

## WIGOS Demonstration Project of Morocco

Kingdom of Morocco  
Ministry of Energy, Mining, Water and Environment  
Secretariat of State in Charge of Water  
National Meteorological Department

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### **IMPLEMENTATION PLAN**

WIGOS Demonstration Project in Morocco consists on standardization and traceability project that include two principal actions:

- Strengthening material capacities and human knowledge of the Moroccan Regional Instrumentation Center (RIC) for AR-I and improving its technical procedures to allow it to accomplish its task of calibration in link to recognized Metrological International chain ,
- Establishment of Metadata catalogues of the whole synoptic, marine, aeronautic and automatic weather stations constituting the Moroccan Meteorological Surface observing Network.

For the first action, CIMO recommendations was followed to improve Moroccan RIC capabilities in terms of data traceability, technical measurement and standardization facilities, quality control by audits and inter-comparisons: "*The CIMO underlined the importance and the interest of the RIC reinforcement, being sensible that an aid should be procured them in four big domains:*

- a) *Setting up of laboratories and purchase of standardization devices;*
- b) *Quality Insurance and control;*
- c) *Training;*
- d) *Assessment of the RIC. "*

Thus, the following deliverables of the WIGOS Moroccan Demonstration Project was integrated in the Implementation Plan:

1. Strengthening Moroccan RIC material capabilities,
2. Improvement of RIC staff knowledge in matter of meteorology and quality insurance by training and experience exchange;
3. Implementing quality approach in order of certification;
4. Establishment of written procedures and operating manuals;
5. Conducting calibrating campaign;
6. Assessment of the Moroccan RIC.

**WMO/CIMO decides to support the DP of Morocco. The way and the manner of providing this support is not yet established**

For the second action, the following tasks were also taken into account in preparing the Implementation Plan:

7. Achievement of a first metadata catalogue for one synoptic weather station,
8. Conduct some sensitization actions for weather station's staff,
9. Generalization of this example to the other synoptic, marine and aeronautic weather stations of the national meteorological observing network,
10. Analyse of the collected documents and establishment the final catalogue

## ACTION ITEMS AND RELATED SUB-TASKS OF THE WIGOS MOROCCAN DEMONSTRATION PROJECT

	Expected Result	Responsibility	Action	Status	Due Date
1.	Strengthening Moroccan RIC material capabilities,	<b>RIC of MOROCCO</b>	<ol style="list-style-type: none"> <li>1. Setting up of the laboratory,</li> <li>2. Purchase of laboratory standards,</li> <li>3. Acquirement of calibrating equipments and facilities.</li> </ol>	<ul style="list-style-type: none"> <li>• The existing laboratory local was set up in 2007. (Cost of the action is about 12.000 Euros)</li> <li>• A new site was affected in July 2009 and a special financial support was provided to fit the new laboratory local to standards. (A new local is now available and operational. The cost of the action is about 30.000 Euros)</li> <li>• The Acquisition of standards and calibrating equipments to calibrate instruments measuring atmospheric pressure was achieved in august 2008 (The cost is about 150.000 Euros),</li> <li>• A first set of standards and calibrating equipments to calibrate instruments measuring temperature and humidity was achieved in January 2009 (The cost is about 70.000 Euros)</li> <li>• The acquisition process of the second part is achieved. The implementation of the material is expected during the Q2 of 2010 (The cost is about 280.000 Euros)</li> </ul>	<p>Achieved 2007) (Q3</p> <p>Achieved 2009) (Q4</p> <p>Achieved 2008) (Q3</p> <p>Achieved 2009) (Q1</p> <p>Achieved 2010) (Q3</p>

2.	Improvement of RIC staff knowledge in matter of meteorology and quality insurance by training and experience exchange	<b>1. WMO/CIMO and RIC of Morocco</b> <b>2. RIC of Morocco</b> <b>3. RIC of Morocco</b> <b>4. NMHs of Morocco and Météo-France</b>	<p>1. Organize training session in matter of metrology (in this context the NMHs of Morocco will organize the WMO training French session in metrology for AR-I);</p> <p>2. Organize training in matter of quality approach and certification (ISO 17025);</p> <p>3. Organize visit for the RIC staff to RICs of developing countries;</p> <p>4. Organize laboratory standards intercomparison between RIC of Morocco and Météo France calibrating laboratory (RIC AR-VI).</p>	<ul style="list-style-type: none"> <li>The WMO training French session was organized in December 2009</li> <li>A technical specifications note is under preparation to choose a consultant in order to prepare RIC certification. Quality circles will be organized in matter of quality insurance, ISO 17025 and certification</li> <li>Visit of 2 persons of the RIC of Morocco to RIC of Météo France.</li> <li>The intercomparison was done during the visit to Météo France laboratory</li> </ul>	<p>1. Achieved (Q1 2009)</p> <p>2. A consultant was chosen (Q4, 2010) the beginning of the accreditation process, including quality training, should be done by Q2, 2011 and end at Q4, 2012</p> <p>3. Done. Q2, 2010</p> <p>4. Done. Q4, 2010</p>
3.	Implementing quality approach in order of certification	<b>RIC of Morocco</b>	<p>1. Develop a Quality Framework toward certification in concordance with ISO 17025 requirements.</p>	<ul style="list-style-type: none"> <li>A technical specifications note is under preparation to choose a consultant in order to prepare RIC certification.</li> <li>Quality circles will be organized in matter of quality insurance, ISO 17025 and certification</li> </ul>	<p>1. A consultant was chosen (Q4, 2010) the beginning of the accreditation process, including quality training, should be done by Q2, 2011 and end at Q4, 2012</p>
4.	Establishment of written procedures and operating manuals	<b>1. WMO/ CIMO and RIC of Morocco</b> <b>2. RIC of Morocco</b>	<p>1. Help in writing technical procedures and operating manuals in regard with ISO and equipment constructors requirements,</p> <p>2. Write, with the help of quality consultant, quality manuals.</p>	<ul style="list-style-type: none"> <li>Should be discussed with WMO/CIMO secretariat. RIC of Slovenia could help to achieve this goal. CIMO ET on RICs suggested the conduct of workshop to help all RICs of AR I to develop their own procedures and also to conduct laboratory transfer standards intercomparison</li> <li>The contract with the consultant include the preparation of technical procedures and quality documents within 14 months</li> </ul>	<p>1. Not defined</p> <p>2. (Q4, 2012)</p>

5.	Conducting calibrating campaign	<b>RIC of Morocco</b>	1. Perform laboratory and site calibrating operations concerning digital barometers installed in all synoptic and aeronautic weather stations;	<ul style="list-style-type: none"> <li>• First campaigns were achieved in 2007</li> <li>• Many barometers should be calibrated by the end of this year</li> </ul>	1. Q3, 2011
6.	Assessment of the Moroccan RIC	<b>WMO /CIMO</b>	<p>1. A First assessment made by CIMO ET with regards to ISO 17025 and RIC TORs</p> <p>2. Accreditation with regards to ISO 17025</p>	<ul style="list-style-type: none"> <li>• A first template assessment was conducted by CIMO ET on RICs in December 2009 using the new evaluating Scheme developed by the ET.</li> <li>• Internal and external Technical and quality audits during accreditation process</li> </ul>	<p>1. Achieved (Q4 2009)</p> <p>2. Q2 2011 to Q4 2012</p>
7.	Achievement of a first metadata catalogue for one synoptic weather station,	<b>NMHs of Morocco</b>	1. Prepare a document summarizing meteorological equipments in use in the weather station and the environment of each equipment	<ul style="list-style-type: none"> <li>• A document was prepared for the principal aeronautic weather station (Mohamed V airport weather station) during June 2009.</li> </ul>	1. achieved Q3 2009
8.	Conduct some sensitization actions for weather station's staff	<b>NMHs of Morocco</b>	1. Make technical and meteorological staff working in the synoptic network of the NMHs of morocco aware on the interest and the role of metadata	<ul style="list-style-type: none"> <li>• This action was integrated in the fundamental and continuous training process.</li> </ul>	1. Each year since 2007
9.	Generalization of this example to the other synoptic, marine and aeronautic weather stations of the national meteorological observing network,	<b>NMHs of Morocco</b>	1. Official letter to be send to the responsible of each weather station of the NMHs Network inviting them to prepare similar documents	<ul style="list-style-type: none"> <li>• Done</li> </ul>	1. Q1 2010

10	Analyse of the collected documents and establishment the final catalogue	<b>NMHs of Morocco</b>	<ol style="list-style-type: none"> <li>1. Collect documents and analyse information</li> <li>2. Establishment of the final catalogue</li> </ol>	<ul style="list-style-type: none"> <li>• responses of stations were sent</li> <li>• Collecting information in database for further analysis</li> </ul>	<ol style="list-style-type: none"> <li>1. Q3 2010</li> <li>2. Q4 2011</li> </ol>
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***RABIA MERROUCHI, FEBRUARY 1<sup>st</sup>, 2011***