process	Environmental Compliance and Enforcement	Monitor and evaluate SEA of DMTDPs	Nation-wide	X	X	X	X			170,000	EPA	MMDAs
		Environmental Compliance and Enforcement	Undertake SEA of mining policy , Bio-energy policy, Rural and sanitation	National	X	X	X	X			1m	EPA	MC, MLGRD, MOE

			module and strategy										
		Environmental Compliance and Enforcement	Asses and monitor the cost of environmental degradation in Ghana	Nation-wide	X	X	X	X			300,000	EPA	MESTI
		Environmental Compliance and Enforcement	Organize SEA training for 46 public sector institutions	Kumasi			X	X			180,000	EPA	MDAs
		Environmental Compliance and Enforcement	undertake Environmental and Natural Resource Accounting	Nation-wide		X	X	X			175,000	EPA	MLNR, MESTI, MOFA
<b>Reduce loss of biodiversity</b>	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	Environmental Compliance and Enforcement	Continue the implementation of MAB project	MAB communities	X	X	X	X			1m	EPA	FC, MESTI
		Environmental Compliance and Enforcement	Continue the implementation of Sustainable Land and water management project	Northern, Upper East and West Regions	X	X	X	X			2m	EPA	RCCs, MESTI
<b>Enhance capacity to adapt to climate change impacts</b>	Increase resilience to climate change impacts through early warning systems	Environmental Education, Information and Communication	Celebrate World Day to Combat Drought and Desertification	Wa			X			300,000		EPA	MESTI, RCC, TA, GES
	Enhance national capacity to respond to climate change through the establishment of a Climate Change Centre	Environmental Compliance and Enforcement	Phase out Ozone Depletion Substances (ODS)	Nation-wide	X	X	X	X			10m	EPA	MESTI



<b>Promote green economy</b>	Create the knowledge base and build technical, human and financial capacity	Environmental Education, Information and Communication	Construct a green city office complex at Damfa for EPA Head Office	Damfa	X	X	X			6.5 m		EPA	MESTI, CTRB
		Environmental Compliance and Enforcement	Environmental Impact Assessment (EIA) Administration	Nation-wide	X	X	X	X		1m		EPA	Community, MMDAs
		Environmental Compliance and Enforcement	Chemicals compliance and management	Nation-wide	X	X	X	X		200,000		EPA	GPHA
<b>Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental</b>	Strengthen emergency preparedness to manage disasters in the oil and gas industry.	Environmental Compliance and Enforcement	Procure vehicles and boat for monitoring	Western Region		X	X	X		1.5 m		WPA	MESTI
		Environmental Education, Information and Communication	Establish Grievance database	National	X	X	X	X			145,000	EPA	NITA
<b>Promote sustainable extraction and use of mineral resources</b>	Enforce compliance of relevant regulations and guidelines on small scale mining	Environmental Compliance and Enforcement	Develop plan to establish specialized environmental courts	Accra	X	X	X	X			235,000	EPA	Judicial Service
	Strengthen compliance and enforcement of relevant regulations and guidelines on environmental impact of small scale mining	Environmental Compliance and Enforcement	Environmental Quality/Monitoring (Compliance Monitoring)	Nation-wide	X	X	X	100,000	400,000		EPA	MC	
		Environmental Compliance and Enforcement	Undertake AKOBEN Performance rating of all mining operations in Ghana	Nation-wide	X	X	X	X		300,000		EPA	MC

		Environmental Compliance and Enforcement	Issue and renewal of permits for mining	Nation-wide	X	X	X	X		500,000		EPA	MC
<b>Promote effective waste management and reduce noise pollution</b>	Intensify enforcement of regulations on noise pollution and control	Environmental Compliance and Enforcement	Monitor and analyse pollutants including Noise, PM10, CO, NO2, SO2 and Ozone	Nation-wide	X	X	X	X	200,000			EPA	
		Environmental Compliance and Enforcement	Sample and analyse effluent quality from industries and hotels	Tema and Accra, Kumasi, Takoradi	X	X	X	X	72,000			EPA	MMDAs
<b>Enhance natural resources management through community participation</b>	Develop and implement communication and public participation strategy for natural resource management	Environmental Education, Information and Communication	Develop Environmental Education Strategy for Ghana	National	X	X	X	X		200,000		EPA	Research institution
	Effectively disseminate information on legislation on the environment especially in the local languages	Environmental Education, Information and Communication	Print campaign materials and calendars on environmental issues	National	X	X	X	X		200,000		EPA	Media
		Environmental Education, Information and Communication	Annual public relation activities	National	X	X	X	X		200,000		EPA	Media
		Environmental Education, Information and Communication	Cover environmental issues in national and local media	Nation-wide	X	X	X	X		100,000		EPA	Media
		Environmental Education,	Conduct perception study of EPA	National	X	X	X	X		150,000		EPA	Research Institution

		Information and Communication											
		Environmental Education, Information and Communication	Celebrate World Environment Day	National and Regional		X	X			600,000		EPA	RCCs, MMDAs
	Ensure capacity building of existing governance structures at the local level such as unit committees in natural resource management	Environmental Education, Information and Communication	Provide office and residential accommodation for new District offices	Damongo, Nkwanta and Wulensi	X	X	X	X		500,000		EPA	MMDAs
		Environmental Education, Information and Communication	Procure office equipment and logistics for Head Office, Regional and District Offices	Nation-wide	X	X	X	X		15m		EPA	MESTI
		Environmental Education, Information and Communication	Provide quality office and residential accommodation for staff	HQ and Regional Offices	X	X	X	X		10m		EPA	MESTI

TABLE 5.2: ANNUAL ACTION PLAN (2015)

TABLE 5.2.1 ANNUAL ACTION PLAN FOR PROGRAMME ONE (1): MANAGEMENT AND ADMINISTRATION

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB-PROGRAMMES	ACTIVITIES	LOCATION	TIME FRAME (2015)				INDICATIVE BUDGET			IMPLEMENTING AGENCIES	
					1st	2nd	3rd	4th	GoG	IGF	Donor	Lead	Collaborating
Ensure sustainable management of natural resources	Promote the adoption of the principles of green economy in national development planning	SP 1.1	Mainstreaming of green economy principles into sector and district development plans		X	X	X	X	GH 54,000		GH 36,000	MESTI-ENV.	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement Green Economy Assessment (Quantitative) for Green Economy scoping		x	x	x	x	GH 48,000		GH 32,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop Green Economy Indicators for implementation at all levels	Nation-wide	x	x	x	x	GH 51,000		GH 34,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Conduct Green Economy Fiscal study	Nation-wide	X	X	X	X	GH 72,300		GH 48,200	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

			Develop and implement Green Economy Action Plan at all levels	Nation-wide	X	X	X	X	GH120,000		GH80,000	MESTI	
			Implementation of SLWMP in the three northern regions										
			Capacity building for integrated spatial planning		x	x	x	x			900,000	MESTI	SADA
			Implement sustainable land and water management practices including CREMA & Sustainable forest		X	X	X	X			5,000,000	MESTI	MoFA, EPA, Forestry Commission
			Monitoring and coordinating of activities		X	X	X	X			150,000	MESTI	
<b>Strengthen institutional and regulatory frameworks for sustainable natural resource management</b>	Enhance policy and regulatory framework and coordination among key Government agencies and other stakeholders to improve the management of the environment	<b>SP 1.1</b>											

	and natural resources.												
	Operationalize National Biosafety Authority (NBA)	Accra	x	x	x	x	5,000,000			MESTI	PSC, NBA Board		
	Implement Appeals Tribunal for Biosafety Authority	Accra	x	x	x	x	200,000			NBA	MESTI, media house, Min. of Com.		
	Conduct Biosafety Related training	Accra, Kumasi, Tamale, Takoradi	x	x	x	x	100,500			NBA	MESTI, Academic institutions		
	Produce Biosafety Guidelines and forms	Accra	x	x	x	x	300,500			NBA	MESTI, TAC, IBC		
	Process Biosafety Applications for permits	Accra	x	x	x	x	160,500			NBA	MESTI, TAC, IBC		
Improve the policy and institutional framework for effective coastal resource management	Coordinate and harmonize relevant policies and programmes with regional and international bodies as well as ECOWAS	SP 1.1	Establish a coordination structure with linkages to regional and international bodies as well as ECOWAS	Ghana		x	x	x	125,000		10,000,000	MESTI	EPA, MFA, UNIDO, UNEP, GEF, GCLME coordination unit
	Establish a coastal zone	SP 1.1	Operationalize the headquarters	Accra		x	x	x	150,000			MESTI	EPA, MFA, UNIDO, UNEP,

	commission with strong stakeholder participation		agreement for the Guinea Current Commission (GCC)										GEF, GCLME coordination unit
	Establish an Integrated Marine and Coastal Management Framework at all levels	<b>SP 1.1</b>	Engage stakeholders in the regional and district levels to agree on components of the management framework	4 coastal regions (26 districts)		x	x	x	37,500			MESTI	MLGRD, TCDP, EPA, Ministry of Fisheries and Acquaculture, Fisheries commission, Marine Productivity & Biodiversity centre UG,
			Establish regional and district marine and coastal management framework in 4 coastal regions	4 coastal regions (26 districts)		x	x	x	75,000			MESTI	MLGRD, TCDP, EPA, Ministry of Fisheries and Acquaculture, Fisheries commission, Marine Productivity & Biodiversity centre UG, Dept. of Fisheries and Aquatic sciences
	Promote an institutional arrangement for the coordination of Marine and Coastal resource management	<b>SP 1.1</b>	Enact a legislation to internalize the provisions of the Guinea Current Commission	Accra	x	x	x	x	112,500			MESTI	EPA, MFA, UNIDO, UNEP, GEF, GCLME coordination unit

<b>Reduce loss of biodiversity</b>	Facilitate the collaboration in/and harmonization of biodiversity in related agreements.	<b>SP 1.1</b>	Organize 4 meetings of the planning committee	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>100, 000</b>				MESTI	NBC, EPA, GAEC, MOFA, MOE, MLNR, MOTI, MJAG
			Recruit consultant to work on the harmonization	<b>Accra</b>	<b>x</b>	<b>x</b>	<b>x</b>		<b>120,000</b>				MESTI	NBC, NPA
			Organize 5 workshops for harmonizing agreements.	<b>Accra, Kumasi</b>			<b>X</b>	<b>X</b>	<b>160, 000</b>				MESTI	EPA, GAEC, MOFA, MOE,
			Organize workshops to Validate biodiversity agreement.				<b>X</b>	<b>X</b>	<b>160, 000</b>				MESTI	EPA, GAEC, MOFA, MOE,
	Review and implement a national strategy to deal with invasive alien species	<b>SP 1.1</b>	Organize 3 workshops on gap analysis	<b>Accra, Takoradi, Kumasi, Bolgatan ga</b>	<b>X</b>	<b>X</b>			<b>250, 000</b>				MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
			Engage consultant to conduct review	<b>Accra</b>	<b>x</b>	<b>x</b>			<b>120,000</b>				MESTI	NBC, NPA
			Hold stakeholder consultations on the revised strategy	<b>Accra, Kumasi</b>		<b>x</b>	<b>x</b>		<b>200,000</b>				MESTI	<b>NBC</b>



		Monitoring	National			X	X	290,000			MESTI	EPA, GAEC, MOFA, MOE, Universities	
	Establish marine protected areas along the coast	SP 1.1	Stakeholder consultations	Takoradi, Volta, Accra	X	X			150,000			MESTI	NBC, EPA, MLNR, MOFAD, Universities
			Engage consultant to survey and identify sites	Accra	X	X	X	X	350,000			MESTI	NBC, EPA, GAEC, MLNR, MOH Universities
		Training	Accra, Takoradi, Ho		x	x	x	350,000			MESTI	NBC, national consultant.	
	Protect important wetlands especially in the western corridor	SP 1.1	Community education	Western Region (4 districts)	X	X	X	X	877,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs
			Enact DAs and MMDAs by-laws	Takoradi and 4 other District capitals	X	X	X	X	1,150,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs, RCCs
			Monitoring and enforcement	Western Region	X	X	X	X	1,000,000			MESTI	NBC, GAEC, MOE, Universities
	Develop and implement a	SP 1.1	Hire consultants	Accra	X	X	X	X	1,300,000			MESTI	NBC, EPA, GAEC, MOFA, MOE,

	system of payment of ecosystem services												Universities
			Stakeholder consultation	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>290,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
			Monitoring and enforcement	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>1,000,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE,
	Promote research, public education and awareness on biodiversity and ecosystem services	<b>SP 1.1</b>	Meetings/ conferences/ workshops	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>380,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Universities
			Produce education materials	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>690,000</b>			MESTI	NBC, EPA, GAEC, Univeristies
			Public engagements	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>1,150,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	<b>SP 1.1</b>	Meetings and conferences	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>550,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, RCCs, MMDAs
			Community engagements	<b>Nation-wide</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>720,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs

			Support DAs. and MMDAs to enact by-laws	Five selected districts	X	X	X	X	1,850,000			MESTI	NBC, EPA, GAEC, MOFA, NBC, MOE, MMDAs
			Monitoring & Evaluation	Nation-wide	X	X	X	X	1,120,000			MESTI	NBC, EPA, MLNR, MLGRD
Enhance capacity to adapt to climate change impacts	Enhance national capacity to respond to climate change through the establishment of a Climate Change Centre	SP 1.1	Develop coordinating structures for the implementation of the National climate change policy strategy		X	X	X	X	63,700		42,480	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Institutionalize roles and responsibility for MMDAs to implement NCCPS		X	X	X	X	54,000		36,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Development of NCCPS M&E plan to monitor MMDAs for the implementation of the NCCPS		X	X	X	X	90,000		60,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement communication strategy for the NCCPS		X	X	X	X	111,000		74,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

			Design and implement pro-poor climate interventions for vulnerable communities		X	X	X	X	114,000		76,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Train and build capacity of staff of MDAs to support climate change activities		X	X	X	X	114,000		76,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Support and Monitor implementation of NCCPS at sector and district levels		X	X	X	X	144,000		96,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
<b>Mitigate the impacts of climate variability and change</b>	Intensify research and promote awareness of climate change	<b>SP 1.1</b>	Support and Monitor R&D component of NCCPS at sector and district levels		X	X	X	X	144,000		96,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Implement alternative livelihoods strategies to minimize impacts of climate change on the poor and	<b>SP 1.1</b>	Collaborate with relevant MDAs to implement smart agriculture component of NCCPS		X	X	X	X	102, 000		11m US\$ GH 68,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

	vulnerable especially women												
	Promote energy efficiency in all aspects of social and economic life  (put all activities related to NAMA's under this)	<b>SP 1.1</b>	Develop National Appropriate Mitigation Actions for priority sectors of the NCCP		X	X	X	X	48,000		32,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and promote NAMA investor Guide to attract investments for mitigation actions		X	X	X	X	60,000		40,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Collaborate with relevant MDAs to implement REDD+ readiness activities		X	X	X	X	78,000		52,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop communication strategy for NAMA implementation		X	X	X	X	100,000		66,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Adopt climate sensitive waste	<b>SP 1.1</b>	Develop and implement		X	X	X	X	315,000		210,000	MESTI	EPA, NDPC, MOF, MOFA,

	management practices		Waste to Energy NAMAs										MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement Sanitation Standards		X	X	X	X	315, 000		210,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
Promote green economy	Develop a long-term national Low Carbon Growth (LCG) model for effective decision making	SP 1.1	Develop a green economy model for Ghana		X	X	X	X	75,000		50,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR
			Develop and implement low carbon development strategy framework		X	X	X	X	37,500		25,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR
	Develop coordinated response to climate change challenges through linkages between research, industry and Government	SP 1.1	Establish governance structure for implementation of climate change activities		X	X	X	X	120,000		80,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR

			Strengthen linkages between research, industry and government for implementation of NCCP		X	X	X	X	120,000		8,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR, Universities
Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental sustainability	Develop adequate capacity of environmental management and regulatory institutions to monitor and enforce regulations for sustainable management of the oil and gas industry	SP 1.1	<p>Review Environmental Assessment Guidelines for onshore oil and gas management</p> <p>-Review of draft Environmental Assessment Guidelines for onshore for circulation</p> <p>-First review of Draft guidelines (internal stakeholders – MESTI/EPA)</p> <p>-Second Review of Draft Guidelines (External stakeholders)</p> <p>-Printing of Guidelines</p>	Accra	x	x					15, 101.81	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
			Review Waste Regulations for	Accra							15,101.81	MESTI,	Min. of Finance, Min. of Energy

			controlling onshore and offshore waste management in the oil and gas sector  -Stakeholders review workshop for Environmental Assessment Regulations  -Stakeholders review workshop for Waste Regulations  -Training in permitting of Offshore Chemicals									EPA	& Petroleum, Petroleum Commission, Ghana national petroleum corporation
			Develop an oil & gas specific waste management program to feed into the national Waste Management Policy framework  - Develop draft programme  -Engage Stakeholder	Accra/Takoradi		x	x	x			50,640	MESTI, EPA	Min. of Finance, Min. of Energy & Petroleum, Petroleum Commission, Ghana national petroleum corporation



			consultations - Seek Cabinet Endorsement - Seek Parliament approval										
			Organize Training for relevant MDAs on permitting, monitoring and controlling of Offshore Chemicals	Takoradi / Accra	x						7,550.91	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
	Develop and enforce the use of spatial plans along the oil belts especially in the Western Region	<b>SP 1.1</b>	Develop spatial plan for two Districts in the Western Regions - Training of TCPD staff to undertake the exercise	Takoradi	x						418,905.31	MESTI, Town & Country Plan. Dept,	District Assemblies in Western region
			Develop Regional Plans to promote effective resource allocation across all Regions - stakeholder consultations across all regions	All regions		x	x	x			88,620	MESTI, Town & Country Plan. Dept, National Devt Plannin g Commis sion	All MMDAs in the country

			<p>Develop National Spatial Framework for all regions in Ghana</p> <p>-stakeholder consultations across the country</p> <p>- Organize sensitization workshop for Parliamentary Select committee on Environment, Lands and Natural Resources</p> <p>-Seek Cabinet approval</p> <p>-Seek parliamentary approval</p> <p>- launch of the National Spatial Framework</p> <p>- public education about the plans by the media</p>	All regions		x	x	x			1,439,250	MESTI, Town & Country Plan. Dept, National Devt Planning Commission	All MMDAs in the country
			<p>Prepare District Spatial Plans to guide development in all Districts</p>	216 Districts		x	x	x			318,150	MESTI, Town & Country Plan. Dept, National	All MMDAs in the country

			Assemblies									I Devt Plannin g Commis sion	
			Prepare Structural Plans to guide investments in all Districts Assemblies	216 Districts		x	x	x			190,132.5	MESTI, Town & Country Plan. Dept, Nationa I Devt Plannin g Commis sion	All MMDAs in the country
			Prepare local Plans to guide settlement planning across the country	216 Districts		x	x	x			209,070	MESTI, Town & Country Plan. Dept, Nationa I Devt Plannin g Commis sion	All MMDAs in the country
	Strengthen research into environmental impacts associated with the oil and gas industry	<b>SP 1.1</b>	Organize Field work for Sensitivity Mapping (Version 2)	Takoradi /cape coast/Ac cra	x	x	x				53,611.426	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
			Develop first draft of Western	Accra/Ta koradi/c	x	x	x				11,892.70	MESTI,	Min. of Finance, Min. of Energy,

			and Central regional operational Oil Spill contingency plans for Stakeholders  -Review meeting with EPA selected staff on draft operational plans for the 2 Regions  Workshop for 2 Regions (Western and Central)  Support for students to carry a research work in waste management	ape coast								EPA	Petroleum Commission, Ghana national petroleum corporation
			National oil Spill Contingency plan revised  - Undertake Internal Stakeholder meetings  Engage external Stakeholders in a review workshop	Accra/Takoradi		x	x				101,280	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
Promote the application of Science, Technology and Innovation	Promote Science, Technology and Innovation development at	1.1 GENERAL ADMINISTRATIVE	Organize Stakeholder Consultation meetings to review and	Accra	x				20,000			MESTI	

in all sectors of the economy	all levels of Production		adopt new strategies for implementing the Better Ghana ICT Project and submit new strategies to cabinet for approval										
			Develop the National STI database	Nationwide	x	x	x	x			200,000	MESTI/COTVET	World Bank, MOF
			Build the capacity of the Staff of the STI Directorates	Accra		x	x				200,000	MESTI/COTVET	World Bank, MOF
			Procure laptops and implement new programme under the better Ghana ICT Project	nationwide		x			15,000,000			MESTI	
			Implementat the pilot project of the Ghana -South Africa TV White Space Project to community schools.	nationwide			X	X	80,000		1,000,000	MESTI	
			Prepare the national Development Plan for the STI Directorate	Accra		x	X	X			200,000	MESTI/COTVET	World Bank, MOF
			Conduct National STI Baseline	Nationwide	X	x	X	X			400,000	MESTI/COTVET	World Bank, MOF

			Survey										
			Construct and launch the STI office Complex	Accra	X	X	x	X			1,000,000	MESTI/ COTVET	World Bank, MOF
			Organize Annual Stakeholders meetings to review the implementation of the MASTESS Programme	Accra, kumasi	x				50,000			MESTI	MOE,
			Print, advertise and Distribute MASTESS Application Forms	Accra		x	x		37,500			MESTI	District Assemblies, MOE
			Review application Forms and Select Beneficiaries	Accra			x		125,000			MESTI	MOE, Scholarship Secretariat
			Disburse Funds	Nationwide				x	3,750,000			Scholarship secretariat	MESTI, MOE, GETFund,
			Support the implementation of the 3-year Ghana-South Africa S & T Plan of Action	Ghana/ South Africa		x	x		250,000		100,000	MESTI	DST-SA, COTVET_PSU, World Bank, MOF
			Organize National Research and Strategic	nationwide		x			30,000			MESTI	MOE, NDPC, Universities, R & D institutions

			Development Plans Seminar										
			Engage a Consultant to prepare the National R & D strategic Development plan	Accra		x	x		150,000			MESTI	
	Promote the diffusion and transfer of technology	<b>1.1 GENERAL ADMINISTRATI ON</b>	Organize ICT capacity training workshop for staff on the use of Information Management System	Accra		X			30,000			MESTI	Min. of Communication,
			Organize Capacity training programs for ICT staff	Accra	X				15,000			MESTI-RSIM	MESTI-HRM
	Promote the establishment of innovation and incubation centers	<b>1.1 GENERAL ADMINISTRATI ON</b>	Establish the Innovation Secretariat	Secretariat established.				X	1,000,000			MESTI	MOTI, MOF, NDPC, MOE
<b>Strengthen the institutional framework to promote the development of research and its application</b>	Adequately resource the Science and Technology Endowment Fund to support research activities in tertiary and research	<b>1.1 GENERAL ADMINISTRATI ON</b>	Engage a Consultant to draft the STI fund manual	STI Fund Manual		x			50,000			MESTI	MOF,MOE
			Organize National STI Fund Board meetings	Minutes of meetings	X	X	X	X	50,000			MESTI	

	institutions		Develop LI for STI Fund	Accra		x	x		100,000			MESTI	Attorney Generals department, MOE
			Organize series of fund raising activities for the STI Fund	Nationwide		x	x	x	60,000			MESTI	
			Organize National STI Fund Board meetings	Accra	x	x	x	x	50,000			MESTI	
	Build appropriate linkages between research and production to ensure that research outputs are utilized	1.1 GENERAL ADMINISTRATIVE	Implement the Phase 2 of the Action Plan on the use of local building industry in the construction industry	progress reports	x	X	X	X	500,000			MESTI	CSIR,MOTI,GEC, MWRWH,MDPI, GSA,ARC
			Organize Annual Stakeholders meeting to review the Action Plan on the Policy of the Use of Local Building Materials in the Construction Industry	reports			X		50,000			MESTI	
			Support 5 R & D Institutions to establish and operation	Report, functional centers	x	X	X	X	-		2,500,000	MESTI/ COTVET	GTUC, UG, CSIR, GAEC, K-Poly, World Bank, MOF



			centers for developing and marketing technologies	in 5 institutions									
Promote the establishment of national Science and Technology Theme Parks to provide world-class facilities for electronics, precision engineering, ICT and bio-technology.	<b>1.1 GENERAL ADMINISTRATIVE</b>	Conduct Feasibility Studies on the establishment of 2 technology parks	Accra	x	x				1,000,000			MESTI	MOTI, MOF, NDPC, MOE
		Prepare Business Plan and project documents for the establishment of 2 technology parks	Accra			x			1,000,000			MESTI	NDPC, MOF, MOE, MOTI
		Construct and Launch 2 technology parks	Nationwide				x		50,000,000			MESTI	MOF, NDPC, MOE, MOTI
		Organize Annual Regional Technology Fairs	Nationwide				x		1,000,000			MESTI	
Facilitate the use of the platform of the annual "Ghana Science Congress" for development of relevant technologies to support agriculture, small and	<b>1.1 GENERAL ADMINISTRATIVE</b>	Plan and Organize 2ND Ghana Science Congress	Accra	x	x	x	x		250,000		250,000	MESTI	MOE, R & D institution, Science and Technology Associations, Ghana Acaademy of Arts and Sciences

	medium scale enterprises and climate change mitigation												
	Provide a forum for collaboration among research institutions	<b>1.1 GENERAL ADMINISTRATI ON</b>	Participate in series of annual international conference related to STI	<b>Sector-wide</b>	x	X	X	X	125,000			MESTI	
			Support the activities of the National Contacts Points (NCPs) of the EU Horizon 2020 programme	Reports, Agreements,	x	X	X	X	75,000			MESTI	CSIR-STEPRI, EU Commission
<b>Strengthen policy formulation, development planning, and M&amp;E processes for equitable and balanced spatial and socio-economic development</b>	Institutionalize the coordination of development policy formulation, planning, monitoring and evaluation (M&E) at all levels especially among sector agencies	<b>1.4 POLICY, PLANNING, BUDGETING, MONITORING &amp; EVALUATION</b>	Prepare MESTI Annual Action Plan (AAP)	Koforidua	X				15,000	0	0		CSIR, GAEC, EPA, TCPD, MESTI Directorates
			Prepare Annual Performance Report (APR) to OHCS	Accra	X				15,000	0	0		CSIR, GAEC, EPA, TCPD, MESTI Directorates, OHCS
			Prepare Annual Progress Report (APR) to NDPC	Prampram	X				12,000	0	0		CSIR, GAEC, EPA, TCPD, MESTI Directorates, NDPC
			Organise MESTI MDA Annual Progress Report validation workshop and	Accra	X				25,000	0	0		CSIR, GAEC, EPA, TCPD, MESTI Directorates, NDPC, media

			dissemination									houses
			Preparation of Sector Medium Term Development Plan	Koforidua	X				60,000	0	0	CSIR, GAEC, EPA, TCPD, MESTI Directorates, NDPC
			Organise Mid-year review workshop	Accra			X		25,000	0	0	CSIR, GAEC, EPA, TCPD, MESTI Directorates
			Undertake quarterly progress report compilation, and validation	Accra	X	X	X	X	20,000	0	0	CSIR, GAEC, EPA, TCPD, MESTI Directorates
			Undertake budget monitoring	Accra					10,000	0	0	CSIR, GAEC, EPA, TCPD, MESTI Directorates
			Undertake quarterly M & E data collection	Accra	X	X	X	X	10,000	0	0	CSIR, GAEC, EPA, TCPD, MESTI Directorates
			Preparation of Sector M&E Plan	Aburi	X	X	X	X	100,000	0	0	CSIR, GAEC, EPA, TCPD, MESTI Directorates
			Organise biannual feedback sessions with relevant stakeholders	Accra	X	X	X	X	50,000	0	0	CSIR, GAEC, EPA, TCPD, MESTI Directorates

			Organise biannual feedback sessions with relevant Agencies/Directorates	Accra	X		X		20,000	0	0		CSIR, GAEC, EPA, TCPD, MESTI Directorates
			Undertake monitoring of mining companies	Brong-Ahafo, Western, Ashanti and Eastern Regions	X		X		80,000	0	0		Mining companies, EPA, MC, MLNR
			Undertake monitoring of Telecom companies	Accra	X	X	X	X	108,000	0	0		Telcos, RSIM Directorate
			Monitor the implementation of MESTI projects and programmes	Nation-wide					200,000	0	0		MESTI Directorates
			Monitor 2 projects each from the of 4 Agencies	Nation-wide	X	X	X	X	160,000	0	0		CSIR, GAEC, EPA, TCPD
			Organise SONA review meetings	Accra	X	X	X	X	100,000	0	0		CSIR, GAEC, EPA, TCPD
			Monitoring of SONA projects	Nation-wide	X	X	X	X	106,000	0	0		CSIR, GAEC, EPA, TCPD, OoP, MDAs
			Presentation to Parliamentary Select Committee on EST on MESTI	Accra				X	60,000	0	0		Parliament, MoF, CSIR, GAEC, EPA,

			MDA budget									TCPD
			Preparation of HIV/AIDS workplace policy	Accra			X		30,000	0	0	MESTI Directorates
			Presentation to Parliamentary Select Committee on Poverty Reduction on MESTI MDA APR	Accra		X			25,000	0	0	Parliament, NDPC, CSIR, GAEC, EPA, TCPD
			Preparation of Sector Annual Budget	Accra			X		50,000	0	0	MoF, CSIR, GAEC, EPA, TCPD
			Refresher budget preparation training	Accra			X		10,000	0	0	PPMED, CSIR, GAEC, EPA, TCPD
			Prepare project proposals and implement sector related projects assigned to the PPMED	Sector-wide		X	X		50,000	0	0	Development Partners, All Directorates, TCPD, GAEC, CSIR, EPA, NDPC
			Monitor and evaluate the activities of green economy	Sector-wide	X	X	X	X	30,000	0	0	Environment Directorate
			Monitor and evaluate the marine and coastal development projects	Coastal regions	X	X	X	X	100,000	0	0	Environment Directorate, EPA, MLNR

			Monitor and evaluate the implementation of biodiversity activities	Sector-wide	X	X	X	X	30,000	0	0		Environment Directorate, EPA, MLNR
			Monitor and evaluate the implementation of the National Strategy on alien species	Sector-wide	X	X	X	X	30,000	0	0		Environment Directorate, EPA, MLNR
			Monitor and evaluate the establishment of operationalisation of marine protected areas	Sector-wide	X	X	X	X	30,000	0	0		Environment Directorate, EPA, MLNR
			Monitor and evaluate the implementation of the system of payment of ecosystem services	Sector-wide	X	X	X	X	30,000	0	0		Environment Directorate, EPA
			Monitor and evaluate the effective management of biosphere reserves and other hotspots	Sector-wide	X	X	X	X	30,000	0	0		Environment Directorate, EPA
			Monitor and evaluate the implementation of the alternative	Sector-wide	X	X	X	X	50,000	0	0		Environment Directorate, EPA, MLNR

			livelihoods programme in climate change affected areas										
			Monitor and evaluate the implementation of the energy efficiency project	Sector-wide	X	X	X	X	100,000	0	0		Environment Directorate, EPA, Energy Commission
			Monitor and evaluate the institutions that enforce regulations for sustainable developmentthe management of the oil and gas industry	Sector-wide	X	X	X	X	100,000	0	0		Environment Directorate, EPA, MoEP
			Monitor and evaluate the compliance to spatial plans for areas along the oil belt	Oil regions	.	X	X	X	30,000	0	0		Environment Directorate, EPA, TCPD
			Monitor and evaluate the implementation of the STI Policy	Sector-wide	X	X	X	X	70,000	0	0		STI Directorate, CSIR, GAEC, NDPC
			Monitor and evaluate the implementation of Incubation Centres/ Science and Technology	Sector-wide	X	X	X	X	100,000	0	0		STI Directorate, CSIR, GAEC, MoC

			Theme Parks										
			Monitor and evaluate the operationalisation of the STI Fund	Sector-wide	X	X	X	X	30,000	0	0		STI Directorate, CSIR, GAEC, MoF
Improve transparency and access to public information	Modernize information management systems of MDAs	1.5 Statistics, Research, Information Management and Public Relations	Acquire modern tools and technology to enhance information flow to the public e.g. Website, software and hardware tools.	Accra	X				40,000			MESTI-RSIM	MESTI-Procurement, MoC
			Production of brochures, half yearly journals documentaries and other publications on MESTI programs, projects and activities.	Accra			X		70,000			MESTI-RSIM	All other Directorates, Agencies under MESTI
			Provide media coverage for Minister and Dep. Ministers activities	Nationwide	X	X	X	X	50,000			MESTI-RSIM	All other Directorates, Agencies under MESTI
			Organize Meet-The-Press Series	Accra		X			50,000			MESTI-RSIM	All other Directorates, Agencies under MESTI, MoC
			Organize Policy Fair	Accra		X			50,000			MESTI-RSIM	All other Directorates, Agencies under



													MESTI, MoC
									50,000			MESTI-RSIM	MESTI-HRM, Agencies under MESTI, IPR

**TABLE 5.2.2 ANNUAL ACTION PLAN (2015) FOR PROGRAMME TWO (2): RESEARCH AND DEVELOPMENT**

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB-PROGRAMMES	ANNUAL ACTIVITY	LOCATION	TIME FRAME				INDICATIVE BUDGET		IMPLEMENTING AGENCIES		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GOG GH¢	IGF	DONOR	LEAD	COLLABORATING
Promote the application of Science, Technology and Innovation to all Sectors of the Economy	1. Apply Science and Technology and Innovation to promote agricultural development	Scientific and Industrial Research	1.0 Promoting Commercial Agriculture	Kumasi and Tamale	√	√	√	√	250,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-SRI
			1.1 Promote Rice Production										
			1.1.1 Provision of breeder, foundation and certified local rice (perfumed) seeds										
			1.1.2 Prepare and disseminate local rice production guides to commercial farmers and other stakeholders	Kumasi and Tamale	√	√	√	√	200,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-SRI
			1.1.3 Organize farmer's fields to demonstrate and transfer SAWAH Technology to farmers/stakeholders	Kumasi and Tamale	√	√	√	√	125,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-SRI

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ANNUAL ACTIVITY	LOCATION	TIME FRAME				INDICATIVE BUDGET		IMPLEMENTING AGENCIES		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GOG GH¢	IGF	DONOR	LEAD	COLLABO- RATING
			1.2 Promote mango and vegetable production	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-PGRRI
			1.2.2 Organize training workshops and farmer field schools for farmers, extension agents and NGOs/fruit processors	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00			CSIR	MOFA CSIR-SARI CSIR-CRI CSIR-PGRRI
			1.2.3 Training prospective and actual fruit processors in mango fruit processing	Tamale, Kumasi, Bunso and Accra	√	√	√	√	600,000.00			CSIR	MOFA CSIR-FRI
			1.2.4 Demonstrate, transfer and train food processors on the solar drying technology for mango production	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00			CSIR	MOFA CSIR-FRI
			1.2.5 Develop and multiply improved planting materials of pepper and egg plants for farmers/ stakeholders.	Tamale, Kumasi, Bunso and Accra	√	√	√	√	500,000.00				MOFA CSIR-SARI CSIR-CRI CSIR-PGRRI
		1.3 Promotion of Improved planting materials for Oil Palm and Coconut	1.3.1 Multiply and supply improved planting materials of Oil Palm and Coconut to farmers	Kusi - Kade Sekondi-Takoradi, and Bunso	√	√	√	√	600,000.00			CSIR	MoFA CSIR - OPRI CSIR – PGRRI
		1.4 Increased output of poultry	1.4.1 Develop and transfer	Tamale and Accra	√	√	√	√	500,000.00			CSIR	MoFA CSIR-ARI

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ANNUAL ACTIVITY	LOCATION	TIME FRAME				INDICATIVE BUDGET		IMPLEMENTING AGENCIES		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GOG GH¢	IGF	DONOR	LEAD	COLLABO- RATING
		and livestock production	techniques for increasing meat and egg production for livestock and poultry farmers										
			1.4.2 Promote the use of locally produced vaccines for livestock and poultry	Tamale and Accra	√	√	√	√	600,000.00			CSIR	MoFA CSIR-ARI
			1.5.1 Promote sustainable fishery management of capture fishery (marine and fresh water)  1.5.2 Enhance fish preservation and management of post-harvest loses. 1.5.3 Intensify the promotion of improved oven for smoking fish called FRISMO	Akosombo and Accra	√	√	√	√	600,000.00			CSIR	CSIR-WRI
			2.0 Water and Sanitation Management  2.1.1 Promote Rain water harvesting technology for schools and small communities	Accra, Kumasi and Tamale   Tamale	√   √	√   √	√   √	√   √	600,000.00   500,000.00			CSIR   CSIR	CSIR – WRI   CSIR-WRI WRC
			2.1.2 Promote the										

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ANNUAL ACTIVITY	LOCATION	TIME FRAME				INDICATIVE BUDGET		IMPLEMENTING AGENCIES		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GOG GH¢	IGF	DONOR	LEAD	COLLABO- RATING
			drilling of bore holes for rural communities										
			2.1.3 Promote and develop bio-sanitation toilet for schools and communities	Peri-urban Accra	√	√	√	√	600,000.00			CSIR	CSIR-WRI WRC, EPA
			2.1.4 Biological control of mosquitos against malaria	Accra	√	√	√	√	250,000.00			CSIR	CSIR-WRI WRC
			3.0 Road Materials Management  3.1.1 Employ expertise in road material investigations in the five major cities in Ghana	Tamale, Kumasi, Takoradi, Sekondi and Accra	√	√	√	√	250,000.00			CSIR	CSIR-BRRI
			3.1.2 Promote the construction of wooden bridges using lesser known wood species	Kumasi	√	√	√	√	250,000.00			CSIR	CSIR-FORIG CSIR-BRRI
			4.0 Rural Electrification Project  4.1.1 Use of lesser known wood species for poles	Kumasi Koforidua Takoradi	√	√	√	√	150,000.00			CSIR	CSIR-FORIG
			4.1.2 Bio-fuels (from agricultural waste) for generators	Kumasi	√	√	√	√	150,000.00			CSIR	CSIR-IIR

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ANNUAL ACTIVITY	LOCATION	TIME FRAME				INDICATIVE BUDGET		IMPLEMENTING AGENCIES		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GOG GH¢	IGF	DONOR	LEAD	COLLABO- RATING
			4.1.3 Hybrid solar/wind energy systems for households	Kumasi	√	√	√	√	200,000.00			CSIR	CSIR-IIR
			5.0 Housing Programme  5.1.1 Use of local building materials and fast track construction techniques for affordable housing delivery	Kumasi, Accra, Koforidua	√	√	√	√	250,000.00			CSIR	CSIR-BRRI Metropolitan and District Assemblies
			6.0 ICT/STI Policy and Plant Genetics Resources Conservation  6.1.1 Facilitation of policy research for the implementation of STI policy for national development	Accra	√	√	√	√	150,000.00			CSIR	CSIR-STEPRI
			6.1.2 Packaging and dissemination of scientific research results to end users	Accra	√	√	√	√	250,000.00			CSIR	CSIR-INSTI

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ANNUAL ACTIVITY	LOCATION	TIME FRAME				INDICATIVE BUDGET		IMPLEMENTING AGENCIES		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GOG GH¢	IGF	DONOR	LEAD	COLLABO- RATING
			6.1.3 Intensify the characteriza-tion and conservation of plant genetic resources as well as protection and distribution nationwide	Bunso	√	√	√	√	250,000.00			CSIR	CSIR-PGRRI

**TABLE 5.3.1 ANNUAL ACTION PLAN (2016) FOR PROGRAMME ONE (1): MANAGEMENT AND ADMINISTRATION**

ADOPTED POLICY OBJECTIVES	ADOPTED STRATEGIES	SUB- PROGRAMMES	ACTIVITIES	LOCATIO N	TIME FRAME (2016)				INDICATIVE BUDGET			IMPLEMENTING AGENCIES	
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	GoG	IGF	Donor	Lead	Collaborating
Ensure sustainable management of natural resources	Promote the adoption of the principles of green economy in national development planning	SP 1.1	Mainstreaming of green economy principles into sector and district development plans		X	X	X	X	GH 54,000		GH 36,000	MESTI-ENV.	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

			Develop and implement Green Economy Assessment (Quantitative) for Green Economy scoping		x	x	x	x	GH 48,000		GH 32,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop Green Economy Indicators for implementation at all levels	Nation-wide	x	x	x	x	GH 51,000		GH 34,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Conduct Green Economy Fiscal study	Nation-wide	X	X	X	X	GH 72,300		GH 48,200	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement Green Economy Action Plan at all levels	Nation-wide	X	X	X	X	GH120,000		GH80,000	MESTI	
			Implementation of SLWMP in the three northern regions										
			Capacity building for integrated spatial planning		x	x	x	x			900,000	MESTI	SADA
			Implement sustainable land and water		X	X	X	X			5,000,000	MESTI	MoFA, EPA, Forestry

			management practices including CREMA & Sustainable forest										Commission
			Monitoring and coordinating of activities		X	X	X	X			150,000	MESTI	
<b>Strengthen institutional and regulatory frameworks for sustainable natural resource management</b>	Enhance policy and regulatory framework and coordination among key Government agencies and other stakeholders to improve the management of the environment and natural resources.	<b>SP 1.1</b>											
	Operationalize National Biosafety Authority (NBA)	Accra	x	x	x	x	5,000,000			MESTI	PSC, NBA Board		
	Implement Appeals Tribunal for Biosafety Authority	Accra	x	x	x	x	200,000			NBA	MESTI, media house, Min. of Com.		
	Conduct Biosafety Related training	Accra, Kumasi, Tamale, Takoradi	x	x	x	x	100,500			NBA	MESTI, Academic institutions		



	Produce Biosafety Guidelines and forms	Accra	x	x	x	x	300,500			NBA	MESTI, TAC, IBC		
	Process Biosafety Applications for permits	Accra	x	x	x	x	160,500			NBA	MESTI, TAC, IBC		
Improve the policy and institutional framework for effective coastal resource management	Coordinate and harmonize relevant policies and programmes with regional and international bodies as well as ECOWAS	<b>SP 1.1</b>	Establish a coordination structure with linkages to regional and international bodies as well as ECOWAS	Ghana		x	x	x	125,000		10,000,000	MESTI	EPA, MFA, UNIDO, UNEP, GEF, GCLME coordination unit
	Establish a coastal zone commission with strong stakeholder participation	<b>SP 1.1</b>	Operationalize the headquarters agreement for the Guinea Current Commission (GCC)	Accra		x	x	x	150,000			MESTI	EPA, MFA, UNIDO, UNEP, GEF, GCLME coordination unit
	Establish an Integrated Marine and Coastal Management Framework at all levels	<b>SP 1.1</b>	Engage stakeholders in the regional and district levels to agree on components of the management framework	4 coastal regions (26 districts)		x	x	x	37,500			MESTI	MLGRD, TCDP, EPA, Ministry of Fisheries and Aquaculture, Fisheries commission, Marine Productivity & Biodiversity centre UG,

			Establish regional and district marine and coastal management framework in 4 coastal regions	4 coastal regions (26 districts)		x	x	x	75,000			MESTI	MLGRD, TCDP, EPA, Ministry of Fisheries and Acquaculture, Fisheries commision, Marine Productivity & Biodiversity centre UG, Dept. of Fisheires and Aquatic sciences
	Promote an institutional arrangement for the coordination of Marine and Coastal resource management	<b>SP 1.1</b>	Enact a legislation to internalize the provisions of the Guinea Current Commission	Accra	x	x	x	x	112,500			MESTI	EPA, MFA, UNIDO, UNEP, GEF, GCLME coordination unit
<b>Reduce loss of biodiversity</b>	Facilitate the collaboration in/and harmonization of biodiversity in related agreements.	<b>SP 1.1</b>	Organize 4 meetings of the planning committee	<b>Accra</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>100, 000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, MLNR, MOTI, MJAG
			Recruit consultant to work on the harmonization	<b>Accra</b>	<b>x</b>	<b>x</b>	<b>x</b>		<b>120,000</b>			MESTI	NBC, NPA
			Organize 5 workshops for harmonizing agreements.	<b>Accra, Kumasi</b>			<b>X</b>	<b>X</b>	<b>160, 000</b>			MESTI	EPA, GAEC, MOFA, MOE,

			Organize workshops to Validate biodiversity agreement.				X	X	160,000			MESTI	EPA, GAEC, MOFA, MOE,
	Review and implement a national strategy to deal with invasive alien species	SP 1.1	Organize 3 workshops on gap analysis	Accra, Takoradi, Kumasi, Bolgatanga	X	X			250,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, Universities
			Engage consultant to conduct review	Accra	x	x			120,000			MESTI	NBC, NPA
			Hold stakeholder consultations on the revised strategy	Accra, Kumasi		x	x		200,000			MESTI	NBC
		Monitoring	National			X	X	290,000			MESTI	EPA, GAEC, MOFA, MOE, Universities	
	Establish marine protected areas along the coast	SP 1.1	Stakeholder consultations	Takoradi, Volta, Accra	X	X			150,000			MESTI	NBC, EPA, MLNR, MOFAD, Universities
			Engage consultant to survey and identify sites	Accra	X	X	X	X	350,000			MESTI	NBC, EPA, GAEC, MLNR, MOH Universities
		Training	Accra, Takoradi, Ho		x	x	x	350,000			MESTI	NBC, national	

												consult ant.	
	Protect important wetlands especially in the western corridor	<b>SP 1.1</b>	Community education	<b>Western Region (4 districts)</b>	X	X	X	X	<b>877,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs
			Enact DAs and MMDAs by-laws	<b>Takoradi and 4 other District capitals</b>	X	X	X	X	<b>1,150,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs, RCCs
			Monitoring and enforcement	<b>Western Region</b>	X	X	X	X	<b>1,000,000</b>			MESTI	NBC, GAEC, MOE, Universities
	Develop and implement a system of payment of ecosystem services	<b>SP 1.1</b>	Hire consultants	<b>Accra</b>	X	X	X	X	<b>1,300,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Universities
			Stakeholder consultation	<b>Nation-wide</b>	X	X	X	X	<b>290,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
			Monitoring and enforcement	<b>Nation-wide</b>	X	X	X	X	<b>1,000,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE,
	Promote research, public education and awareness on biodiversity and ecosystem	<b>SP 1.1</b>	Meetings/ conferences/ workshops	<b>Accra</b>	X	X	X	X	<b>380,000</b>			MESTI	NBC, EPA, GAEC, MOFA, MOE, Universities

	services												
			Produce education materials	Accra	X	X	X	X	690,000			MESTI	NBC, EPA, GAEC, Univeristies
			Public engagements	Nation-wide	X	X	X	X	1,150,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, Univeristies
	Ensure the effective management of biosphere reserves and other biodiversity hot spots.	SP 1.1	Meetings and conferences	Accra	X	X	X	X	550,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, RCCs, MMDAs
			Community engagements	Nation-wide	X	X	X	X	720,000			MESTI	NBC, EPA, GAEC, MOFA, MOE, MMDAs
			Support DAs. and MMDAs to enact by-laws	Five selected districts	X	X	X	X	1,850,000			MESTI	NBC, EPA, GAEC, MOFA, NBC, MOE, MMDAs
			Monitoring & Evaluation	Nation-wide	X	X	X	X	1,120,000			MESTI	NBC, EPA, MLNR, MLGRD
Enhance capacity to adapt to climate change impacts	Enhance national capacity to respond to climate change through the establishment of a Climate Change Centre	SP 1.1	Develop coordinating structures for the implementation of the National climate change policy strategy		X	X	X	X	63,700		42,480	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

			Institutionalize roles and responsibility for MMDAs to implement NCCPS		X	X	X	X	54,000		36,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Development of NCCPS M&E plan to monitor MMDAs for the implementation of the NCCPS		X	X	X	X	90,000		60,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Develop and implement communication strategy for the NCCPS		X	X	X	X	111,000		74,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Design and implement pro-poor climate interventions for vulnerable communities		X	X	X	X	114,000		76,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
			Train and build capacity of staff of MDAs to support climate change activities		X	X	X	X	114,000		76,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

			Support and Monitor implementation of NCCPS at sector and district levels		X	X	X	X	144,000		96,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
Mitigate the impacts of climate variability and change	Intensify research and promote awareness of climate change	SP 1.1	Support and Monitor R&D component of NCCPS at sector and district levels		X	X	X	X	144,000		96,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
Promote green economy  Ensure that practices in the oil and gas industry are consistent with Ghanaian and international standards of environmental sustainability	Implement alternative livelihoods strategies to minimize impacts of climate change on the poor and vulnerable especially women	SP 1.1 SP 1.1 SP 1.1 SP 1.1 SP 1.1 SP 1.1	Collaborate with relevant MDAs to implement smart agriculture component of NCCPS		X	X	X	X	102, 000		11m US\$ GH 68,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Promote energy efficiency in all aspects of social and economic life		Develop National Appropriate Mitigation Actions for priority sectors of the NCCP		X	X	X	X	48,000		32,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	(put all activities related to NAMA's under this)  Adopt climate		Develop and promote NAMA investor Guide to attract investments for mitigation actions		X	X	X	X	60, 000		40,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF

<p>sensitive waste management practices</p> <p>Develop a long-term national Low Carbon Growth (LCG) model for effective decision making</p> <p>Develop coordinated response to climate change challenges through linkages between research, industry and Government</p> <p>Develop adequate capacity of environmental management and regulatory institutions to monitor and enforce regulations for sustainable management of the oil and gas industry</p> <p>Develop and</p>	Collaborate with relevant MDAs to implement REDD+ readiness activities		X	X	X	X	78, 000		52,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Develop communication strategy for NAMA implementation		X	X	X	X	100,000		66,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Develop and implement Waste to Energy NAMAs		X	X	X	X	315, 000		210,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Develop and implement Sanitation Standards		X	X	X	X	315, 000		210,000	MESTI	EPA, NDPC, MOF, MOFA, MOFAD, MoEP, RCC, MLGRD, Universities, MMDAs, other MDAs, PEF
	Develop a green economy model for Ghana		X	X	X	X	75,000		50,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR
	Develop and implement low carbon development		X	X	X	X	37,500		25,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR



	enforce the use of spatial plans along the oil belts especially in the Western Region		strategy framework										
			Establish governance structure for implementation of climate change activities		X	X	X	X	120,000		80,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR
			Strengthen linkages between research, industry and government for implementation of NCCP		X	X	X	X	120,000		8,000	MESTI	PSC,NDPC, EPA, MLGRD, MLNR, Universities
			Review Environmental Assessment Guidelines for onshore oil and gas management  -Review of draft Environmental Assessment Guidelines for onshore for circulation  -First review of Draft guidelines (internal stakeholders – MESTI/EPA)  -Second Review of Draft Guidelines	Accra	x	x					15, 101.81	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation

			(External stakeholders)  -Printing of Guidelines									
			Review Waste Regulations for controlling onshore and offshore waste management in the oil and gas sector  -Stakeholders review workshop for Environmental Assessment Regulations  -Stakeholders review workshop for Waste Regulations  -Training in permitting of Offshore Chemicals	Accra						15,101.81	MESTI, EPA	Min. of Finance, Min. of Energy & Petroleum, Petroleum Commission, Ghana national petroleum corporation
			Develop an oil & gas specific waste management program to feed into the national	Accra/Takoradi		x	x	x		50,640	MESTI, EPA	Min. of Finance, Min. of Energy & Petroleum, Petroleum Commission,

			Waste Management Policy framework  - Develop draft programme  -Engage Stakeholder consultations  - Seek Cabinet Endorsement  - Seek Parliament approval										Ghana national petroleum corporation
			Organize Training for relevant MDAs on permitting, monitoring and controlling of Offshore Chemicals	Takoradi / Accra	x						7,550.91	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
			Develop spatial plan for two Districts in the Western Regions  - Training of TCPD staff to undertake the exercise	Takoradi	x						418,905.31	MESTI, Town & Country Plan. Dept,	District Assemblies in Western region
			Develop Regional Plans to promote effective resource	All regions		x	x	x			88,620	MESTI, Town & Country Plan.	All MMDAs in the country

			allocation across all Regions  - stakeholder consultations across all regions									Dept, National Devt Plannin g Commis sion	
			Develop National Spatial Framework for all regions in Ghana  -stakeholder consultations across the country  - Organize sensitization workshop for Parliamentary Select committee on Environment, Lands and Natural Resources  -Seek Cabinet approval  -Seek parliamentary approval  - launch of the National Spatial Framework  - public education about the plans	All regions		x	x	x			1,439,250	MESTI, Town & Country Plan. Dept, National Devt Plannin g Commis sion	All MMDAs in the country

			by the media										
			Prepare District Spatial Plans to guide development in all Districts Assemblies	216 Districts		x	x	x			318,150	MESTI, Town & Country Plan. Dept, National Devt Planning Commission	All MMDAs in the country
	Strengthen research into environmental impacts associated with the oil and gas industry	SP 1.1	Prepare Structural Plans to guide investments in all Districts Assemblies	216 Districts		x	x	x			190,132.5	MESTI, Town & Country Plan. Dept, National Devt Planning Commission	All MMDAs in the country
			Prepare local Plans to guide settlement planning across the country	216 Districts		x	x	x			209,070	MESTI, Town & Country Plan. Dept, National Devt Planning Commission	All MMDAs in the country
			Organize Field work	Takoradi /cape	x	x	x				53,611.426	MESTI,	Min. of Finance, Min. of Energy,

			Sensitivity Mapping (Version 2)	coast/Accra								EPA	Petroleum Commission, Ghana national petroleum corporation
			Develop first draft of Western and Central regional operational Oil Spill contingency plans for Stakeholders  -Review meeting with EPA selected staff on draft operational plans for the 2 Regions  Workshop for 2 Regions (Western and Central)  Support for students to carry a research work in waste management	Accra/Takoradi/coast	x	x	x				11,892.70	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation
			National oil Spill Contingency plan revised  - Undertake Internal Stakeholder meetings  Engage external	Accra/Takoradi		x	x				101,280	MESTI, EPA	Min. of Finance, Min. of Energy, Petroleum Commission, Ghana national petroleum corporation

			Stakeholders in a review workshop										
Build appropriate linkages between research and production to ensure that research outputs are utilized	<b>1.1 GENERAL ADMINISTRATI ON</b>	Implement the Phase 2 of the Action Plan on the use of local building industry in the construction industry	nationwide	X	X	x	X	500,000				MESTI	CSIR,MOTI,GEC, MWRWH,MDPI, GSA,ARC
		Organize Annual Stakeholders meeting to review the Action Plan on the Policy of the Use of Local Building Materials in the Construction Industry	Accra			x		50,000				MESTI	
		Organize Annual Regional Technology Fairs	Nationwide			x		1,000,000				MESTI	
		Support 5 R & D Institutions to establish and operation centers for developing and marketing technologies	Accra, Kumasi	X	X					2,500,000		MESTI/ COTVET	GTUC, UG, CSIR, GAEC, K-Poly, World Bank, MOF
		Launch the Annual National STI Competition	Nationwide		x	x	x	500,000		500,000		MESTI	Private Sector, MOTI, R & D Institution

	Promote the establishment of national Science and Technology Theme Parks to provide world-class facilities for electronics, precision engineering, ICT and bio-technology.	<b>1.1 GENERAL ADMINISTRATI ON</b>	Construct and Launch 2 technology parks	Nationwide	x	x	x	x	25,000,000				MESTI	MOF, NDPC, MOE, MOTI
	Facilitate the use of the platform of the annual “Ghana Science Congress” for development of relevant technologies to support agriculture, small and medium scale enterprises and climate change mitigation	<b>1.1 GENERAL ADMINISTRATI ON</b>	Plan and Organize the 2 <sup>nd</sup> Ghana Science Congress	Accra	X	X	x		250,000		250,000		MESTI	MOE, R & D institution, Science and Technology Associations, Ghana Acaademy of Arts and Sciences
	Provide a forum for collaboration among research institutions	<b>1.1 GENERAL ADMINISTRATI ON</b>	Participate in series of annual international conference related to STI	World wide	X	X	x	X	125,000				MESTI	
			Support the activities of the National	Ghana/EU	X	X	x	X	75,000				MESTI	CSIR-STEPRI, EU Commission



			Contacts Points (NCPs) of the EU Horizon 2020 programme										
<b>Strengthen policy formulation, development planning, and M&amp;E processes for equitable and balanced spatial and socio- economic development</b>	Institutionalize the coordination of development policy formulation, planning, monitoring and evaluation (M&E) at all levels especially among sector agencies	<b>1.4 POLICY, PLANNING, BUDGETING, MONITORING &amp; EVALUATION</b>											

<b>Improve transparency and access to public information</b>	Modernize information management systems of MDAs	<b>1.5 Statistics, Research, Information Management and Public Relations</b>											


## **Chapter 6: Monitoring and Evaluation Plan**

### **SECTOR Monitoring & Evaluation Arrangements**

#### **INTRODUCTION**

The importance of monitoring in the implementation of strategic plans, programmes and projects cannot be over emphasized. M&E ensures that at each stage of implementation of a project or programme, the required inputs are delivered on time, used as intended and is producing the desired results. It also provides the necessary feedbacks to inform policy and subsequent programmes.

Consequently, in the implementation of programmes and projects in this document, the Ministry's Policy, Planning, Monitoring and Evaluation (PPME) Directorate will be responsible for the overall Monitoring and Evaluation of the plan. However, specific project monitoring and evaluation are the responsibilities of Sector Departments implementing these projects. In the implementation arrangement, then roles and responsibilities of the various actors have been clearly spelt out. In most instances, the Ministry plays a facilitating role while the Agencies actually do the implementation of the programmes and projects. The Ministry will therefore send monitoring request to the Agencies to provide monitoring reports to reflect and complete the implementation process. The various Project Management Units of the Ministry shall also monitor periodically donor funded projects according to prescribed formats for monitoring and evaluation of projects by the NDPC for the sector. Monitoring and Evaluation reports should be prepared in accordance with the format recommended by the NDPC.

Monitoring and evaluation reports generated from all these arrangements will be coordinated by the PPMED and presented to the Ministry periodically.

**TABLE 6.1: MONITORING & EVALUATION MATRIX**

## **CHAPTER 7: COMMUNICATION PLAN**

### **7.1 Communication Strategy**

The purpose of this chapter is to formulate strategies and to bring the approved Sector Medium Term Development Plan (SMTDP) to all stakeholders with the view of soliciting the co-operation and collaboration of all stakeholders so as to facilitate successful implementation of planned programmes and projects, disseminate sector policies, programmes, projects, and progress reports to inform, educate and create awareness. This is to create awareness on the expected roles of all stakeholders in the implementation of sector programmes and projects, promote dialogue and generate feedback on the performance of the sector, and to access and manage the expectation of the public (parliament) concerning the services of the sector.

### **7.2 Collaborating MMDAs and Other Stakeholders**

#### **7.2.1 Ministries, Departments and Agencies (MDAs)**

The SMTDP has identified the following collaborating Ministries (MDAs) and other stakeholders as key informants and audience of its programmes and projects:

- Ministry of Finance and Economic Planning;
- Ministry of Local Government and Rural Development;
- Ministry of Lands and Natural Resources;
- Ministry of Energy;
- Ministry of Education;
- Ministry of Health;
- Information Services Department,
- Ministry of Women and Children Affairs;
- Ministry of Justice and Attorney General;
- Ministry of the Interior;
- Ministry of Defence;
- Ministry of Communications;
- Council for Scientific and Industrial Research (CSIR);
- Environmental Protection Agency (EPA);

- Ghana Atomic Energy Commission (GAEC);
- Town and Country Planning Department (TCPD);
- Water Resources Commission;
- Development Partners;
- Traditional Authorities;
- Non-Governmental organizations (NGOs);
- Civil Society Organizations (CSOs);
- Media;
- Private Sector (Districts, sub structures and Communities);
- Public works Department (PWD);
- Rural Enterprises Project;
- State Enterprises Commission (SEC);
- Technical Institutes of Ghana;
- Polytechnics
- Universities (University of Ghana, Kwame Nkrumah University of Science and Technology, University of Cape Coast, University for Development Studies; University of Education – Winneba); and
- Volta River Authority (VRA).

#### *7.2.2 Non-Governmental Agencies and Institutions*

- Association of Ghana Industries;
- Association of Small Scale Industries;
- Centre for Policy Analysis;
- Ghana Academy of Arts and Sciences;
- Ghana Association of Science Teachers;
- Ghana Biochemical Society;
- Ghana Chamber of Mines;
- Ghana Chemical Society;
- Ghana Geological Society;

- Ghana Institution of Biology;
- Ghana Institute of Planners;
- Ghana Institution of Engineers;
- Ghana Institution of Physics;
- Ghana Institution of Surveyors;
- Ghana Journalists Association;
- Ghana Medical Association;
- Ghana National Association of Garages;
- Ghana National Chamber of Commerce;
- Ghana Registered Nurses Association;
- Ghana Science Association;
- Institute of Economic Affairs;
- Mathematical Association of Ghana;
- National Union of environmental Non-Governmental Organisations;
- Pharmaceutical Society of Ghana;
- Private Enterprise Foundation
- Trades Union Congress; and
- Women in Science and Technology.

### **7.3 Expected Impacts and Issues Management**

The communication strategy is to develop simple messages focusing on the following:

- Clean and healthy environment;
- Promotion of S&T and Innovation activities;
- Increase household incomes, and reduce poverty levels;
- Improve standard of living;
- Stimulate local economy (i.e. tourism, use of local resources etc);
- Generate employment and revenue;
- Reduce rural-urban migration;



- Attract and retain professional and technical experts among others.

This sector, in collaboration with the identified MDAs, will hold discussions with Chiefs and landowners to conserve and protect the environment against alternative land use activities.

The communication strategy would ensure that Planning authorities enforce development control. It would also ensure that environmental impact assessment and mitigation plans are prepared to avoid degradation and potential conflict. Communication with regulatory authorities would strictly ensure compliance and enforcement of environmental regulation.

#### **7.4 Institutional Arrangement for Information Communication**

An Information Communication Unit (ICU) shall be established within the RSIM Directorate to co-ordinate the formulation, implementation and dissemination of the sector's communication plan and strategies.

The ICU which shall be chaired by the Director of Research, Statistic and Information Management (Director RSIM) shall meet at least once a quarter. Other members shall include:

- Director, PPBME;
- Director, STI;
- Director, F&A;
- All heads of Departments and Agencies; and
- The Public Relations Officer - Member/Secretary.

#### **7.5 Selected Consultation/Outreach Methods**

##### **7.5.1 Interpersonal Communication**

Interpersonal communication with stakeholders include, interaction, letters, memoranda, telephone conversations, fax messages, conference calls, Voice Over Internet Protocol (VOIP) etc. a newsletter, conference, networking, workshop, e-mail alerts, press release, website and promotional literature.

### *7.5.2 Media*

The sector outreach programme first and foremost focuses on internal publicity. It may take the form of meetings with a definite agenda and appropriate documents provided through minutes and reports.

It may also include notice board, handouts, newsletters, brochures, audio visuals like slides, video clips and documentaries and use of corporate identity keys – logos, slogans, special colours, official type styles and dress, calendars, diaries. Seminars, symposia, workshops and spot-lights constitute additional tools for information dissemination.

### *7.5.3 Public Media*

Use of Information Service Department's publicity vans, press coverage – using public newspapers review programmes on radio and television, interviews, panel discussions programmes, Use of the sector website and other government websites, intranets/internet, including Local Area Networks(LAN) and Wide Area Networks(WAN), Central Document Repository System including Documentation Centres, Voice Over Internet Protocols (VOIP), etc.

## **7.6 Communication Technique**

- Use of multi-media approach, including outreach activities;
- Advocacy; and
- Publicity.

## **7.7 Co-Ordination**

The major components of the co-ordination are:

- Identifying experts for contents of communication materials;
- Developing and producing all communication materials;
- Identifying resource persons to facilitate sector campaigns at all levels;
- Organizing workshops, meetings and seminars;

- Media planning and buying; and
- Monitor and evaluate the campaign.

## **7.8 Monitoring and Evaluation**

Evaluation shall be done through Annual Progress Reports and Summative Evaluation

## **7.9 Monitoring Indicators**

- Implementation of planned activities;
- Number of communication materials produced and disseminated backed by distribution list to various targets;
- Major documents simplified and disseminated;
- Number of outreach activities undertaken and reports produced; and
- Press clippings, recordings and transmission certificates from media houses.

## **7.10 Evaluating Success - Indicators**

- Percentage achievement of Deliverables for different policy goals;
- Openness and transparency promoted and thereby reducing resistance;
- Loyalty and trust built among stakeholders;
- New partnerships built;
- Sharing of new ideas;
- Opportunities for creative thinking and problem solving created;
- Increased Job satisfaction;
- Enlarged sphere of influence;
- Increased awareness of work profile; and
- Increased respect and cooperation.

**Table 7.1** provides a breakdown of methods, dates and stakeholders for consultation with the aim of assessing the impact of programmes/projects and to provide the necessary information on the programmes/projects of the Sector.

**Table 7.1: Summary of Media Consultation/Outreach to Be Used By the Sector**

ITEM No.	DATE	METHOD	STAKEHOLDERS	SPOKEPERSONS
1	March and September	Teaching and Learning	MESTI/ Academic Institutions	Resource Persons
2	January-December	Coverage, conferences, press releases etc	Print Media, Electronic Media, Opinion Leaders, Chiefs, Financial Institutions, Research Institutions, Service Providers, etc.	Minister, Deputy Ministers, Chief Director etc.
3	March, July	Printing press	RSIM, MESTI Project Coordinators, Printing press, MESTI Agencies etc	Distributions of the print out.
4	May	Meetings	RSIM, Various MESTI Directorates, MESTI Agencies, Min of Communications/Information Services Department, Media	Minister, Deputy Ministers, Chief Director and Heads of Agencies
5	October	Meetings/ coverage	Media, MESTI Agencies etc	Minister, Deputy Ministers, Chief Director etc
6	October	Workshop	MESTI Agencies, Min of Communications, Information Services Dept, General Public	RSIM
7	December	Selection Process/ Awards	Journalists/ MESTI Agencies etc	Minister and Chief Director.

### **7.11 Budget**

The budget to be used to support the consultations and outreach programmes is presented in table 7.2 below.

**Table 7.2: Budget for the Medium of Consultation/Outreach**

Item No.	Activities	Responsibility	Stakeholders	Qty	Frequency	Unit Cost (Gh¢)	Budget (Gh¢)
1. 1	Yearly training of PR Officers ( Foreign & Local Training Institutions) <ul style="list-style-type: none"> <li>▪ Effective PR function</li> <li>▪ Effective communication skills</li> </ul>	MESTI/Relevant institutions	MESTI, IPR, Academic/Relevant institutions	2	2	25,000.00	50,000.00
2. 2	Publicity/coverage of Minister & Deputy Ministers activities	Director RSIM/PRO	Media/Relevant institutions	3	20	2, 500.00	50,000.00
3. 3	Production of brochures, half yearly journals documentaries and other publications on MESTI programs, projects and activities.	Director RSIM, PRO/ Editorial Board	MESTI, Project Coordinators, Printing press, MESTI Agencies etc	4	1	17,500.00	70,000.00
4. 4	Meet-The-Press Series	RSIM, Various MESTI	Min of Communicatio	1	1	50,000.00	50,000.00

		Directorates and MESTI Agencies	ns/Information Services Department, Media				
5. 6	Policy Fair	RSIM, Various MESTI Directorates, MESTI Agencies,	Ministry of Communicatio ns/Information Services Department, Media	1	1	50,000.00	50,000.00
6. 8	Training of Journalists on Environmental and STI issues	RSIM, STI AND Environment Directorate	Journalists/ Resource Persons	1	2	15, 000.00	30,000.00
7. 9	Environmental Journalists Awards	RSIM, various MESTI Directorates	Media, MESTI Agencies, Editorial Board	1	1	55,000.00	50,000.00
	<b>TOTAL</b>						<b>355,000.00</b>

### **7.12 Impact Assessment**

Media monitoring will be used after each announcement to evaluate, solicit the views of key stakeholders particularly the beneficiary communities to find out the effectiveness of the communication tools and processes and to re-strategize by considering method of delivery and content of the message.



## **ANNEXES**

### **Annex 1: Assets Register**

<b>Infrastructure/ facility</b>	<b>Physical Location</b>	<b>Quantity</b>	<b>Condition</b>	<b>Required</b>	<b>Gap</b>	<b>Remarks</b>
Office block	MESTI Head Office, Ministries	2	Good	3	1	Need for creation of more office space
Official Vehicles	MESTI Head Office, Ministries	23 (includes two motor bikes)	Fairly Good	25	2	Half of the fleet are old vehicles and comes with high maintenance cost. There is also the need for the purchase of at least two staff buses to aid with official work and the transport need of staff
Office furniture (Office Desks, Swivel Chairs)	MESTI Head Office, Ministries	78 of each	Fairly Good	78		No office space to accommodate more furniture
Photocopiers	MESTI Head Office, Ministries	11	Fairly Good	11		Regular servicing to avoid frequent breakdowns and the need to purchase modern industrial copiers
Laptop Computers	MESTI Head Office, Ministries	8	Good	20	12	Regular servicing and updating of softwares
Desktop Computer	MESTI Head Office, Ministries	36		50	14	Regular servicing and updating of softwares
Refrigerator	MESTI Head Office, Ministries	25	Fairly Good	35	10	Replacement of old and non-energy conserving fridges
Air Conditioners	MESTI Head Office, Ministries	45	Good	45		Replacement of outmoded and non-energy saving air conditioners

Television set	MESTI Head Office, Ministries	14		22		Replacement of outmoded hunchback and other non-energy television.
Scanners	MESTI Head Office, Ministries	5		10	5	The need to encourage its use to limit paper usage
Radio	MESTI Head Office, Ministries	26		35	9	Each office must at least own one
Fax Machines	MESTI Head Office, Ministries	4	Fairly Good	11	7	2 broken down
Comb Binder	MESTI Head Office, Ministries	7		10	3	4 broken down
File Cabinet	MESTI Head Office, Ministries	70	Good	70		Regular servicing (oiling and other routine maintenance)
Printers	MESTI Head Office, Ministries	35	Good	50	15	Regular servicing
Conference Chairs	MESTI Head Office, Ministries	44	Good	86	42	8 of the conference chair are in the Minister Conference area with 36 at the main Ministry Conference Room which is highly inadequate to accomdate the entire staff
Telephone Handset	MESTI Head Office, Ministries	19		50	31	Intercomsare needed in all offices and direct lines for some specified rooms

