Republic of The Gambia

Ministry of Environment, Climate Change, Water Resources, Parks and Wildlife

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BUSINESS PLAN (2015 – 2019)
for the proposed
THE GAMBIA METEOROLOGICAL AUTHORITY (GAMA)

June 2014

prepared by

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1. SUMMARY

The goal of this business plan for the Gambia Meteorological Authority (GAMA) is to facilitate the establishment of a meteorological infrastructure and service that correspond to (a) the requirements of the country to reduce vulnerability to natural disasters, (b) the needs of the customers and the economic sectors of The Gambia, and (c) to fulfill the international obligations vis-à-vis WMO and civil aviation.

The Business Plan will take departure from the enactment of the Gambia Meteorological Authority Bill by National Assembly which will create the foundation and framework for the operation of the Gambia Meteorological Authority (GAMA) in the years to come. The Business Plan provides an elaborated overview of vision and mission as stated below:

***VISION:** To excel in the provision of quality weather and climate products and services to various sectors for sustainable socio-economic development of the country, effective climate risk management and remain relevant to the international community.*

***MISSION:** To provide relevant, accurate, reliable and timely weather and climate products and services to various stakeholders for the attainment of sustainable socio-economic development of the country, climate risk management and in collaboration with the international community.These activities will be carried out by qualified and dedicated staff supported by the latest research and technology.*

*The **values of the employees** will be focussed around belief in individual responsibility and creativity, excellence in daily operations, social responsibility at the community, accountability, innovation, transparent interactions with stakeholders, a culture of continuous improvement and zero tolerance concerning negligence and production of low quality services.*

*The Gambia Meteorological Authority will have a pivotal and central role in Gambia to support sustainable socio-economic development and climate risk management of the country. Nonetheless, GAMA will also aim at creating "**a business culture**" to provide a commodity or service that can be sold for money, based upon understanding the needs of the customers, establish new contracts to increase income, promote marketing environment and improve and sustain communication with customers. Competition within the meteorological sector in The Gambia is virtually non-existent – mainly due to the inherent perception of the service being provided as a 'public good', and secondly, because initial capital investment in meteorological infrastructure is sizeable. This situation puts the GAMA in an advantageous position for securing customers and resources benefiting from capital and human investments already made during the past years.*

*The overall **success factors** will include knowing the needs special requirements of the market and customer categories, developing partnerships and providing superior products and services.*

GAMA is constituted with a Board responsible for the performance of its policy functions, powers and duties conferred by the GAMA Act. The Board is comprised of a chairperson, five other members elected/selected by the various stakeholders and the General Director of the GAMA, who shall also be Executive Secretary of the Board.

Under the overall management of the General Director, the organizational structure of GAMA comprises the following Sections and Units:

- *Administration, Accounts, Communication, Marketing and HR Section*
  - *Administration and Accounts Unit*
  - *Communication, Marketing, Customer and Public Relation Unit*
  - *Human Resources Management Unit*
- *Network/Station Section*
- *Climate Services and Data Section*
- *Forecasting Section*

The Senior Management Team includes the General Director of the Authority, Technical Director (Deputy), and heads of the three administrative units and heads/principal officers of the three technical sections. The Technical Director (Deputy) is responsible for the management of the three technical sections and the three administrative units report directly to the General Director.

The heads/principal officers of the technical sections can depute 1-2 Assistant Managers, and, in most cases, supervisory positions within the sections. The staff of each section may be organized by its Manager into units or task forces as appropriate. Inter-sectional or unit teams may be established by the General Director or Technical Director for specific projects or other purposes.

GAMA recognizes the need for training and development of its human resources and therefore encourages staff members to pursue relevant courses which will enhance the skills, knowledge and ability of the individuals. In-house programmes will be designed to improve the supervisory and management practices of staff as well as to improve their productivity capability. In addition, the Authority will plan for continued training of new young professionals to replace staff members seeking employment opportunities outside the Authority.

*During the first five-year period (2015-2019) covered by this business plan, the **strategic objectives** of GAMA will be to:*

1. *Ensure institutional and performance sustainability of GAMA in providing demand-driven meteorological products and services to the customers;*
2. *Develop and implement adequate and relevant programs that will ensure provision of meteorological products and services to sectors of the economy, particularly those not currently being adequately served;*
3. *Improve Information Communication Technology (ICT) for the effective and efficient management of data and information collection, processing, storage, retrieval and reciprocal communication between the GAMA and stakeholders;*
4. *Promote bilateral and multi-lateral cooperation in the meteorological sector;*
5. *Promote application of meteorological products and services; and*
6. *Strengthen the GAMA program planning, implementation; monitoring and evaluation in order to enable the sections/units improve the performance in delivering meteorological products and services.*

*With departure point in these strategic objectives, details of the **specific objectives, outputs, main intervention strategies and indicators** related to implementation of the strategic objectives/business plan are outlined with a the synchronized **action plan** scheduling the implementation of these strategic objectives.*

*The **financial implications** associated with transforming the existing Meteorological Division under the Department of Water Resources to a fully established authority will require a **major shift in understanding** the benefits of meteorological services, but also the associated costs by the main national customers such as the Gambia Civil Aviation Authority (GCAA) and Gambia Port Authority (GPA). The financial plan presented in this business plan consists of the two main elements, viz. costs and revenues, and reflects a gradual move from the prevailing non-commercial setting in 2014 to a financially viable organizational establishment of GAMA by the end of this business plan period.*

It is projected that the first year (2015) is guided much by the present situation related to staffing (number and qualifications) whereas the following three years (2016-2018) the new Authority is being geared up concerning new staff recruitment, training/education and investments as well as building up the revenue sources – and in the final year (2019) GAMA is fully established and functioning as intended.

*The **estimated cost and expenses** for the new Authority is based on comparison of pay scale, allowances and operational expenses for similar agencies in The Gambia (NEA, GCAA, NAWEC and PURA). Nonetheless, it is likely that the Authority during the first years of its establishment would need to provide the necessary service within a funding framework initially only allowing for a 70 percent of the personnel cost to be covered of the salaries otherwise expected to be paid in such an authority. However, over time and with the GAMA intensifying its partner collaboration and marketing, the revenue and funding from providing the meteorological services should increase which then would allow a financial platform whereby full "authority staff salaries level" can be achieved in a not too distant future.*

*The **financing of the operation and capital investments** of the new meteorological authority will need to be a blend between revenues from various customers/receivers of meteorological services, Government funding due to the partly "public good" nature of the service and finally Cooperating Partners due to the substantial capital investments needed.*

*The basis of revenue estimates from customers/receivers of meteorological service in The Gambia is based upon an analysis of the **actual workload/cost** of providing the customized services including personnel and operational cost. In other words, it will be based upon actual cost of GAMA related to "the service" of meteorological information and forecast provided to GCAA necessary – for example to operate arrivals and departures of flights from the national international airport.*

*The **financial sustainability/viability** of the new authority will obviously depend upon the acceptance of the main customers to make the adequate contribution(s) towards the cost required to run a modern meteorological authority. The main customers for non-competed services will need to accept payments set at a reasonable level consistent with the level of recurrent costs required to provide such services. Capital investment costs are assumed to be financed either by government or donor development partners.*

2. BUSINESS OVERVIEW

The Gambia Meteorological Authority (GAMA) is the national authority and provider of meteorological (weather and climate) services in The Gambia. The main task is to safeguard life and property of the Gambian people and to provide high quality weather and climate services to the civil aviation, seaborne transportation, enterprises, organizations, governmental institutions and people in general to support the agriculture, trade and commerce of the country. The added value by this service provision is achieved by the customer's ability to plan ahead to minimize losses and harness opportunities to make profitable business.

In addition, the activities of GAMA are strongly linked to programmes like the Global Framework for Climate Services (GFCS), Disaster Risk Reduction (DRR) and compliance to QMS for aeronautical meteorology which all are prioritized by the World Meteorological Organization.

The way of producing meteorological services has changed radically during the recent years. The world weather is predicted by numerical models covering the whole globe. The weather forecasts are no longer based on analyses of weather observations but the data is used to calibrate the models. The comparative advantage of local weather services in the global competition is reached by:

- Implementing a high resolution model and by calibrating it to the local conditions.
- Maintaining close contacts to customers and by understanding their needs.
- Producing customer-oriented products.

To be competitive and cost efficient, the production of services must be automated and the organization must be highly qualified and efficiently organized.

2.1 Vision Statement

The vision for GAMA is:

"To excel in the provision of quality weather and climate products and services to various sectors for sustainable socio-economic development of the country, effective climate risk management and remain relevant to the international community".

2.2 Mission Statement

The Gambia Meteorological Authority needs to re-position itself to contribute towards Vision 2020, which is to transform The Gambia into a dynamic middle income country, socially, economically and scientifically. To this effect, the proposed mission statement of GAMA is:

"To provide relevant, accurate, reliable and timely weather and climate products and services to various stakeholders for the attainment of sustainable socio-economic development of the country, climate risk management and in collaboration with the international community.These activities will be carried out by qualified and dedicated staff supported by the latest research and technology."

2.3 Strategic Objectives

1. Ensure institutional and performance sustainability of the GAMA in providing demand driven meteorological products and services to the customers;
2. Develop and implement adequate and relevant programs that will ensure provision of meteorological products and services to sectors of the economy, particularly those not currently being adequately served;
3. Improve Information Communication Technology (ICT) for the effective and efficient management of data and information collection, processing, storage, retrieval and reciprocal communication between the GAMA and stakeholders;
4. Promote bilateral and multi-lateral cooperation in the meteorological sector;

5. Promote application of meteorological products and services, particularly in marginalized vulnerable communities;
6. Strengthen the GAMA program planning, implementation, and monitoring and evaluation to enable the sections/units improve their performance in delivering meteorological products and services.

2.4 Values

As indicated in the mission statement the activities will be carried out by qualified and dedicated staff supported by the following values:

- Belief in individual responsibility and creativity.
- Excellence in daily operations, with superior customer service.
- Social responsibility at the community, area and national levels of society.
- Accountability at all levels, to all stakeholders/customers.
- Innovation in operations and service provision.
- Transparent interactions with stakeholders.
- A culture of continuous improvement.
- Zero tolerance concerning negligence and production of low quality services.

2.5 Business Idea

The Gambia Meteorological Authority will have a pivotal and central role in Gambia to support sustainable socio-economic development and climate risk management of the country. However, GAMA will also aim at creating "a business culture" to provide a commodity or service that can be sold for money, according to a specific and unique model. This model is summarized below:

- Understand the needs of the customer.
- Establish new contracts to increase income.
- Provide the right solution for each customer.
- Promote marketing environment, services and products.
- Improve and sustain communication with the customer.
- Educate existing and potential customers to use the products and services of GAMA.
- Maintain and sustain contact with the financing stakeholders (government and private sector).

2.6 Success Factors

Overall success factors include:

- Being close to the customer.
- Knowing the needs of the customers.
- Knowledge of the special requirements of the market.
- Developing partnership with other institutions to serve the customers.
- Providing superior products and services.

3. PRODUCTS AND SERVICES

3.1 Sector Analysis and Competitive Advantage

The national meteorological services in The Gambia was established by an Act of the National Assembly, Act no. XXX (2015), and mandated to the Gambia Meteorological Authority to provide weather and climate products in The Gambia. The provision of meteorological products and services in The Gambia had not previously been commercialized, since such services were considered to be public goods. This has made the sector unattractive to private investment and a virtual preserve of the government. While the situation remains as such, the passing of the new legislation provides GAMA with the platform to position itself and build upon its existing customers, which would enable the GAMA to undertake cost recovery for providing meteorological products and services.

Competition within the meteorological sector in The Gambia is virtually non-existent – mainly due to the inherent perception of the service being provided *as a public good*, and secondly, because initial capital investment in meteorological infrastructure is demanding. Hence, apart from GAMA, there is no other organization in the country whose core or side business is centred on meteorological products and services. As such, there is no rivalry in the sector.

This monopoly situation, among other factors, puts the Gambia Meteorological Authority in an advantageous position for securing customers and resources. The GAMA will therefore be in a unique position as a newly established semi-autonomous authority, benefiting from capital and human investments already made during the past years of its functioning under the Department of Water Resources as the Meteorological Division.

3.2 Product and Services

GAMA services are tailored to the general public, the government agencies and the private industry/companies, particularly, the transport sector (aviation, shipping, etc.), and also other professionals weather sensitive activities have been included as the Authority's professional customers. GAMA's warnings and forecasts are frequently used by almost the entire population.

GAMA tasks include:

- Monitoring of weather, climate and ocean.
- Providing basic measurements and processing and storage of climate and weather data.
- Preparation of weather and sea forecasts and warnings.
- Providing advice, briefings and other professional information services.
- Sensitizing/training sector stakeholders in the uptake of weather and climate services for enhanced decision-making
- Undertaking research and contributing to knowledge in climate and weather.
- Fulfilment of international obligations in the field of meteorology and related disciplines, including measurements and global data exchange.

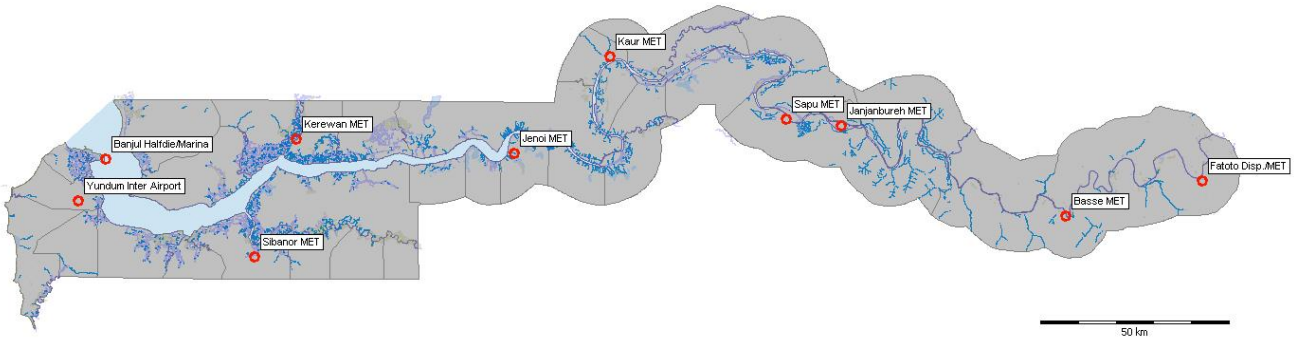
3.3 Production of Services

There are presently 10 meteorological stations in The Gambia observing different parameters:

- 2 stations reporting on 24-hour basis 0-24 hours UTC (Yundum Airport (even half hourly during severe weather) and Basse); and
- 8 stations reporting on 12 hour basis - every 3 hours (daytime 6-18 hours UTC, one station Janjanbureh even until 21 hours UTC).

The 10 stations have so far been operated by permanently based observers which report via mobile to Yundum Airport station for upload to the Global Telecommunication System.

The location of the 10 meteorological stations is shown below.



Additionally, during 2014, 10 Automatic Weather Stations (AWS) is being installed which will report continuously on an hourly basis through automated transmission of the data onto the Global Telecommunication System as well as into a climate database at GAMA level. The installation of the AWS is being carried out in full collaboration with GAMA staff, providing the necessary understanding of how the system functions, and easing maintenance and repairs.

3.4 Customer relations and requirements

The establishment of the GAMA and purpose of existence is borne out of customer focus and also taking into account the special geographical nature of the country. The needs of the customers steer the development of the Authority as depicted in its variety of customers, namely organizations, governmental institutions and agencies, enterprises, professional groups, the media, people in general and representative bodies of the customers. An additional potential group of customers are the internationally funded projects and their representatives.

The needs of the customer are prioritized according to their importance. Services are developed and produced for customers that can pay for them in order to secure the operation and development of the Authority.

To continue and potentially improve free delivery of public weather services, the funding to maintain such free services must continue to be secured from the governmental budget.

GAMA will engage and form networks and cooperation with international providers of weather services and companies with special expertise to be able to offer the customers complete solutions to their problems.

GAMA shall develop a marketing function within a Communication and Marketing Unit to be responsible for market research, marketing and customer relations on different levels.

4. MARKETING STRATEGY AND PUBLIC SERVICE DELIVERY

4.1 Marketing Strategy

As indicated above competition on meteorological products and services in The Gambia is virtually non-existent. Therefore, the services by GAMA are inherently unique selling propositions.

Authority image and market development will be imperative to the institutional and operational well-being of GAMA and its products and services at large. Such a plan will include marketing tactics, such as meeting and negotiation events with existing customers to receive feedback on service, media marketing, networking, and print, media, or online advertising.

Hence, GAMA will ensure to effectuate deliberate programming and implementation of institutional promotion and marketing of the authority's products and services.

Initially, GAMA will endeavour to undertake a structured market analysis that will accurately determine the demand for meteorological products and services, and in that way facilitate the effective realisation of the objective of promoting the application of meteorological products and services among its customers and stakeholders.

Specifically, the authority will undertake assessments to ascertain the customers demand of meteorological products and services and identify possibilities for either charging or increasing cost recovery fees (refer to specific objective 1.2 in section 6.1) and identify and design demand-driven and adequate meteorological products and service packages required locally and internationally (refer to specific objective 2.1 in section 6.2).

In order to continuously market meteorological products and services – basically there is a need to increase the appreciation and understanding of customers' needs of meteorological products and services by collecting feedback.

The main intervention activities will be to:

1. Identify and implement customer feedback mechanisms/methodologies;
2. Institutionalize customer feedback on the quality and delivery of meteorological products and services; and
3. Monitor and evaluate the demand patterns for meteorological products and services.

The customer feedback reports will be prepared at pre-set intervals (bi-annually) by GAMA, indicating data collection tools, methods used, and market analysis on met GAMA products and services for decision making on meteorological products and services by GAMA senior management.

The programming, project implementation and the market analysis will not be carried out as a one-off activity but will be a continuous process covering the entire business plan period, and with the help of internal staff and external consultants.

Further details of the proposed marketing activities are highlighted in Section 6.5.

4.2 Public Service/Corporate Social Responsibility

Apart from delivering services at a certain price/cost to its clients, GAMA will obviously also act as a public service provider of public goods – which can be considered as the "corporate social responsibility" of GAMA in saving lives and livelihoods and reducing damage to properties – hence validating the continued requirement of GAMA's funding from Government.

5. MANAGEMENT AND HUMAN RESOURCES

5.1 Management Team

Under the overall management of the General Director, the organizational structure of GAMA comprises the following Sections and Units:

- Administration, Accounts, Communication, Marketing and HR Section
  - Administration and Accounts Unit
  - Communication, Marketing CR + PR Unit
  - Human Resources Management Unit
- Network/Station Section
- Climate Services and Data Section
- Forecasting Section

The Senior Management Team includes the General Director of the Authority, Technical Director (Deputy), and heads of the three administrative units and heads/principal officers of the three technical sections. The Technical Director (Deputy) is responsible for the management of the three technical sections and the three administrative units are responsible to the General Director.

The heads/principal officers of the technical sections can depute 1-2 Assistant Managers, and, in most cases, supervisory positions within the sections. The staff of each section may be organized by its Manager into units or task forces as appropriate. Inter-sectional or unit teams may be established by the General Director or Technical Director for specific projects or other purposes.

GAMA is constituted with a Board responsible for the performance of its policy functions, powers and duties conferred by the GAMA Act. The Board is comprised of a chairperson, five other members elected/selected by the various stakeholders and the General Director of the GAMA, who shall also be Executive Secretary of the board. There shall be a Secretary to the Board who shall be appointed by the Board from the staff of the Authority.

Annex 1 provides an overview of the organizational structure of GAMA.

5.2 Human Resource Strategy and Policy

The mission statement of GAMA states that the services provided need to be carried out by qualified and dedicated staff. In order to ensure this, GAMA believes that professional motivation and the working conditions, wages/salary and benefits (including human resource development opportunities) it offers to its employees need to be competitive with those offered by other comparable employers in other national agencies.

GAMA has developed a human resource policy paper to employ and maintain a number of highly educated specialists in meteorology, climatology, programming, telecommunication technology, financing, marketing and engineering. The aim is to have top quality expertise in all important activities. The number of permanently employed staff is kept at a minimum to secure the financial sustainability of the services and the Authority. The nature of the service production in one single place/building enables “on the job training” and common learning in meteorology as well as in IT-technology. Short term personnel can be employed for research and development projects.

The structure of the workforce is gradually changed by employing graduate staff and by re-educating people according to the new demands. The total number of employees is balanced with the long term funding capacity of the agency.

GAMA is closely cooperating with WMO, regional universities supporting meteorological research and education. Post graduate education and special skills are obtained from countries with the highest level of skills in the relevant subjects.

The research and development is focused on development and utilization of the automatic data from the new AWSs for numerical models and databases for development of customer products, weather prediction and climatological research. The research programs are undertaken in cooperation with international research institutes and when possible, financed by funding from international sources, e.g. WMO.

5.3 Human Resource Development

GAMA recognizes the need for training and development of its human resources and therefore encourages staff members to pursue relevant courses which will enhance the skills, knowledge and ability of the individuals. In-house programmes will be designed to improve the supervisory and management practices of staff as well as to improve their productivity capability. In addition, the Authority will plan for continued training of new young professionals to replace staff members seeking employment opportunities outside the Authority.

An assessment of the employees' performance will be done every year and a plan of action will be developed for each employee's professional development. The Supervisor is responsible for follow up on these development plans and the Human Resources Management Unit receives and files all completed assessment reports.

Human resource development will be a continuous process and need to be planned and implemented well over a longer period to allow GAMA to function and not be hampered by too many key staff being away at the same time.

The present (2014) status of the available staffing, the present qualifications, the need for training/upgrading and recruitment is outlined in Annex 2.

6. IMPLEMENTING THE STRATEGIC OBJECTIVES

In the first five-year (2015-2020) business plan period, the GAMA strategic objectives will be to:

7. Ensure institutional and performance sustainability of the GAMA in providing demand driven meteorological products and services to the customers;
8. Develop and implement adequate and relevant programs that will ensure provision of meteorological products and services to sectors of the economy, particularly those not currently being adequately served;
9. Improve Information Communication Technology (ICT) for the effective and efficient management of data and information collection, processing, storage, retrieval and reciprocal communication between the GAMA and stakeholders;
10. Promote bilateral and multi-lateral cooperation in the meteorological sector;
11. Promote application of meteorological products and services; and
12. Strengthen the GAMA program planning, implementation; monitoring and evaluation in order to enable the sections/units improve its performance in delivering meteorological products and services.

The action plan/schedule for implementation of these strategic objectives is enclosed as Annex 3.

With departure point in the strategic objectives listed in Section 2.3 details of the specific objectives, outputs, main intervention strategies and indicators related to implementation of the strategic objectives/business plan are outlined in the following sections 6.1 to 6.6.

6.1 Strategic Objective 1: Ensure Performance and Sustainability

Strategic objective 1: Ensure institutional and performance sustainability of the GAMA in providing demand driven meteorological products and services to the customers.

Specific Objective 1.1: Ensure the institutional capacity and sustainability of GAMA.

Output 1.1.1: Legal, administrative and operational framework of GAMA established.

Main Intervention Strategies
1. The Gambia Water Act enacted by National Assembly.
2. The Gambia Meteorological Authority Act enacted by National Assembly.
3. The Gambia Meteorological Board formalized and functioning.
4. The Gambia Meteorological Authority inaugurated and in operation.

Output Indicators:
1. Gambia Water Act and GAMA Act passed and assented to.
2. GAMA Board instituted and meetings conducted.
3. GAMA with section and units established.
4. GAMA positions filled with qualified staff.

Specific Objective 1.2: Ensure that operation, maintenance and practices in meteorology adhere to international standards.

Output 1.2.1: Well-functioning meteorological authority in The Gambia established.

Main Intervention Strategies
1. Establish, install, maintain and monitor meteorological stations, telecommunication systems, and equipment and data storage and management systems.
2. Generate, collect, analyse, process, and disseminate meteorological data and information nationally and internationally.
3. Calibrate meteorological equipment for internal use.
4. Establish and maintain a secure national meteorological database for the purposes of research, analysis, planning and design.

5. Issue routine weather forecasts for the safe operation of civil and military aircrafts, ocean going vessels and other socio-economic activities including agriculture.
6. Issue meteorological advice and warnings with respect to extreme meteorological events including storms, floods and droughts.
7. Formulate policies, standards, objectives and guidelines necessary to ensure the performance of the functions of the Authority and the promotion of services both nationally and internationally.
8. Establishing a quality management system (QMS) suitable for the service provision in The Gambia

Output Indicators:
1. Well maintained and lasting meteorological stations, systems, and equipment.
2. Services and reports generated on meteorological data and information.
3. Annually calibrated meteorological equipment for internal use.
4. Maintain a well-organized/structured national meteorological database.
5. Number of weather forecasts services provided annually.
6. No. of meteorological advice and warnings in connection with extreme meteorological events.
7. Number of updates of policies, standards, objectives and guidelines.
8. Established QMS

Specific Objective 1.3: Raise the required financial means of GAMA to ensure institutional sustainability.

Output 1.3.1: Diversified sources of income to meet administrative and operational costs raised.

Main Intervention Strategies
1. Ensure that that the Gambia Meteorological Authority Bill is enacted by the National Assembly.
2. Consultations with GCAA and GPA to prepare and agree on modalities, which should govern the invoicing and payments for meteorological services (Customer Supplier Agreements).
3. Undertake assessment to ascertain the customers' demand of meteorological products and services and identify possibilities for charging cost recovery fees for other/new customers.
4. Implementation of cost recovery on selected met products and services.

Output Indicators:
1. Approved GAMA Bill,
2. Signed Customer Supplier Agreements with GCAA and GPA,
3. Resource Mobilisation Strategy on selected Met products and services,
4. Customer Supplier Agreements or MOU for the provision of met products and services including type of met products and services on which cost recovery is to be made and amount of money realized from cost recovery.

Output 1.3.2: Increased GAMA capacity to raise financial resources for programs from government and Cooperating Partners (CPs).

Main Intervention Strategies
1. Increase and improve GAMA's dialogue with government institutions and CPs; and
2. Improve GAMA's negotiating skills and knowledge for mobilizing financial resources.

Output Indicators
1. Number and type of meetings held with government institutions and CPs.
2. Minutes of meetings and reports.
3. Number of committees and organizations in which GAMA has membership.
4. Amounts and types of resources arising from GAMA's dialogue with government institutions and CPs.

Specific Objective 1.4: Build and develop the human resources capacity of the restructured GAMA.

Output 1.4.1: Effective and efficient delivery of meteorological products and services to customers (increased staff performance).

Main Intervention Strategies
1. Recruit a Senior Human Resource Officer and one assistant to undertake HR functions;
2. Completing one BSc. Degree in IT hardware/software (Senior IT Technician – HRM Unit)

3. Recruit and train technical staff;
4. Completing one BSc. Degree in Meteorology/Climatology (Principal Meteorologist, NS Section);
5. Completing one BSc. degree in Mechanical Engineering (Head Mechanical Eng./Tech., NS Section);
6. Completing one BSc. Degree in Electrical Engineering (Electrical Engineer/Technician, NS Section);
7. Completing 5 Class II (Higher Diploma Class II), 3 Class III and 9 Class IV.
8. Motivate and retain staff – develop a staff retaining strategy
9. Finalize job descriptions for all staff; and
10. Improve the working environment for the staff by ensuring that they have adequate infrastructure and logistical support to carry out their duties effectively and efficiently.

Output Indicators
1. Senior Human Resource Officer and one assistant recruited;
2. BSc. degree in IT/hardware completed by end 2019 (2016-19)
3. Number of staff recruited and trained in various fields of met specialization as well as support staff;
4. BSc. degree in Meteorology/Climatology completed by end 2018 (2016-18);
5. BSc. degree in Mechanical Engineering completed by end 2018 (2016-18);
6. BSc. degree in Electrical Engineering completed by end 2018 (2015-18);
7. Completed Class II, III and IV upgrading;
8. Percentage of staff separated from GAMA through resignation;
9. Job descriptions for all staff finalized; and
10. Number and quality of various infrastructure and logistics for operations.

Specific Objective 1.5: Improve the responsiveness and efficiency of GAMA by re-locating the Authority HQ.

Output 1.5.1: GAMAHQ re-located and placed at a more appropriately (possibly close to the airport).

Main Intervention Strategies:
1. Lobby government and advocate for the re-location of GAMA HQ.

Output Indicators
1. Number of meetings held with government on the relocation of GAMA HQ.
2. Statutory Instrument on the re-location of GAMA HQ.
3. Relocated GAMA HQ operational.

Specific Objective 1.6: Develop an accounting and financial management system of GAMA.

Output 1.6.1: Functioning of the GAMA financial administration.

Main Intervention Strategies

1. Preparing mode of operation and financial procedures for the functioning of the GAMA.
2. Submitting mode of operation for approval by the GAMA Board and endorsed by the Ministry of Finance.
3. Formulate annual and long term budgetary, operational and financial plans for the Authority.

Output Indicators:

1. Mode of financial operation for GAMA approved

Output 1.6.2: Improved financial management and control

Main Intervention Strategies
1. Recruit a Senior Accountant and two assistants to undertake accounting and procurement functions;
2. Acquire accounting software for the administration and accounts unit; and
3. Develop appropriate accounting and procurement management systems.

Output Indicators
1. Accountant recruited.
2. Accounting software in place.

3. Accounting and procurement manuals in place.

Specific Objective 1.7: Align GAMA towards effectiveness and efficiency to provide meteorological products and services to customers.

Output 1.7.1: A lean and cost-effective organizational structure which is financially sustainable created.

Main Intervention Strategies
1. Review GAMA organizational structure using the criteria of relevance, effectiveness, efficiency, adequacy and sustainability; such that it is:
    - Relevant to meet the needs and aspirations of the country and the international community;
    - Effective so GAMA is capable of implementing all planned programs and projects;
    - Efficient to timely delivery of quality, cost-effective products and services;
    - Adequate in having required staffing, which are sufficiently manned for its core business; and
    - Sustainable so that the GAMA structure is not too top heavy, but is lean and cost-effective.

Output Indicators: A restructured GAMA (if found required)

6.2 Strategic Objective 2: Implement Adequate and Relevant Programs

Strategic Objective 2: Develop and implement adequate and relevant programs that will ensure provision of meteorological products and services to sectors of the economy, particularly those not currently being adequately served.

Specific Objective 2.1: Weather and climate products and services made more specific.

Output 2.1.1: Develop comprehensive programs on meteorology products and services which meet the planning and intervention needs of the different sectors in the economy.

Main Intervention Strategies
1. Identify and design demand driven and adequate meteorological product and service packages required locally and internationally;
2. Rehabilitate any physical infrastructure to enable the Authority carry out its functions of observing weather and climate, data collection, processing, analysis and dissemination.

Output Indicators
1. Number of met packages for local and international customers, and
2. Number of types and condition of various operational infrastructures rehabilitated.

6.3 Strategic Objective 3: Improve Performance and Sustainability

Strategic Objective 3: Improve Information Communication Technology (ICT) for the effective and efficient management of data and information collection, processing, storage, retrieval and reciprocal communication between the GAMA and stakeholders;

Specific Objective 3.1: Improve ICT connectivity nationally and with the international community.

Output 3.1.1: Increased coverage of weather and climate data collection, and improved reliability of meteorological products and services achieved.

Main Intervention Strategy
Installation of ten (10) new automatic weather stations (AWSs).

Output Indicators
Number of AWSs installed

Output 3.1.2: Improved delivery of meteorological products and services at national and international levels.

Main Intervention Strategies
1. Update and acquire modern state-of-the art ICT technology;
2. Ensure connectivity between AWSs and GAMA Head Quarter and the international community.

Output Indicators
1. Number and type of ICT (communication) hardware acquired.
2. Number of AWSs connected to GAMA HQ.
3. Connectivity of GAMA HQ to the meteorological centres in the Western African sub-region and other institutions within the framework of WMO Global Telecommunications System (GTS).

Specific Objective 3.2: Improve the adequacy and modernity of ICT hardware and software.

Output 3.2.1: Improved ICT operational effectiveness and efficiency.

Main Intervention Strategies
1. Baseline study to determine the type and quantities of ICT software and hardware required; and
2. Acquire and install ICT equipment.

Output Indicators
1. Number and type of ICT software and hardware identified for acquisition.
2. Number and type of ICT software and hardware installed.

Specific Objective 3.3: Ensure technical skills and competencies of GAMA ICT personnel.

Output 3.3.1: Improved technical capability in the collection, management and dissemination of weather and climate data and information.

Main Intervention Strategies
1. Training of ICT personnel in the management of weather and climate data and information; and
2. Attachment of GAMA ICT personnel to international bodies with identified best practices.

Output Indicators
1. Number of ICT personnel trained in the management of weather and climate data and information;
2. Number of GAMA ICT personnel attached to international bodies with the identified best practices.

6.4 Strategic Objective 4: Promote Bilateral and Multi-Lateral Cooperation

Strategic Objective 4: Promote bilateral and multi-lateral cooperation in the meteorological sector.

Specific Objective 4.1: Identify and prioritize areas of bilateral and multilateral cooperation.

Output 4.1.1: Improved bilateral and multilateral cooperation achieved.

Main Intervention Strategies
Conduct a needs assessment in areas of bilateral and multilateral cooperation in the meteorological sector.

Output Indicators
Needs assessment Report on areas of bilateral and multilateral cooperation.

Specific Objective 4.2: Identify strategic meteorological institutions and countries for collaboration.

Output 4.2.1: Enhanced knowledge of existing and potential meteorological institutions and countries to collaborate with created.

Main Intervention Strategies
Conduct a study of collaborating meteorological institutions and their areas of specialization and comparative advantages.

Output Indicators
Study Report on enhanced collaborating meteorological institutions.

Specific Objective 4.3: Consolidating cooperation arrangements with respective meteorological institutions and countries.

Output 4.3.1: Network of cooperating meteorological institutions improved.

Main Intervention Strategies

1. Assisted by government contacts with potential cooperating partners in their respective countries and signing of agreements, protocols, conventions, etc. made;
2. Participate in international training, and applied research in meteorology and other related fields in co-operation with relevant international institutions and authorities; and
3. Ensure compliance with conventions, protocols, quality control mechanisms, certification requirements and all other relevant standards and practices of the WMO.

Output Indicators
1. Number of meetings with government and level of engagement.
2. Number and type of agreements, protocols and conventions signed by the Government of The Gambia with other governments to facilitate collaboration between GAMA and other met institutions.
3. Number and type of MoUs signed between GAMA and counterpart institutions outside Gambia.

6.5 Strategic Objective 5: Marketing of Meteorological Products and Services

Strategic Objective 5: Promote the use of meteorological products and services.

Specific Objective 5.1: Improve the design, and presentation of meteorological products and services.

Output 5.1.1: Meteorological products and services being more user-friendly and meeting specific requirements of the end-users.

Main Intervention Strategies
1. Simplify or tailor-make products and services language to suit the different categories of customers including local (rural) communities.
2. Improve the format, appropriate language and timing of communicating meteorological products and services – consultation with relevant government agencies.
3. Completing one BSc. degree in IT related to meteorological services (Communication Technician – Communication and Marketing Unit)
4. Provide consultancy services in meteorology to the public.

Output Indicators:
1. Survey Report on simplification of meteorological products and services in respect to the language and format used in the packaging of meteorological products and services.
2. BSc. degree in IT/hardware completed by end 2018 (2015-18), and
3. Number of consultancy services in meteorology to the public.

Specific Objective 5.2: Market meteorological products and services.

Output 5.2.1: Increased appreciation of customers' needs of meteorological products and services obtained.

Main Intervention Strategies
1. Identify and implement customer feedback mechanisms/methodologies;
2. Institutionalize customer feedback on the quality and delivery of meteorological products and services; and
3. Monitor and evaluate the demand patterns for meteorological products and services.

Output Indicators
1. Customer feedback reports prepared at pre-set intervals (bi-annually) by GAMA; indicating among others the data collection tools and methods used, and information generated for decision making on meteorological products and services.
2. Market Analysis Reports on GAMA meteorological products and services.

6.6 Strategic Objective 6: Strengthen Planning, Implementation and M&E

Strategic Objective 6: Strengthen the GAMA program planning, implementation, and monitoring and evaluation to enable the sections/units improve their performance in delivering meteorological products and services.

Specific Objective 6.1: Develop human resources capacity in operational management.

Output 6.1.1: Planning and implementation capacity developed.

Main Intervention Strategies
1. Training of staff in the sections/units in operational management;
2. Development of database on M&E (GAMA performance)

Output Indicators
1. Number of staff trained in operational management.
2. M&E programme developed.

Specific Objective 6.2: Programme planning, monitoring and evaluation put in place

Output 6.2.1: Programs regularly monitored and evaluated.

Main Intervention Strategies
1. Prepare a Monitoring and Evaluation Plan (M&E Plan).
2. Train key meteorological officers in M&E.

Output Indicators
1. M&E Plan document;
2. Number of meteorological officers trained in M&E.

Output 6.2.2: Research capacity developed.

Main Intervention Strategies
1. Provide training of GAMA staff in research methods in meteorology, climatology, agro-meteorology;
2. Put in place machinery, equipment and ICT software for research;
3. Conduct studies and investigations into meteorological issues and events as directed by the Ministry or in the general public interest.

Output Indicators
1. Number of GAMA staff trained in meteorological research methods; and
2. Number type and condition of machinery and equipment and ICT software acquired.

7. FINANCIAL PLAN – COST AND REVENUES

This chapter 7 presents the financial implications associated with creating the new GAMA. The first 5-year period (2015 - 2019) is to be considered the required time frame to transform the existing Meteorological Division under the Department of Water Resources to a fully established authority. Financially, the challenge is gradually to move from the present non-commercial setting to a financially viable organizational establishment.

The financial plan, which consists of the two main elements, viz. costs and revenues, reflects the progression of the establishment. Basically the first year of the business plan period (2015) is guided much by the present situation related to staffing (number and qualifications). The following three years (2016-2018) is the period where the establishment is geared up concerning new staff recruitment, training/education and investments as well as building up the revenue sources. The final year of the plan period (2019) is envisaged to be the year when GAMA is fully established and functioning as intended.

The elaborations and conclusions presented below are guided by this gradual transformation to take place over a 5-year period.

7.1 Cost and Expenses

The estimated cost and expenses below for the GAMA to be established is based on comparison of pay scale, allowances and operational expenses for similar agencies in The Gambia (NEA, GCAA, NAWEC and PURA) with details given in Annex 4 to 6.

7.1.1 GAMA Personnel Related Costs

Personnel Cost	2015	2016	2017	2018	2019
Personnel salaries	3.659.626	4.672.572	5.046.378	5.450.088	5.886.095
Personnel allowances	3.336.682	4.243.192	4.582.647	4.949.259	5.345.200
Pensions	695.329	887.789	958.812	1.035.517	1.118.358
ICS/Health Insurance	15.660	15.660	15.660	15.660	15.660
Total	7.707.296	9.819.213	10.603.497	11.450.524	12.365.313

The salary levels above is aimed towards achieving a personnel remuneration package which is at least 70% of what is paid in other similar authorities in The Gambia comparable with GAMA. For details on salaries and allowances level(s) reference is made to Annex 4.

7.1.2 GAMA Operating Costs

Operational Cost (GMD)	2015	2016	2017	2018	2019
Local transportation	45.643	46.784	47.954	49.153	50.382
International travels	1.642.229	1.683.285	1.725.367	1.768.501	1.812.714
Motor vehicle – O&M	1.072.000	1.098.800	1.126.270	1.154.427	1.183.287
Water and electricity	314.102	321.954	330.003	338.253	346.710
Rent	777.926	797.374	817.308	837.741	858.684
Communication	946.158	969.812	994.057	1.018.908	1.044.381
Stationery	375.807	385.203	394.833	404.703	414.821
Weather presentation cost	90.000	97.200	104.976	113.374	122.444

LGA rates on stations	25.000	25.625	26.266	26.922	27.595
Spare parts for AWS	275.000	297.000	320.760	346.421	374.134
Maintenance of equipment	229.350	247.697	267.513	288.914	312.027
Vehicle insurance	96.000	103.680	111.974	120.932	130.607
Board costs	189.900	194.648	199.514	204.502	209.614
Audit fees	66.257	67.914	69.612	71.352	73.136
Staff training	3.808.028	3.808.028	3.808.028	3.808.028	3.808.028
Contributions to WMO	450.000	461.250	472.781	484.601	496.716
Total	10.403.399	10.606.253	10.817.215	11.036.732	11.265.280

The figures above are partly based on actual estimates (number of vehicles, expected millage, present cost of service, actual cost of training etc.) and partly on benchmarking against operational cost from similar organizations (PURA, NEA, NAWEC).

For details on operational cost reference is made to Annex 5.

7.1.3 GAMA Investments or Capital Costs

Capital Investments (€)	Quantity needed	Anticipated reuse (%)	Quantity to be procured as new	Unit Cost Estimated average cost (€)	Total (€)
Head Office Building	1				1.037.778
Motor vehicles	8	25	6	28,000	168.000
Computers	40	50	20	450	9.000
Printers	14	50	7	300	2.100
Furniture	28	50	14	750	10.500
Filing Cabinets	19	79	4	400	1.600
Photocopier	7	57	3	1,500	4.500
Projectors and scanners	1	0	1	4.550	4.550
				Total	**1.238.028**

The majority of the investment required is towards construction of a new head quarter closer to the airport. The amount given is benchmarked against the cost of the NEA HQ building (built in 2008) and adjusted for inflation to 2019.

The on-going procurement of automatic weather stations (10) is not included as this is planned to be completed in 2014 (total estimated cost 450.000 €).

For details on capital investments reference is made to Annex 6.

7.2 Finance and Revenues

The financing of the operation and capital investments of the new meteorological authority will need to be a blend between revenues from various **Customers/Receivers** of meteorological services, **Government**

funding due to the partly "public good" nature of the service and finally **Cooperating Partners** due to the substantial capital investments needed.

The basis of revenue estimates from customers/receivers of meteorological service in The Gambia is based upon an analysis of the actual workload/cost of providing the customized services including personnel and operational cost.

7.2.1 Revenues from Service Provided to Civil Aviation

The Gambia Civil Aviation Authority is by far the largest and most important customers for meteorological service in The Gambia. Likewise, the service of GAMA is of paramount importance to GCAA and the country as a whole since without 24 hour meteorological services Banjul International Airport will not live up to international obligations/regulations under ICAO.

The general agreed basis of the payment for the service provided to GCAA is that this will be based upon *actual cost* of GAMA related to "*the service*" of meteorological information and forecast provided to GCAA necessary to operate arrivals and departures of flights from the international airport.

Based upon this mode of service calculation (for personnel component –refer to last two columns in Annex 4) – the following payment needs to be received from GCAA either monthly or on an annual schedule.

Payment to recover personnel and operational cost related to the meteorological service provided to GCAA	**2015**	**2016**	**2017**	**2018**	**2019**
Personnel Cost	5.452.429	6.435.165	6.949.389	7.504.752	8.104.543
Operational Cost	2.113.279	2.182.897	2.255.598	2.331.567	2.411.002
Total GCAA Payment	**7.565.708**	**8.618.062**	**9.204.987**	**9.836.319**	**10.515.545**

This payment is approximately 10% of the present landing and parking fees[1]and will be in tandem with charges made by other meteorological services in the region recovering its investment and operational cost associated with aviation forecasting service from the landing and parking charges. The average cost recovery in the region ranges from 5% - 10% and even 15% in Nigeria of landing and parking fees. For details reference is made to Annex 7.

7.2.2 Revenues from other Services

Two major other customers of continued meteorological services can be identified – namely **Gambia Ports Authority (GPA)** and the future **National Water Resource Management Authority**. In addition, there will be service requests for specific data from other government institutions, donors, private enterprises, etc. Estimates of the anticipated revenues from these customers are given below and details in Annex 8.

Gambia Ports Authority: The services required by GPA include data on tides, windstorms, sea levels and etc. This information is critical for sea navigation and is required so that GPA can provide effectiveness in operating the sea port in Banjul. The information from the GAMA station located at the Banjul port is collected, processing and transmitted to the GPA twice a day.

The cost of this service will need to be recovered on the basis of hourly rates for service provided to government, research; donor and semi-private sector use (see Annex 8).

[1]Landing and parking fees paid to GCAA in 2011 was 76.448.000 Dalasis

Service provide to GPA	Number of hours utilized per month	Day rate for semi-private	Payment per month	Payment per year
2 requests/day (total 8 hours/day)	240	572	137.280	1.647.360

National Water Resource Management Authority: NWRMA will in due course require weather information from GMA as inputs into their hydrological operations. This will entail some cost and a method of cost recovery should be established. It is estimated that approximately 15 requests/month shall be used to establish possible revenue from this customer.

The basis for the costing of this service is given in Annex 8.

Service provide to NWRMA	Number of hours utilized per month	Day rate for government	Payment per month	Payment per year
15 request/month (8 hours/request)	210	336	70.560	846.720

Other customers/revenue sources: It is expected that requests for meteorological data and information will continue and the distribution between the various types of customers will be approximately similar to earlier (survey made for request made in 2012).

Hence, expected revenue from such customers (e.g. NARI, UTG, AfDB, EU, UNFAO, Ministry of Works, Construction and Infrastructure, Department of Forestry, NAWEC, MOA, Tourism, etc.) is estimated below using same unit rate as above (see Annex 8).

Revenue from other sources	Number of requests in 2015	Average hours used per request[2]	Staff hour fee	Set price/hour for data processing	Total daily rate	Total
Government	6	14	136	200	336	28.224
Research	11	14	136	200	336	51.744
Donor	5	14	272	300	572	40.040
Semi-Private/Private	8	14	272	300	572	64.064
Total	30					184.072

Based on the figures above and adjusted for inflation and expected growth – revenues from other sources during the strategy period is given as seen below.

Revenues from other sources	2015	2016	2017	2018	2019
GPA[3]	1.647.360	1.779.149	1.921.481	2.075.199	2.241.215
NWRMA3	846.720	914.458	987.614	1.066.623	1.151.953
Other Sources[4]	184.072	208.001	235.042	253.845	274.152
Total per annum	2.678.152	2.901.608	3.144.136	3.395.667	3.667.321

[2]Based upon a survey of requests to the DWR in 2012 (in total 30)
[3] Adjusted for inflation by 8% annually
[4]Adjusted for inflation (8%) and 5% annual growth for first two years

7.2.3 Funding from Cooperating Partners (Donors)

It is expected that external funding can be secured for the following cost items for operation (80% of expenses on international travel to participate in various fora, 100% of capacity development/training and 100% towards to WMO contributions).

Revenue (funding support) from Cooperating Partners towards operational cost	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
International travels	1.313.783	1.418.886	1.532.397	1.654.988	1.787.388	7.707.442
Staff Training	3.808.028	3.808.028	3.808.028	3.808.028	3.808.028	19.040.138
Contributions to WMO	450.000	461.250	472.781	484.601	496.716	2.365.348
Total funding (GMD)	**5.571.811**	**5.688.164**	**5.813.206**	**5.947.617**	**6.092.131**	29.112.928
Total funding (Euro)	**104.085**	**106.258**	**108.594**	**111.105**	**113.805**	543.847

Similarly, funding for capital investment securing a new HQ close to the airport and the funding of additional vehicles will be negotiated with cooperating partners.

Revenue (funding support) from Cooperating Partners towards capital cost	***2015***	***2016***	***2017***	***2018***	***2019***	***Total***
Construction of new HQ	0	0	0	207.556	830.222	1.037.778
Motor vehicles	168.000	0	0	0	0	168.000
Total funding (GMD)	**8.993.292**	**0**	**0**	**11.110.763**	**44.443.052**	**64.547.107**
Total funding (Euro)	**168.000**	**0**	**0**	**207.556**	**830.222**	**1.205.778**

7.2.4 Government Funding/Subvention

The GAMA would normally provide information meant for the general public without a charge/fee. The requests include data for fishing (water levels, winds, visibility, and storms), seasonal rainfall for the planning of farming and crop seasons and macro-economic programming and planning.

It will therefore be necessary that Government continues to provide subvention to the GAMA for the purpose of maintaining the requisite infrastructure for forecasting and making this critical service available for public use.

Based upon the total operating and capital investment cost of GAMA and the anticipated revenues from no-government sources – the government subvention during 2015-2020 is expected to be as indicated below:

Government Subvention towards operational cost	**2015**	**2016**	**2017**	**2018**	**2019**
Total budget (GMD)	**2.295.025**	**3.217.632**	**3.258.383**	**3.307.653**	**3.355.597**

It can be noted from the budget above that the government contribution over the years will only slightly increase and the additional revenue potentials from other 'sectors' such as tourism, donors and projects, joint assignments with international partners and increased need and of variety of private operators for meteorological information will contribute to ensure personal cost levels to be comparable to similar other authorities in the country.

The government subvention towards the capital expenditures is indicated below:

Required subvention from Government towards capital investment cost	2015	2016	2017	2018	2019	Total
Computers	4.500	4.500	0	0	0	9.000
Printers	1.050	1.050	0	0	0	2.100
Furniture	5.250	5.250	0	0	0	10.500
Filing Cabinets	800	800	0	0	0	1.600
Photocopier	2.250	2.250	0	0	0	4.500
Projectors and scanners	2.275	2.275	0	0	0	4.550
Government Subvention (GMD)	**863.195**	**863.195**	**0**	**0**	**0**	1.726.391
Government Subvention (Euro)	**16.125**	**16.125**	**0**	**0**	**0**	32.250

7.3 Summarized Budgets (2015-2019)

7.3.1 Summarized Operational Budget (2015-2019)

The operational GAMA budget is summarized below (all figures given in GMD).

Cost and Expenditures	2015	2016	2017	2018	2019
Personnel related cost	7.707.296	9.819.213	10.603.497	11.450.524	12.365.313
Operating cost	10.403.399	10.606.253	10.817.215	11.036.732	11.265.280
Total GAMA Cost	**18.110.695**	**20.425.466**	**21.420.712**	**22.487.256**	**23.630.593**

Revenue /funding	2015	2016	2017	2018	2019
Government Subvention	2.295.025	3.217.632	3.258.383	3.307.653	3.355.597
Revenue from GCAA	7.565.708	8.618.062	9.204.987	9.836.319	10.515.545
Revenue from GPA	1.647.360	1.779.149	1.921.481	2.075.199	2.241.215
Revenue from NWRMA	846.720	914.458	987.614	1.066.623	1.151.953
Revenue from other Sources	184.072	208.001	235.042	253.845	274.152
Funding from Cooperating Partners	5.571.811	5.688.164	5.813.206	5.947.617	6.092.131
Total Revenue/Funding	**18.110.695**	**20.425.466**	**21.420.712**	**22.487.256**	**23.630.593**

Details of sources of revenues/funding for specific cost items are given in Annex 9.

The financial sustainability/viability of the new authority will obviously depend upon the acceptance of the main customers to make the adequate contribution(s) towards the cost required to run a modern meteorological Authority. The main customers for non-competed services will need to accept payment set at a reasonable level consistent with the level of recurrent costs (as outlined above) required to provide such services. It should be noted that the capital investment costs are not included in the payment calculations above as this is assumed to be paid either by government or donor development partners.

GAMA should as soon as possible establish Customer Supplier Agreements with all relevant customers (GCAA, GPA and eventually also NWRMA), which clearly define the outputs and associated costs/payments.

As mentioned in section 7.1.1 above, it is likely that the Authority during the first years of its establishment would need to provide the necessary service within a funding framework initially only allowing a certain part of the personnel cost to be covered. Hence, in the budget tables presented in this chapter and associated annexes, a 70%-level of the salaries otherwise expected to be paid in an authority is used. However, over time and with the GAMA intensifying its partner collaboration and marketing, the revenue and funding from providing the meteorological services should increase which then would allow a financial platform whereby full "authority staff salaries level" can be achieved in a not too distant future.

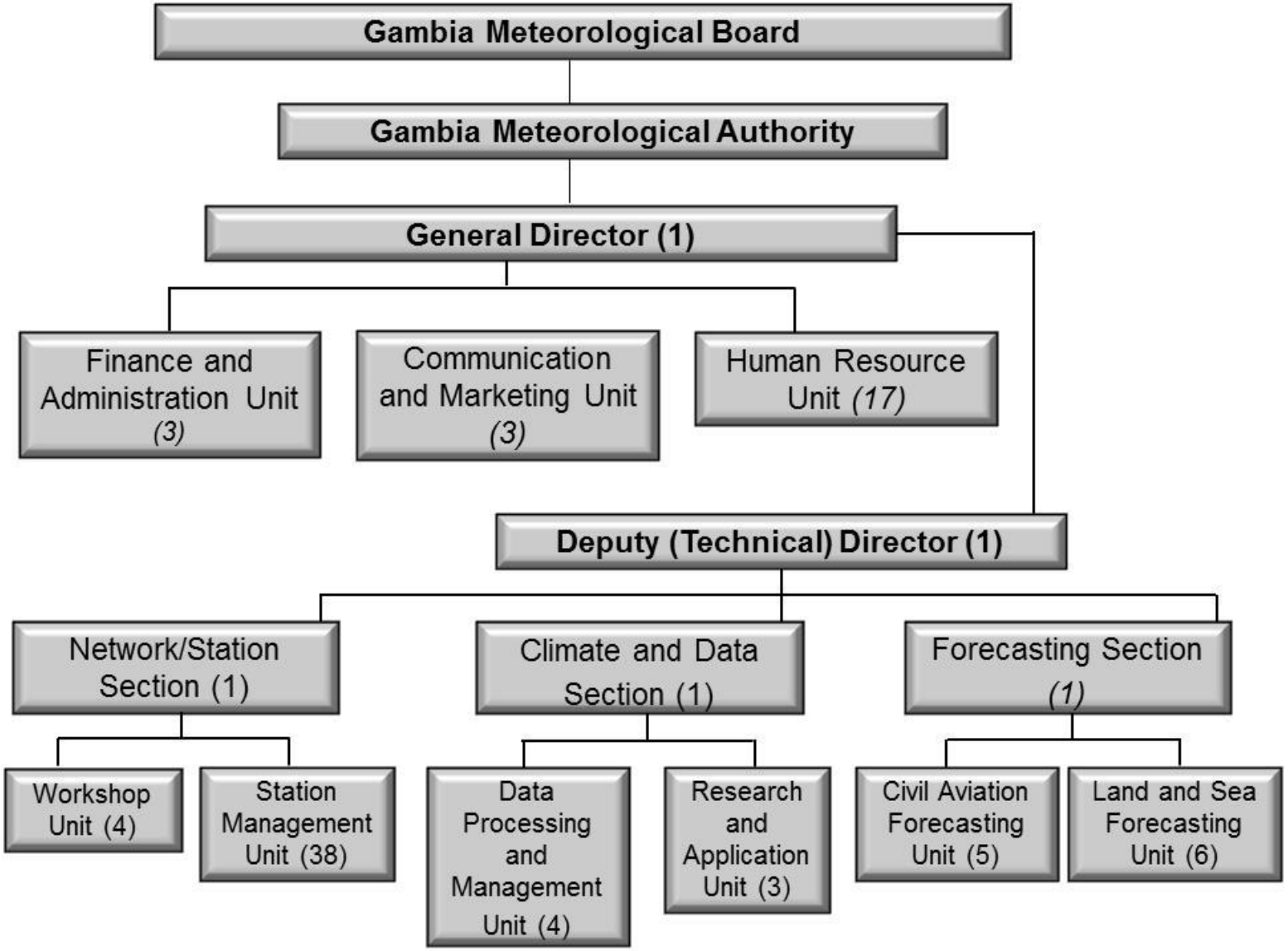
7.3.2 Summarized Capital (Investment) Budget (2015-2019)

The capital GAMA budget is summarized below (all figures given in EURO)

Required capital investment cost	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
Construction of new Head Office	0	0	0	207.556	830.222	1.037.778
Motor vehicles	168.000	0	0	0	0	168.000
Computers	4.500	4.500	0	0	0	9.000
Printers	1.050	1.050	0	0	0	2.100
Furniture	5.250	5.250	0	0	0	10.500
Filing Cabinets	800	800	0	0	0	1.600
Photocopier	2.250	2.250	0	0	0	4.500
Projectors and scanners	2.275	2.275	0	0	0	4.550
Total	**184.125**	**16.125**	**0**	**207.556**	**830.222**	**1.238.028**

Financing	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
Government Subvention	16.125	16.125	0	0	0	32.250
Funding from Cooperating Partners	168.000	0	0	207.556	830.222	1.205.778
Total Financing	**184.125**	**16.125**	**0**	**207.556**	**830.222**	**1.238.028**

Annex 1: GAMA Organisational Structure



Annex 2: Overview of GAMA staffing, qualification, recruitment and training needs

Gambia Meteorological Authority	**To build upon or recruit**		**Training/Upgrading**					
Authority Organisational Set-Up	Exist in DWR	To Recruit	MSc	BSc	Cl. I	Cl. II	Cl. III	Cl. IV
Finance, Administration, Communication, Marketing and HR								
General Director (GAMA)	1	0	0	0	0	0	0	0
Administration and Accounts	0	3	0	0	0	0	0	0
Communication, Marketing CR + PR	1	2	0	1	0	0	0	0
Human Resources and Services	12	5	0	1	0	0	0	0
Deputy Director (GAMA)	1	0	0	0	0	0	0	0
Total Administration	**15**	**10**	**0**	**2**	**0**	**0**	**0**	**0**
Network/Station Section								
Head/Principal Meteorologist	1	0	0	1	0	0	0	0
Workshop Unit	2	2	0	2	0	0	0	0
Station Management Unit	38	0	0	0	0	0	1	9
Total Network/Station Section	**41**	**2**	**0**	**3**	**0**	**0**	**1**	**9**
Climate and Data Section								
Head/Principal Meteorologist	1	0	0	0	0	0	0	0
Data Processing and Management Unit	4	0	0	0	0	1	2	0
Research and Application Unit	3	0	0	0	0	0	0	0
Total Climate and Data Section	8	0	0	0	0	1	2	0
Forecasting Section								
Head/Principal Meteorologist	1	0	0	0	0	0	0	0
Civil Aviation Forecasting Unit	5	0	0	0	0	1	0	0
Land and Sea Forecasting Unit	6	0	0	0	0	3	0	0
Total Forecasting Section	12	0	0	0	0	4	0	0
Total	76	12	0	5	0	5	3	9

Annex 3: Action Plan/Schedule for the Implementation of Strategic Objectives

Strategic Objective 1: Ensure institutional and performance sustainability of the GAMA in providing demand driven meteorological products and services to the customers	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 1.1: Ensure the institutional capacity and sustainability of GAMA																					
Output 1.1.1: Legal, administrative and operational framework of GAMA established																					
Activity 1.1.1.1: The Gambia Water Act enacted by National Assembly	X																				National Assembly
Activity 1.1.1.2: The Gambia Meteorological Authority Act enacted by National Assembly	X																				National Assembly
Activity 1.1.1.3: The Gambia Meteorological Board formalized and functioning		X																			Minister of Env, CC, WR, Parks and WL
Activity 1.1.1.4: The Gambia Meteorological Authority inaugurated and in operation		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	General Director,GAMA
Specific Objective 1.2: Ensure that operation, maintenance and practices in meteorology adhere to international standards																					
Output 1.2.1: Well-functioning meteorological authority in The Gambia established																					
Activity 1.2.1.1: Establish, install, maintain and monitor meteorological stations, telecommunication systems, and equipment and data storage and management systems	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Deputy Technical Director
Activity 1.2.1.2: Generate, collect, analyse, process, and disseminate meteorological data and information nationally and internationally	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of Climate and Data Section
Activity 1.2.1.3: Calibrate meteorological equipment for internal use	X				X				X				X				X				Head Mechanical Engineer
Activity 1.2.1.4 (1): Establish a secure national meteorological database for the purposes of research, analysis, planning and design.	X	X	X	X																	Head of Data Processing and Mgt. Unit
Activity 1.2.1.4 (2): Maintain a secure national meteorological database for the purposes of research, analysis, planning and design.			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of Data Processing and Mgt. Unit
Activity 1.2.1.5: Issue routine weather forecasts for the safe operation of civil and military aircrafts, ocean going vessels and other socio-economic activities including agriculture	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of Forecasting
Activity 1.2.1.6: Issue meteorological advice and warnings with respect to extreme meteorological events including storms, floods and droughts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of Forecasting
Activity 1.2.1.7: Formulate policies, standards, objectives and guidelines necessary to ensure the performance of the functions of the Authority and the promotion of services both nationally and internationally			X	X	X	X															General Director,GAMA
Activity 1.2.1.8: Establishing a quality management system (QMS) suitable for the service provision in The Gambia	X																				Deputy Technical Director

Strategic Objective 1: Ensure institutional and performance sustainability of the GAMA in providing demand driven meteorological products and services to the customers	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 1.3: Raise the required financial means of GAMA to ensure institutional sustainability																					
Output 1.3.1: Diversified sources of income to meet administrative and operational costs raised																					
Activity 1.3.1.1: Ensure that that the Gambia Meteorological Authority Bill is enacted by National Assembly	X																				Minister of Env, CC, WR, Parks and WL
Activity 1.3.1.2: Consultations with GCAA and GPA to prepare and agree on modalities which should govern the invoicing and payments for meteorological services (Customer Supplier Agreements)	X	X																			General Director,GAMA
Activity 1.3.1.3: Undertake assessment to ascertain the customers' demand of meteorological products and services and identify possibilities for charging cost recovery fees for other/new customers		X	X	X																	Head of Communication and Marketing
Activity 1.3.1.4: Implementation of cost recovery on selected meteorological products and services					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of Accounting
Output 1.3.2: Increased GAMA capacity to raise financial resources for programs from government and Cooperating Partners (CPs)																					
Activity 1.3.2.1: Increase and improve GAMA's dialogue with government institutions and CPs			X	X	X	X	X	X													General Director,GAMA
Activity 1.3.2.2: Improve GAMA's negotiating skills and knowledge for mobilizing financial resources			X	X	X	X															Head of HRM
Specific Objective 1.4: Build and develop the human resources capacity of the restructured GAMA																					
Output 1.4.1: Effective and efficient delivery of meteorological products and services to customers (increased staff performance)																					
Activity 1.4.1.1: Recruit a Senior Human Resource Officer and one assistant to undertake HR functions		X																			General Director,GAMA
Activity 1.4.1.2: Completing one BSc. degree in IT hardware/software (Senior IT Technician – HRM Unit)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					Head of HRM
Activity 1.4.1.3: Recruit and train technical staff			X	X	X	X															Head of HRM
Activity 1.4.1.4: Completing one BSc. degree in Meteorology/Climatology (Principal Meteorologist, NS Section)	X	X	X	X	X	X	X	X	X	X	X	X									Head of HRM
Activity 1.4.1.5: Completing one BSc. degree in Mechanical Engineering (Head Mechanical Eng./Tech., NS Section)					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of HRM
Activity 1.4.1.6: Completing one BSc. degree in Electrical Engineering (Electrical Engineer/Technician, NS Section)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					Head of HRM
Activity 1.4.1.7: Completing 5 Class II (Higher Diploma Class II), 3 Class III and 9 Class IV.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of HRM
Activity 1.4.1.8: Motivate and retain staff - develop a staff retaining strategy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of HRM
Activity 1.4.1.9: Finalize job description for all staff	X	X																			Head of HRM
Activity 1.4.1.10: Improve the working environment for the staff by ensuring that they have adequate infrastructure and logistical support to carry out their duties effectively and efficiently	X	X	X	X																	Head of HRM

Strategic Objective 1: Ensure institutional and performance sustainability of the GAMA in providing demand driven meteorological products and services to the customers	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 1.5: Improve the responsiveness and efficiency of GAMA by re-locating the authority HQ																					
Output 1.5.1: GAMA HQ re-located and placed more appropriately (possibly close to the airport)																					
Activity 1.5.1.1: Lobby government and advocate for the re-location of GAMA HQ			X	X	X	X	X	X													General Director,GAMA
Specific Objective 1.6: Develop an accounting and financial management system of GAMA																					
Output 1.6.1: Functioning of the GAMA financial administration																					
Activity 1.6.1.1: Preparing mode of operation and financial procedures for the functioning of the GAMA			X	X																	Head of Accounting
Activity 1.6.1.2: Submitting mode of operation for approval by the GAMA Board and endorsed by the Ministry of Finance				X	X																General Director,GAMA
Activity 1.6.1.3: Formulate annual and long term budgetary, operational and financial plans for the Authority				X				X				X				X				X	Head of Accounting
Output 1.6.2: Improved financial management and control																					
Activity 1.6.2.1: Recruit a Senior Accountant and two assistants to undertake accounting and procurement functions		X																			General Director,GAMA
Activity 1.6.2.2: Acquire accounting software for the administration and accounts unit			X	X																	Head of Accounting
Activity 1.6.2.3: Develop appropriate accounting and procurement management systems			X	X	X	X															Head of Accounting
Specific Objective 1.7: Align GAMA towards effectiveness and efficient to provide meteorological products and services to customers																					
Output 1.7.1: A lean and cost-effective organizational structure which is financially sustainable created																					
Activity 1.7.1.1: Review GAMA organizational structure using the criteria of relevance, effectiveness, efficiency, adequacy and sustainability															X	X					Independent reviewer(s)

Strategic Objective 2: Develop and implement adequate and relevant programs that will ensure provision of meteorological products and services to sectors of the economy, particularly those not currently being adequately served	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 2.1: Weather and climate products and services made more specific																					
Output 2.1.1: Develop comprehensive programs on meteorology products and services which meet the planning and intervention needs of the different sectors in the economy																					
Activity 2.1.1.1: Identify and design demand driven and adequate meteorological product and services packages required locally and internationally			X	X	X	X															Deputy Director
Activity 2.1.1.2: Rehabilitate any physical infrastructure to enable the Authority to carry out its functions of observing weather and climate, data collection, processing, analysis and dissemination			X	X							X	X							X	X	Head of Network/Stations

Strategic Objective 3: Improve Information Communication Technology (ICT) for the effective and efficient management of data and information collection, processing, storage, retrieval and reciprocal communication between the GAMA and stakeholders	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 3.1: Improve ICT connectivity nationally and with the international community																					
Output 3.1.1:Increased coverage of weather and climate data collection and improved reliability of meteorological products and services achieved																					
Activity 3.1.1.1: Installation of ten (10) new automatic weather stations (AWSs)																					**Already done**
Output 3.1.2: Improved delivery of meteorological products and services at national and international levels																					
Activity 3.1.2.1: Update and acquire modern state-of-the art ICT technology	X	X	X	X																	Head of Climate and Data Section
Activity 3.1.2.2: Ensure connectivity between AWSs and GAMA Head Quarter and the international community	X	X																			Head of Climate and Data Section
Specific Objective 3.2: Improve the adequacy and modernity of ICT hardware and software																					
Output 3.2.1: Improved ICT operational effectiveness and efficiency																					
Activity 3.2.1.1: Baseline study to determine the type and quantities of ICT software and hardware required			X																		Senior IT Technician
Activity 3.2.1.2: Acquire and install ICT equipment					X	X															Senior IT Technician
Specific Objective 3.3: Ensure technical skills and competencies of GAMA ICT personnel																					
Output 3.3.1: Improved technical capability in the collection, management and dissemination of weather and climate data and information																					
Activity 3.3.1.1: Training of ICT personnel in the management of weather and climate data and information					X	X	X	X													Head of HRM
Activity 3.3.1.2: Attachment of GAMA ICT personnel to international bodies with identified best practices							X	X	X	X	X	X	X	X	X	X	X	X	X	X	Head of HRM

Strategic Objective 4: Promote bilateral and multi-lateral cooperation in the meteorological sector	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 4.1: Identify and prioritize areas of bilateral and multilateral cooperation																					
Output 4.1.1: Improved bilateral and multilateral cooperation achieved																					
Activity 4.1.1.1: Conduct a needs assessment in areas of bilateral and multilateral cooperation in the meteorological sector					X	X															General Director,GAMA
Specific Objective 4.2: Identify strategic meteorological institutions and countries for collaboration																					
Output 4.2.1: Enhanced knowledge of existing and potential meteorological institutions and countries to collaborate with created																					
Activity 4.2.1.1: Conduct a study of collaborating meteorological institutions and their areas of specialization and comparative advantages						X	X														Head of Research and Application Unit
Specific Objective 4.3: Consolidate cooperation arrangements with respective meteorological institutions and countries																					
Output 4.3.1: Network of cooperating meteorological institutions improved																					
Activity 4.3.1.1: Assisted by government contacts with potential cooperating partners in their respective countries and signing of agreements, protocols, conventions, etc made							X	X	X	X											General Director,GAMA
Activity 4.3.1.2: Participate in international training, and applied research in meteorology and other related fields in co-operation with relevant international institutions and authorities									X	X	X	X	X	X	X	X	X	X	X	X	Head of HRD
Activity 4.3.1.3: Ensure compliance with conventions, protocols, quality control mechanisms, certification requirements and any other relevant standards and practices of the WMO							X	X	X	X	X	X	X	X	X	X	X	X	X	X	Deputy Director

Strategic Objective 5: Promote the use of meteorological products and services	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 5.1: Improve the design and presentation of meteorological products and services																					
Output 5.1.1: Meteorological products and services being more user-friendly and meeting specific requirements of the end-users																					
Activity 5.1.1.1: Simplify or tailor-make products and services language to suit the different categories of customers including local (rural) communities				X	X	X															Head of Communication and Marketing
Activity 5.1.1.2: Improve the format, appropriate language and timing of communicating meteorological products and services - consultation with relevant government agencies					X	X															Head of Climate and Data Section
Activity 5.1.1.3: Completing one BSc. degree in IT related to meteorological services (Communication Technician – Communication and Marketing Unit)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					Head of HRD
Activity 5.1.1.4: Provide consultancy services in meteorology to the public;							X		X		X		X		X		X		X		Deputy Director
Specific Objective 5.2: Market meteorological products and services																					
Output 5.2.1: Increased appreciation of customers' needs of meteorological products and services obtained																					
Activity 5.2.1.1: Identify and implement customer feedback mechanisms/methodologies					X	X															Head of Communication and Marketing
Activity 5.2.1.2: Institutionalize customer feedback on the quality and delivery of meteorological products and services							X	X	X	X											Head of Communication and Marketing
Activity 5.2.1.3: Monitor and evaluate the demand patterns for meteorological products and services							X	X	X	X	X	X	X	X	X	X	X	X	X	X	Customer/Public Relation Assistant(s)

Strategic Objective 6: Strengthen the GAMA program planning, implementation, and monitoring and evaluation to enable the sections/units improve their performance in delivering meteorological products and services.	IMPLEMENTATION Schedule, 2015 -2019																				RESPONSIBLE PARTY
	2015				2016				2017				2018				2019				
	Quarter				Quarter				Quarter				Quarter				Quarter				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Specific Objective 6.1: Develop human resources capacity in operational management																					
Output 6.1.1: Planning and implementation capacity developed																					
Activity 6.1.1.1: Training of staff in the sections/units in operational management			X	X	X	X	X	X	X	X	X	X				X				X	Head of HRD
Activity 6.1.1.2: Development of database on M&E (GAMA performance)					X	X															Senior IT Technician
Specific Objective 6.2: Programme Planning, Monitoring and Evaluation put in place																					
Output 6.2.1: Programs regularly monitored and evaluated																					
Activity 6.2.1.1: Prepare a Monitoring and Evaluation Plan (M&E Plan)						X															General Director,GAMA
Activity 6.2.1.2: Train key meteorological officers in M&E						X	X														Head of HRD
Output 6.2.2: Research capacity developed																					
Activity 6.2.1.1: Provide training of GAMA staff in research methods in meteorology, climatology, agro-meteorology					X	X	X	X													Head of HRD
Activity 6.2.1.2: Put in place machinery, equipment and ICT software for research						X	X														Head of Research and Application Unit
Activity 6.2.1.3: Conduct studies and investigations into meteorological issues and events as directed by the Ministry or in the general public interest							X	X	X	X					X	X			X	X	Head of Research and Application Unit

Annex 4: Personnel Cost Details

Salary Component for 2015

Positions	Staff Required	Comparable salary scale level (Similar to other authorities in The Gambia)					Total (annual)	Related to Aviation		Salary component expected from Government from 2015		Total (annual) (2015)	Total in % of what should be expected as salary in an authority
	Total	Class I	Class II	Class III	Class VI	Other	Dalasis	%	Dalasis	%	Dalasis	Dalasis	
Director General (GAMA)	1	18.750					225.000	40%	90.000	30%	67.500	**157.500**	70,00%
Deputy Director (GAMA)	1	18.281					219.375	40%	87.750	30%	65.813	**153.563**	70,00%
Communication Technician (ICE)	1					6.533	78.390	10%	7.839	60%	47.034	**54.873**	70,00%
Training Officer (entry level class IV MET School)	1	6.533					78.390	15%	11.759	55%	43.115	**54.873**	70,00%
Senior IT Technician	1					6.533	78.390	25%	19.598	45%	35.276	**54.873**	70,00%
Chief Driver	1					3.218	38.610	20%	7.722	50%	19.305	**27.027**	70,00%
Support Staff	9					1.658	179.010	20%	35.802	50%	89.505	**125.307**	70,00%
Head/Principal Meteorologist	1	11.310					135.720	50%	67.860	20%	27.144	**95.004**	70,00%
Head Mechanical Engineer/Technician	1					8.970	107.640	50%	53.820	20%	21.528	**75.348**	70,00%
Electrical Engineer/Technician	1					6.533	78.390	50%	39.195	20%	15.678	**54.873**	70,00%
Station Management Unit	38			5.662	4.680	4.680	2.192.970	70%	1.535.079	0%	0	**1.535.079**	70,00%
Head/Principal Meteorologist	1	11.310					135.720	20%	27.144	50%	67.860	**95.004**	70,00%
Data Processing and Management Unit	4	8.970	6.533	5.662			321.906	20%	64.381	50%	160.953	**225.334**	70,00%
Research and Application Unit	3	8.970	6.533	5.662			253.968	20%	50.794	50%	126.984	**177.778**	70,00%
Head/Principal Meteorologist	1	11.310					135.720	80%	108.576	-10%	-13.572	**95.004**	70,00%
Civil Aviation Forecasting Unit	5	8.970	6.533				450.450	100%	450.450	-30%	-135.135	**315.315**	70,00%
Land and Sea Forecasting Unit	6	8.970	6.533			5.662	518.388	0%	0	70%	362.872	**362.872**	70,00%
Total	76						5.228.037	51%	2.657.768		1.001.858	**3.659.626**	70,00%

Allowances Component for 2015

Positions	Staff Required	Comparable allowances level (Similar to other authorities in The Gambia)					Total (annual)	Related to Aviation		Salary component expected from Government from 2015		Total (annual)	Total of what sholud be expected as salary in an authority
		Class I	Class II	Class III	Class VI	Other	Dalasis	%	Dalasis	%	Dalasis	Dalasis	
Director General (GAMA)	1	10.000					120.000	40%	48.000	30%	36.000	84.000	70,00%
Deputy Director (GAMA)	1	8.750					105.000	40%	42.000	30%	31.500	73.500	70,00%
Communication Technician (ICE)	1					8.000	96.000	10%	9.600	60%	57.600	67.200	70,00%
Training Officer (entry level class IV MET School)	1	8.000					96.000	15%	14.400	55%	52.800	67.200	70,00%
Senior IT Technician	1					8.000	96.000	25%	24.000	45%	43.200	67.200	70,00%
Chief Driver	1					3.500	42.000	20%	8.400	50%	21.000	29.400	70,00%
Support Staff	9					2.500	270.000	20%	54.000	50%	135.000	189.000	70,00%
Head/Principal Meteorologist	1	11.500					138.000	50%	69.000	20%	27.600	96.600	70,00%
Head Mechanical Engineer/Technician	1					10.188	122.250	50%	61.125	20%	24.450	85.575	70,00%
Electrical Engineer/Technician	1					8.000	96.000	50%	48.000	20%	19.200	67.200	70,00%
Station Management Unit	38			3.500	3.500	3.500	1.596.000	70%	1.117.200	0%	0	1.117.200	70,00%
Head/Principal Meteorologist	1	11.500					138.000	20%	27.600	50%	69.000	96.600	70,00%
Data Processing and Management Unit	4	10.188	8.000	4.000			314.250	20%	62.850	50%	157.125	219.975	70,00%
Research and Application Unit	3	10.188	8.000	4.000			266.250	20%	53.250	50%	133.125	186.375	70,00%
Head/Principal Meteorologist	1	11.500					138.000	80%	110.400	-10%	-13.800	96.600	70,00%
Civil Aviation Forecasting Unit	5	10.188	8.000				532.500	100%	532.500	-30%	-159.750	372.750	70,00%
Land and Sea Forecasting Unit	6	10.188	8.000			5.662	600.438	0%	0	70%	420.307	420.307	70,00%
Total	76						4.766.688	0%	2.282.325		1.054.357	3.336.682	

Salary Component for 2016

Positions	Staff Required	Comparable salary scale level (2015 + added 8%) (Similar to other authorities in The Gambia)					Total (annual)	Related to Aviation		Salary component expected from Government from 2016		Total (annual) 2016	Total in % of what should be expected as salary in an authority
	Total	Class I	Class II	Class III	Class VI	Other	Dalasis	%	Dalasis	%	Dalasis	Dalasis	
Director General (GAMA)	1	20.250					243.000	40%	97.200	30%	72.900	**170.100**	70,00%
Deputy Director (GAMA)	1	19.744					236.925	40%	94.770	30%	71.078	**165.848**	70,00%
Head of Accounting	1					12.215	146.578	30%	43.973	40%	58.631	**102.604**	70,00%
Account Assistant	2					6.114	146.746	30%	44.024	40%	58.698	**102.722**	70,00%
Head of Communication and Marketing	1					12.215	146.578	20%	29.316	50%	73.289	**102.604**	70,00%
Customer/Public Relation Assistant	1					5.054	60.653	10%	6.065	60%	36.392	**42.457**	70,00%
Communication Technician (ICE)	1					7.055	84.661	10%	8.466	60%	50.797	**59.263**	70,00%
Head of HR and Service	1					12.215	146.578	20%	29.316	50%	73.289	**102.604**	70,00%
Training Officer (entry level class IV MET School)	1	7.055					84.661	15%	12.699	55%	46.564	**59.263**	70,00%
Private Secretary to the General Director	1					3.475	41.699	15%	6.255	55%	22.934	**29.189**	70,00%
HR Relation Assistant	1					5.054	60.653	20%	12.131	50%	30.326	**42.457**	70,00%
Senior IT Technician	1					7.055	84.661	25%	21.165	45%	38.098	**59.263**	70,00%
IT Technician	1					6.114	73.373	25%	18.343	45%	33.018	**51.361**	70,00%
Superintendent (in charge of Service Staff)	1					7.055	84.661	20%	16.932	50%	42.331	**59.263**	70,00%
Chief Driver	1					3.475	41.699	20%	8.340	50%	20.849	**29.189**	70,00%
Support Staff	9					1.790	193.331	20%	38.666	50%	96.665	**135.332**	70,00%
Head/Principal Meteorologist	1	12.215					146.578	50%	73.289	20%	29.316	**102.604**	70,00%
Head Mechanical Engineer/Technician	1					9.688	116.251	50%	58.126	20%	23.250	**81.376**	70,00%
Electrical Engineer/Technician	1					7.055	84.661	50%	42.331	20%	16.932	**59.263**	70,00%
Workshop Assistants	2					5.054	121.306	50%	60.653	20%	24.261	**84.914**	70,00%
Station Management Unit	38			6.114	5.054	5.054	2.368.408	70%	1.657.885	0%	0	**1.657.885**	70,00%
Head/Principal Meteorologist	1	12.215					146.578	20%	29.316	50%	73.289	**102.604**	70,00%
Data Processing and Management Unit	4	9.688	7.055	6.114			347.658	20%	69.532	50%	173.829	**243.361**	70,00%
Research and Application Unit	3	9.688	7.055	6.114			274.285	20%	54.857	50%	137.143	**192.000**	70,00%
Head/Principal Meteorologist	1	12.215					146.578	80%	117.262	-10%	-14.658	**102.604**	70,00%
Civil Aviation Forecasting Unit	5	9.688	7.055				486.486	100%	486.486	-30%	-145.946	**340.540**	70,00%
Land and Sea Forecasting Unit	6	9.688	7.055			6.114	559.859	0%	0	70%	391.901	**391.901**	70,00%
Total	88						6.675.103	47%	3.137.396		1.535.176	**4.672.572**	

Allowances Component for 2016

Positions	Staff Required	Comparable allowances level (2015 + added 8%) (Similar to other authorities in The Gambia)					Total (annual)	Related to Aviation		Salary component expected from Government from 2015		Total (annual)	Total of what sholud be expected as salary in an authority
		Class I	Class II	Class III	Class VI	Other	Dalasis	%	Dalasis	%	Dalasis	Dalasis	
Director General (GAMA)	1	10.800					129.600	40%	51.840	30%	38.880	90.720	70,00%
Deputy Director (GAMA)	1	9.450					113.400	40%	45.360	30%	34.020	79.380	70,00%
Head of Accounting	1					12.420	149.040	30%	44.712	40%	59.616	104.328	70,00%
Account Assistant	2					3.780	90.720	30%	27.216	40%	36.288	63.504	70,00%
Head of Communication and Marketing	1					12.420	149.040	20%	29.808	50%	74.520	104.328	70,00%
Customer/Public Relation Assistant	1					3.780	45.360	10%	4.536	60%	27.216	31.752	70,00%
Communication Technician (ICE)	1					8.640	103.680	10%	10.368	60%	62.208	72.576	70,00%
Head of HR and Service	1					12.420	149.040	20%	29.808	50%	74.520	104.328	70,00%
Training Officer (entry level class IV MET School)	1	8.640					103.680	15%	15.552	55%	57.024	72.576	70,00%
Private Secretary to the General Director	1					3.780	45.360	15%	6.804	55%	24.948	31.752	70,00%
HR Relation Assistant	1					3.780	45.360	20%	9.072	50%	22.680	31.752	70,00%
Senior IT Technician	1					8.640	103.680	25%	25.920	45%	46.656	72.576	70,00%
IT Technician	1					3.780	45.360	25%	11.340	45%	20.412	31.752	70,00%
Superintendent (in charge of Service Staff)	1					8.640	103.680	20%	20.736	50%	51.840	72.576	70,00%
Chief Driver	1					3.780	45.360	20%	9.072	50%	22.680	31.752	70,00%
Support Staff	9					2.700	291.600	20%	58.320	50%	145.800	204.120	70,00%
Head/Principal Meteorologist	1	12.420					149.040	50%	74.520	20%	29.808	104.328	70,00%
Head Mechanical Engineer/Technician	1					11.003	132.030	50%	66.015	20%	26.406	92.421	70,00%
Electrical Engineer/Technician	1					8.640	103.680	50%	51.840	20%	20.736	72.576	70,00%
Workshop Assistants	2					3.780	90.720	50%	45.360	20%	18.144	63.504	70,00%
Station Management Unit	38			3.780	3.780	3.780	1.723.680	70%	1.206.576	0%	0	1.206.576	70,00%
Head/Principal Meteorologist	1	12.420					149.040	20%	29.808	50%	74.520	104.328	70,00%
Data Processing and Management Unit	4	11.003	8.640	4.320			339.390	20%	67.878	50%	169.695	237.573	70,00%
Research and Application Unit	3	11.003	8.640	4.320			287.550	20%	57.510	50%	143.775	201.285	70,00%
Head/Principal Meteorologist	1	12.420					149.040	80%	119.232	-10%	-14.904	104.328	70,00%
Civil Aviation Forecasting Unit	5	11.003	8.640				575.100	100%	575.100	-30%	-172.530	402.570	70,00%
Land and Sea Forecasting Unit	6	11.003	8.640			6.114	648.473	0%	0	70%	453.931	453.931	70,00%
Total	88						6.061.703	0%	2.694.303		1.548.889	4.243.192	

Normal Pay Scales and Allowances of an authority similar to the GAMA

A. Basic Salary Schedule		Salary Base Year	Allowances (base year)					Total Allowances Base Year	Total Salary and Allowances Base Year
	Category		Responsibility	Telephone	Vehicle Transport	Residential	Risk		
I	**Top Management**								
A	Director General	225.000	72.000	24.000	-	12.000	12.000	120.000	345.000
B	Deputy Director	219.375	63.000	18.000	-	12.000	12.000	105.000	324.375
II	**Heads of Sections**								
A	Head of Accounting	135.720	54.000	12.000	48.000	12.000	12.000	138.000	273.720
A	Head of Communication and Marketing	135.720	54.000	12.000	48.000	12.000	12.000	138.000	273.720
A	Head of HR and Service	135.720	54.000	12.000	48.000	12.000	12.000	138.000	273.720
A	Head/Principal Meteorologist - Network	135.720	54.000	12.000	48.000	12.000	12.000	138.000	273.720
A	Head/Principal Meteorologist - Climate and Data	135.720	54.000	12.000	48.000	12.000	12.000	138.000	273.720
A	Head/Principal Meteorologist - Forecasting	135.720	54.000	12.000	48.000	12.000	12.000	138.000	273.720
III	**Heads of Units**								
A	Head Mechanical Engineer/Technician - Workshop Unit	107.640	41.250	9.000	48.000	12.000	12.000	122.250	229.890
A	Head/Senior Meteorologist - Data Processing and Management	107.640	41.250	9.000	48.000	12.000	12.000	122.250	229.890
A	Head/Senior Meteorologist - Research and Application	107.640	41.250	9.000	48.000	12.000	12.000	122.250	229.890
A	Chief Forecasters - Civil Aviation Forecasting	107.640	41.250	9.000	48.000	12.000	12.000	122.250	229.890
A	Chief Forecasters - Land and Sea	107.640	41.250	9.000	48.000	12.000	12.000	122.250	229.890
B	Senior Meteorologist/Climatologist	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Superintendant (in charge of Service Staff)	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Training Officer (entry level class IV MET School)	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Station O&M Manager (Deputy)	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Senior Meteorological Technician	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Electrical Engineer/Technician	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Senior IT Technician	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Forecasters	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Communication Technician (ICE)	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
B	Head Middle Meteorological Technician - Station Management Unit	78.390	36.000	-	36.000	12.000	12.000	96.000	174.390
IV	**Technicians & Assistants**								
A	Middle Meteorological Technician	67.938	-	-	24.000	12.000	12.000	48.000	115.938
A	IT Technicians	67.938	-	-	18.000	12.000	12.000	42.000	109.938
A	Senior Observer/Comm.	67.938	-	-	18.000	12.000	12.000	42.000	109.938
A	Account Assistant	67.938	-	-	18.000	12.000	12.000	42.000	109.938
A	TV Production Technician	67.938	-	-	18.000	12.000	12.000	42.000	109.938
A	Station O&M Manager (Deputy)	67.938	-	-	18.000	12.000	12.000	42.000	109.938
B	Observers	56.160	-	-	18.000	12.000	12.000	42.000	98.160
B	O&M Assistant	56.160	-	-	18.000	12.000	12.000	42.000	98.160
B	Customer/Public Relation Assistants	56.160	-	-	18.000	12.000	12.000	42.000	98.160
B	HR Relation Assistants	56.160	-	-	18.000	12.000	12.000	42.000	98.160
B	Workshop Assistants	56.160	-	-	18.000	12.000	12.000	42.000	98.160
C	Private/ Secretary	38.610	-	-	18.000	12.000	12.000	42.000	80.610
C	Chief Driver	38.610	-	-	18.000	12.000	12.000	42.000	80.610
D	Driver	19.890	-	-	18.000	12.000	-	30.000	49.890
E	Messenger	19.890	-	-	18.000	12.000	-	30.000	49.890
E	Cleaner	19.890	-	-	18.000	12.000	-	30.000	49.890

Annex 5: Operation Cost Details

Sl.	**Operational Cost**	**Means of estimation/calculation of 2015 budget cost**	**2015**	**2016**	**2017**	**2018**	**2019**
1	Local transportation	Benchmarked against of PURA operational cost (2010-2012) – 50%	45.643	46.784	47.954	49.153	50.382
2	International travels	Benchmarked against of PURA operational cost (2010-2012) – 50%	1.642.229	1.683.285	1.725.367	1.768.501	1.812.714
3	Motor vehicle running cost and maintenance	(Millage/fuel (90.000), spare parts (20.000) and regular maintenance/service (24.000)) x 8	1.072.000	1.098.800	1.126.270	1.154.427	1.183.287
4	Water and electricity	Benchmarked against of PURA operational cost (2010-2012) – 50%	314.102	321.954	330.003	338.253	346.710
5	Rent	Benchmarked against of PURA operational cost (2010-2012) – 50%	777.926	797.374	817.308	837.741	858.684
6	Communication (Telephone, Internet & Postage)	Benchmarked against of PURA operational cost (2010-2012) – 50%	946.158	969.812	994.057	1.018.908	1.044.381
7	Stationery	Benchmarked against of PURA operational cost (2010-2012) – 50%	375.807	385.203	394.833	404.703	414.821
8	Weather Presentation Cost	(Monthly salary of totally 7.500 to 3 semi-permanent staff/presenters) x 12 months	90.000	97.200	104.976	113.374	122.444
9	LGA Rates on stations	Estimated (to be confirmed)	25.000	25.625	26.266	26.922	27.595
10	Spare parts for Automatic Stations	Estimated to be totally 5.000 Euro/year (exchange rate of 55 GMD per one Euro)	275.000	297.000	320.760	346.421	374.134
11	Maintenance of equipment	Benchmarked against of PURA operational cost (2010-2012) – 50%	229.350	247.697	267.513	288.914	312.027
12	Vehicle insurance	Estimated to be 12.000 x 8 vehicles	96.000	103.680	111.974	120.932	130.607
13	Board Costs	Benchmarked against of PURA operational cost (2010-2012) – 60%	189.900	194.648	199.514	204.502	209.614
14	Audit Fees	Benchmarked against of PURA operational cost (2010-2012) – 80%	66.257	67.914	69.612	71.352	73.136
15	Staff Training	See separated budget overview (next page)	3.808.028	3.808.028	3.808.028	3.808.028	3.808.028
16	Contributions to WMO	Estimated (to be confirmed)	450.000	461.250	472.781	484.601	496.716
	Total Operational Cost		10.403.399	10.606.253	10.817.215	11.036.732	11.265.280

GAMA Training Budget 2015 - 2019

Gambia Meteorological Authority	Training/Upgrading						Cost of Training(€)					Location
Organisational Set-Up	MSc	BSc	Cl. I	Cl. II	Cl. III	Cl. IV	Airticket	Fees	Boarding/Lodging	Materials	Total	
Administration, Accounts, Communication, Marketing and HR												
Communication, Marketing CR + PR	0	1	0	0	0	0	653,82	5.755,40	29.352,52	4.316,55	40.079,28	Ghama/Gimpa
Human Resources and Services	0	1	0	0	0	0	653,82	5.755,40	29.352,52	4.316,55	40.079,28	Ghama/Gimpa
Total Administration	**0**	**2**	**0**	**0**	**0**	**0**	**1.307,64**	**11.510,79**	**58.705,04**	**8.633,09**	**80.158,56**	
Network/Station Section												
Head/Principal Meteorologist	0	1	0	0	0	0	653,82	12.086,33	17.266,19	4.316,55	34.322,89	Nigeria
Workshop Unit	0	2	0	0	0	0	1.307,64	24.172,66	34.532,37	8.633,09	68.645,77	Nigeria
Station Management Unit	0	0	0	0	1	9	6.538,21	30.215,83	43.165,47	21.582,73	101.502,24	Nigeria
Total Network/Station Section	**0**	**3**	**0**	**0**	**1**	**9**	**8.499,67**	**66.474,82**	**94.964,03**	**34.532,37**	**204.470,89**	
Climate and Data Section												
Data Processing and Management Unit	0	0	0	1	2	0	1.961,46	9.064,75	12.949,64	6.474,82	30.450,67	Nigeria
Total Climate and Data Section	0	0	0	1	2	0	**1961,46194**	**9064,7482**	**12949,64029**	**6474,82014**	**30.450,67**	
Forecasting Section												
Civil Aviation Forecasting Unit	0	0	0	1	0	0	653,82	3.021,58	4.316,55	2.158,27	10.150,22	Nigeria
Land and Sea Forecasting Unit	0	0	0	3	0	0	1.961,46	9.064,75	12.949,64	6.474,82	30.450,67	Nigeria
Total Forecasting Section	0	0	0	4	0	0	**2.615,28**	**12.086,33**	**17.266,19**	**8.633,09**	**40.600,89**	
Total	0	5	0	5	3	9	**14.384,05**	**99.136,69**	**183.884,89**	**58.273,38**	**355.681,02**	
										Total (GM1	**19.040.138,43**	

Annex 6: Capital Investment Details

Summary of estimated quantities of GAMA HQ equipment to operate						
Sections	**MV**	**Computers**	**Printers**	**Furniture (Sets)**	Filing Cabinet	Photocopier
Administration and Accounts	3	4	3	4	4	1
Communication and Marketing	0	3	1	3	2	1
Human Resource Service	0	8	2	9	0	0
Network Stations	3	8	2	0	6	0
Climate and Data Section	1	8	3	5	3	3
Forecasting Section	1	9	3	7	4	2
Total	**8**	**40**	**14**	**28**	**19**	**7**

Financial Estimates of Capital Expenditure - GAMA	**Means of estimation/calculation of capital investment**	Quantity needed	Percentage of anticipated reuse	Quantity to be procured as new	Unit Cost Estimated average cost	Total (€)
Head Office Building	Benchmarked against the cost of the NEA HQ building in 2008 (completion cost 46.700.000 GMD) and adjusted for inflation to 2019	1	0			1.037.778
Motor vehicles	3 saloons, 1 specialized van, 1 staff van and 3 double cabin pick-ups. Average cost 28.000	8	25	6	28.000	168.000
Computers	Unit cost of 450 Euro	40	50	20	450	9.000
Printers	Unit cost of 300 Euro	14	50	7	300	2.100
Furniture	Set of 1 ex. Desk/1 ex. Chair/2 visitor's chairs	28	50	14	750	10.500
Filing Cabinets	Unit cost of 400 Euro	19	79	4	400	1.600
Photocopier	Unit cost of 1.500 Euro	7	57	3	1500	4.500
Projectors	Lump sum of 4.550 Euro	1	0	1	4550	4.550
Total to be financed						**1.238.028**

Annex 7: Revenue Details (GCAA)

Personnel cost related to the meteorological service provided to GCAA	***2015***	***2016***	***2017***	***2018***	***2019***
Personnel salaries	2.657.768	3.137.396	3.388.388	3.659.459	3.952.216
Personnel allowances	2.282.325	2.694.303	2.909.847	3.142.635	3.394.046
Pensions	504.976	596.105	643.794	695.297	750.921
ICS/Health Insurance	7.360	7.360	7.360	7.360	7.360
Total Personnel Cost	**5.452.429**	**6.435.165**	**6.949.389**	**7.504.752**	**8.104.543**

Operational cost related to the meteorological service provided to GCAA	**% of total operational TGMA cost**	***2015***	***2016***	***2017***	***2018***	***2019***
Local transportation	51%	23.204	23.784	24.378	24.988	25.612
International travels	0%	0	0	0	0	0
Motor vehicle running cost and maintenance	51%	544.971	558.595	572.560	586.874	601.546
Water and electricity	51%	159.679	163.671	167.763	171.957	176.256
Rent	51%	395.473	405.359	415.493	425.881	436.528
Communication (Telephone, Internet & Postage)	51%	480.996	493.021	505.347	517.981	530.930
Stationery	51%	191.049	195.825	200.720	205.738	210.882
Weather presentation cost	0%	0	0	0	0	0
LGA Rates on stations	51%	12.709	13.027	13.353	13.686	14.029
Spare parts for Automatic Stations	51%	139.801	150.985	163.064	176.109	190.198
Maintenance of equipment	51%	116.594	125.922	135.995	146.875	158.625
Vehicle insurance	51%	48.803	52.708	56.924	61.478	66.396
Board Costs	0	0	0	0	0	0
Audit Fees	0	0	0	0	0	0
Staff Training	0	0	0	0	0	0
Contributions to WMO	0	0	0	0	0	0
Total Operational Cost		**2.113.279**	**2.182.897**	**2.255.598**	**2.331.567**	**2.411.002**

Personnel and operational cost related to the meteorological service provided to GCAA	***2015***	***2016***	***2017***	***2018***	***2019***
Personnel Cost	5.452.429	6.435.165	6.949.389	7.504.752	8.104.543
Operational Cost	2.113.279	2.182.897	2.255.598	2.331.567	2.411.002
Total Personnel Cost	**7.565.708**	**8.618.062**	**9.204.987**	**9.836.319**	**10.515.545**

Annex 8: Estimated/Suggested Rate (per hour) for GAMA service

Basis for staff hour fee Head/Senior Meteorologist - Data Processing and Management	
Description	GMD
Annual salary	107.640
Annual allowance	122.250
Pension	20.452
Health	174
Total	250.516
Fee[5]/hour (for government and research)	136
Overhead (100%) for donor and semi-private organizations	501.031
Fee5/hour (donors and semi-private)	272

Overview over suggested base hourly rates for request for meteorological service			
	Staff hour fee	Set price/hour for data processing	Total hourly rate
Government	136	200	336
Research	136	200	336
Donor	272	300	572
Semi-Private/Private	272	300	572

[5]Fee per hour based on 184 working days per year – each 10 hours = 1840 working hours per annum

Annex 9: Details on the GAMA Cost/Expenditures and Revenues/Sources of Funding (2015)

Operational Cost and Expenditures		Revenues / funding sources to cover the operational cost and expenditures											
		Government		GCAA		GFA		NWRMA		Other Customers		Coorperating Partners	
Cost and Expenditure Items	GMD	GMD	%	GMD	%	GMD	%	GMD	%	GMD	%	GMD	%
Personnel salaries	3.659.626	482.887	13%	2.657.768	73%	336.784	9%	147.354	4%	34.833	1%	0	0%
Personnel allowances	3.336.682	464.946	14%	2.282.325	68%	382.495	11%	167.355	5%	39.561	1%	0	0%
Pensions	695.329	91.749	13%	504.976	73%	63.989	9%	27.997	4%	6.618	1%	0	0%
ICS/Health Insurance	15.660	7.461	48%	7.360	47%	544	3%	238	2%	56	0%	0	0%
Local transportation	45.643	6.296	14%	23.204	51%	9.482	21%	5.531	12%	1.131	2%	0	0%
Motor vehicle running cost and maintenance	1.072.000	147.862	14%	544.971	51%	222.691	21%	129.913	12%	26.563	2%	0	0%
Water and electricity	314.102	43.324	14%	159.679	51%	65.250	21%	38.065	12%	7.783	2%	0	0%
Rent	777.926	107.300	14%	395.473	51%	161.602	21%	94.275	12%	19.276	2%	0	0%
Communication (Telephone, Internet & Postage)	946.158	130.505	14%	480.996	51%	196.549	21%	114.663	12%	23.444	2%	0	0%
Stationery	375.807	51.836	14%	191.049	51%	78.068	21%	45.543	12%	9.312	2%	0	0%
Weather presentation cost	90.000	90.000	100%	0	0%	0	0%	0	0%	0	0%	0	0%
LGA Rates on stations	25.000	3.448	14%	12.709	51%	5.193	21%	3.030	12%	619	2%	0	0%
Spare parts for Automatic Stations	275.000	37.931	14%	139.801	51%	57.127	21%	33.327	12%	6.814	2%	0	0%
Maintenance of equipment	229.350	31.634	14%	116.594	51%	47.644	21%	27.794	12%	5.683	2%	0	0%
Vehicle insurance	96.000	13.241	14%	48.803	51%	19.942	21%	11.634	12%	2.379	2%	0	0%
Board Costs	189.900	189.900	100%	0	0%	0	0%	0	0%	0	0%	0	0%
Audit Fees	66.257	66.257	100%	0	0%	0	0%	0	0%	0	0%	0	0%
Staff Training	3.808.028	0	0%	0	0%	0	0%	0	0%	0	0%	3.808.028	100%
International travels	1.642.229	328.446	20%	0	0%	0	0%	0	0%	0	0%	1.313.783	80%
Contributions to WMO	450.000	0	0%	0	0%	0	0%	0	0%	0	0%	450.000	100%
Total	18.110.695	2.295.025	13%	7.565.708	42%	1.647.360	9%	846.720	5%	184.072	1%	5.571.811	31%