



TERMS OF REFERENCE FOR CONSULTANTS

Reviewing Climate and Soils of West and Central Africa (WCA): A critical input into Farming Systems Research Prioritization for the sub humid and semi arid regions of WCA

Introduction: As a central component of Australia's commitment to supporting the Comprehensive African Agricultural Development Programme (CAADP), and in particular Pillar IV, AusAID is supporting the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to develop an institutional partnership with CORAF/WECARD. This partnership intends improving agricultural research addressing challenges particularly in the sub-humid and semi arid mixed crop livestock zones of the sub region that shares several important similarities with the climate and soils of northern Australia. Characterization of the natural environment allows farming systems and production alternatives to be compared and research spillovers to be assessed, for the improvement of resource management and for the development of sustainable production. In order therefore to ensure meaningful research intervention by the CORAF/WECARD and CSIRO partnership it is imperative to undertake an appropriate assessment of the prevailing soil and climate trend in the CORAF/WECARD mandate region with particular emphasis on the semi arid-sub humid region.

1. Objective: To have an up to date knowledge of the state of soils and climate trend in West and central Africa with particular emphasis on the semi arid-sub humid regions, that will serve as critical input into guiding the design of appropriate research interventions by CORAF/WECARD and CSIRO partnership aimed at improving livelihoods in the sub region.

2. Expected Output

- A detailed soil map of West and Central Africa providing current nature and variation of soils in the sub region.
- Nature and extent of soil degradation as well as possible reasons for such degradation
- A reliable guide for considering various available options for soil management and delineation of appropriate recommendation domains.
- Reliable knowledge of the current climate and the variations over the years thereby providing the opportunity for modelling and prediction of climate to better inform farmers
- Reliable information to guide future interventions in improving and updating soil and climatic data and information.

3. Tasks

3a. Soils

- Identify major soil types and their properties across the region
- Produce soil maps of the respective areas
- Identify the nature and trends in soil degradation in the region
- Analyse the causes of soil degradation and outline current soil management practices
- Demarcate major recommendations domains based on soil type

3b. Climate

- Determine and analyse trends in rainfall, temperature, and potential evapo transpiration, across the region and the target countries over the last 50 years
- Highlight key rainfall and temperature projections for the region
- Advance possible causes for the above variation in climate over the years
- Identify the average length of growing season in the major agroclimatic zones in the CORAF/WECARD region.
- Evaluate the capacity of countries in the region to effectively monitor
- Recommend minimum facilities for the effective measurement of weather in strategic countries particularly in the semi arid-sub humid region of West and Central Africa.

4. Methodology: Two consultants (a soil scientist and a climatologist) will be hired to work simultaneously. The study will essentially involve a desk review of soil and climate of the CORAF/WECARD region with emphasis on the semi arid-sub humid sub region stretching from Senegal in West Africa to Cameroon in Central Africa.

5. Qualification and Experience: The Consultants should have the following qualifications and expertise in the respective disciplines:

- (i) An advanced degree preferably a Ph.D. in soil science/climatology or related field
- (ii) At least 10 years of relevant professional experience as a soil scientist/climatologist
- (iii) Experience in agricultural research planning and implementation at national and international levels in West and Central Africa will be of considerable advantage
- (iv) Impressive publication record in soil science/climatology or related fields
- (v) In addition to the above requirements being bilingual will be an added advantage
- (vi) Female candidates are encouraged to apply

6. Duration of review and time frame: It is estimated that a total of 15 days will be required for the assignment including desk review, writing the report as well as possible revision to incorporate comments and suggestions from CORAF/WECARD and CSIRO. The call for consultants will be made in May and selection of suitable candidates will be done in early

June. The review will be done in June and the final report should be available not later than June 27, 2010.

7. Expression of interest: Interested consultants are invited to send in an expression of interest to the Executive Director of CORAF/WECARD secoraf@coraf.org in the form of a letter with an appropriate CV in line with the above requirements for ease of evaluation. A detailed concept note is available on request.

8. Remuneration: An attractive bulk sum will be paid based on the qualification and experience of the consultant.

9. Presentation of reports: Each consultant should submit a final report of not more than 30 pages in addition to relevant annexes to the Executive Director of CORAF/WECARD through the Executive Secretary (secoraf@coraf.org) not later than June 27, 2010.