TERMS OF REFERENCE FOR HIRING THREE CONSULTANTS

MARITIME METEOROLOGY PROJECT (SURVEILLANCE AND OBSERVATION) FOR THE NORTHWEST AFRICAN BASIN AND MACARONESIA

1. BACKGROUND

Following Las Palmas Action Plan, an expert meeting on West Africa Marine Meteorology was held in Dakar (Senegal), from 27 to 29 February, at the Direction de Météorologie Nationale. Thirty participants from both NHMS and Maritime/Port authorities from Mauritania, Cape Vert, Morocco, Senegal, Cote d' Ivoire and Spain attended the meeting. This activity was a follow-up of the Las Palmas Action Plan and was supported in the framework of the Spanish cooperation in close collaboration with WMO.

Mauritania, Cape Vert, Morocco, Senegal and Cote d' Ivoire presented a diagnostic of the situation on marine meteorology in their region to provide valuable information on their capabilities to help identify their needs and requirements. An integrated Spanish proposal was presented and discussed. The group noted that the Spanish proposal covered the development of both marine meteorology and oceanographic products and services and would contribute to the needs expressed by the countries in the region to improve marine meteorological services for maritime safety and fisheries management. The Meeting requested WMO Secretariat and AEMET to draft the Terms of Reference (ToR) of this pilot project and circulate among the participants and the Ad-Hoc Regional Sub-project Team.

The draft ToR was presented during Meeting of the Conference of Directors of the West African NMHSs held in Niamey, Republic of Niger, 13 to 14 November 2008. The Conference requested WMO Secretariat and AEMET to finalise this TOR that was endorsed at the Niamey Conference of Directors and to commence the Project implementation as soon as possible. It was also requested to include The Gambia in this first stage and to considerer as a second stage the expansion to other countries in the Gulf of Guinea.

To continue with the definition of the ToR of the pilot project and commence its implementation, it is necessary to count on the experts that will work together with the NMHS and the Regional Specialized Meteorological Centre at Dakar (RSMC-Dakar) and therefore three High Degree Graduates will be contracted for one year. This period could be extended for annual periods following WMO regulations in view of the results of their work and accordingly to the project ToR approved by the Conference of Directors of the West African NMHSs. Additionally a consultant for communication issues will be contracted for a short period of time at the beginning of the project.

2. ACTIVITIES

The overall objective of this Project is to enhance the capacity of the NMHSs of West African coastal countries and provide them with the relevant tools that will allow them to contribute to the sustainable development of their respective countries and enhance the delivery of products and services to the various socioeconomic sectors related to marine activity as it is essential for them. In accordance with this:

A. One High Degree Graduate (Type I) with a full-time contract should manage the basic aspects of the Project and their specific assignments would be:
    1. Coordination and management of real time satellital observation and its transmission to the RSMC-Dakar.
    2. Coordination, management and maintenance of the hardware system associated with the L-band antenna.
    3. Maintenance and management of the Operational dedicated Servers.
    4. Models and remote sensing observations operational validation the together with data of the sea level radars networks and that of the available buoys in the Region.

5. Maintenance of the Private Virtual Communication Network with RSMC-Dakar and eventually with the NMHS involved in the project.
6. Exchange of technical information with the technical personnel and experts of the NMHS of Senegal, Mauritania, The Gambia and Cape Vert, both by email and telephone.
7. Support of the development and implementation of the new products and services developed by AEMET, Las Palmas University and State Ports.
8. Update an develop procedures in satellite processing chains
9. Elaboration of annual reports both in Spanish and English and an annual abstract in French.
10. Provide marine meteorology research and capacity building to the participants, with the logistic support of WMO and financial matters ensured by the Trust-fund Africa, and in particular, develop specific capacity building activities on the project.
11. Provide a web-based portal, shared or joint with RSMC-Dakar, for user access to a regional marine meteorology research and forecast activities and services.
12. Organization and participation in the training activities.
13. Place of residence: Las Palmas de Gran Canaria – SPAIN

B. One High Degree Graduate (Type II) with a full-time contract should manage the basic aspects of the Project and their specific assignments would be:

1. Management of real time satellital observation and its transmission to the RSMC-Dakar.
2. Management and maintenance of the hardware system associated with the L-band antenna.
3. Maintenance and management of the Operational dedicated Servers.
4. Models and remote sensing observations operational validation the together with data of the sea level radars networks and that of the available buoys in the Region.
5. Maintenance of the Private Virtual Communication Network with RSMC-Dakar and eventually with the NMHS involved in the project.
6. Exchange of technical information with the technical personnel and experts of the NMHS of Senegal, Mauritania, The Gambia and Cape Vert, both by email and telephone.
7. Elaboration of annual reports both in Spanish and English and an annual abstract in French.
8. Provide marine meteorology research and capacity building to the participants, with the logistic support of WMO and financial matters ensured by the Trust-fund Africa, and in particular, develop specific capacity building activities on the project.
9. Provide a web-based portal, shared or joint with RSMC-Dakar, for user access to a regional marine meteorology research and forecast activities and services.
10. Organization and participation in the training activities.
11. Place of residence: Las Palmas de Gran Canaria - SPAIN

C. One High Degree Graduate (Type III) with a full-time contract should be in charge of:

1. Compilation of the bathymetric information available at the north-western African coast needed for the coastal wave applications.
2. Specific implementation of the coastal wave forecast system (SAPO) for three ports of the north-western African coast (Mauritania, Senegal and Cape Verde)
3. Support to the oceanic models developments and parameterizations.
4. Models validation tasks.
5. Coordination with the participant NMHs for the implementation of new developments.
6. Elaboration of annual reports in Spanish and English an annual abstract in French.
7. Possibility to participate in the training activities
8. Place of residence: Madrid - SPAIN

D. One telecommunication expert (Type IV) should be tasked to:
   - Study the telecommunications networks in Senegal, Mauritania, Cape Vert and Gambia taking into account the described specifications in the ToR for the project. Fact finding site visits may be necessary.
   - Prepare recommendations on the project implementation and preparation of technical specifications for the tender process and the evaluation criteria.
   - Elaborate specific plans for site acceptance and technology transfer to West African countries.
   - Participate in the evaluation of the proposals received, preparing an evaluation report.

3. DELIVERABLES

- Progress report every year.
- Capacity building material on specific training.
- Web based portal.
- Dissemination of products 3 times per week (Monday, Wednesday and Friday): sea surface temperature, sea level anomaly, ocean colour maps and geostrophic correlation fields. These products will be available for both each country and the whole.
- Dissemination of validation indicators each 3 months for temperature, chlorophyll and wave height.
- Digitalized bathymetric information at Mauritania, Senegal and Cape Verde and bathymetries for three ports of the north-western African coast on a regular grid with a minimum resolution of 200m
- Three SAPO systems implemented at three ports of the north-western African coast
- Quality control for the SAPOs development.
- Transfer to West African countries the SAPOs technology and specific training.

4. PROFILE OF THE CONSULTANTS

One High Degree Graduates with the following profile (Type I):

- Experience in marine remote sensing (software and hardware)
- Experience in programming under Linux and UNIX platforms
- Experience in relational databases maintenance within the web
- Experience in webs management
- Experience in management of private virtual networks
- Experience in algorithm design and programming
- English and French, fluid conversation level

One High Degree Graduates with the following profile (Type II):

- Experience in marine remote sensing (software and hardware)
- Experience in programming under Linux and UNIX platforms
- Experience in relational databases maintenance within the web
- Experience in webs management
- Experience in management of private virtual networks
- English and French, fluid conversation level

One High Degree Graduate with the following profile (Type III):

- Experience in programming within UNIX and LINUX platforms
- Experience in numerical modelling, specifically in atmospheric areas and in marine environment.
- Experience in algorithms design and programming
- English, fluid conversation level

One communications expert (fill with the WMO's specifications) (Type IV):

- Experience in telecommunications and operational observation systems
- Experience in the WMO Global Telecommunication Systems
- Experience in draft technical specifications and the evaluation criteria for tender process
- Working experience in the West African region
- English and French, fluid conversation level

5. SCHEDULE AND SALARY

Although the pilot project will be implemented during 4 years, the consultancy will be contracted on an annual basis from 1 January 2009 to 31 December 2009.

Type I consultant: 45.000€ per year in 12 monthly payments

Type II consultant: 35.000 € per year in 12 monthly payments

Type III consultant: 35.000 € per year in 12 monthly payments

Type IV consultant: 8.150€ in one payment

Future ToR and contracts and will be developed in due curse according with the development of the project.