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# Food and Agriculture organization of the United Nations

### **Terms of Reference for Interns**

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| **Name:** |  | | | |
| **Job Title:** | Intern (Information Technology) | | | |
| **Division/Office:** FAO Pakistan | | | | |
| **Duty Station:** | Islamabad, Pakistan | | | |
| **Linkage to FAO’s Four Betters:** | Better Production and Better Environment | | | |
| **Start Date of Assignment:** As soon as possible | | **Duration and**  **End Date:** | 11 months from the starting date | |
| **Report to, name of supervisor:** Jiro Ariyama | | **Title:** | Technical Officer (Water Management) | |
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| General Description of task(s) and objectives to be achieved | | | | |
| **Background:**  FAO Pakistan is implementing a project funded by Green Climate Fund; “Transforming Indus Basin with Climate Resilient Agriculture and Water Management in Punjab and Sindh Provinces.” The project aims to develop the country’s capacity to obtain and use relevant information to cope with the impacts of climate change on agriculture and water management.  Modelling of climate change scenarios for Pakistan shows that if agriculture and water management in the Indus River Basin continue along a ‘business as usual’ pathway, increasing temperatures and changes in precipitation will pose serious threats to the future livelihoods of farmers and to the Pakistani agricultural sector. In response to this challenge, the project will help shift Pakistan and Indus Basin agriculture from its current situation of high vulnerability toward an alternative paradigm wherein better information and farming practices will significantly increase resilience to climate change. To do this, the project will develop the country’s capacity to get and use the information it needs to cope with the impacts of climate change on agriculture and water management by putting in place state-of-the art technology (Component 1); building farmers resilience to climate change through skills, knowledge and technology (Component 2), and creating a wider enabling environment for continuous adaptation and expanded sustainable uptake of climate-resilient approaches (Component 3).  Sub-component 1.3 aims to improve availability and use of information services. The intern will mainly work on this sub-component. The project will develop Agriculture, Climate, Water (ACWA) information portal where data and information provided by various organizations will be shared. Sub-component 1.3 also includes activities to establish governance group (“Consortium”) of the portal. In addition, there will be series of training on FAO’s software/tools that will produce inputs to ACWA, such as Agriculture Stress Index System (ASIS), Collect Earth/Collect Mobile, Earth Map, and Modelling System for Agriculture Impacts of Climate Change (MOSAICC). The demo version of the ACWA portal is currently under development, and the intern is expected to contribute to enrichment of the portal.  Besides Sub-component 1.3, the project also uses an online project management information system (PMIS). PMIS includes landing page, set of monitoring dashboards of the project; Budget utilization, financial progress, work plan, procurement activities, training activities etc. The intern is expected to support improvement and maintenance of the PMIS. Component 2, which has activities with farmers, is in need of an android/IO’s application for activity reporting and educational material sharing for farmer field school facilitators.  **Duties and Responsibilities:**  Under the overall supervision of the FAOR and Technical Advisor of the project, direct supervision by Technical Officer (Water Management) of the project, and in close consultation with international geospatial expert and IT expert, the intern will:   * Support development of additional functions on the demo version of ACWA portal, such as analytical tools, data uploaders, and Application Programming Interfaces (API) by providing technical inputs to Terms of References for upgrading. * Upload the data to the portal while making sure it is in the required standards and the metadata is attached. * Provide technical inputs to contractual documents (Terms of reference, service agreements, and/or letters of agreements) under subcomponent 1.3. * Review delivery materials from the developer of the ACWA Portal, and provide technical advice to the developer, if necessary. * Contribute to organizing workshops and training events under Component 1.3. * Participate and provide presentation in project meetings/events related to Sub-component 1.3 when requested by supervisor. * Develop minutes/reports of the meetings and events related to ACWA portal. * Support other activities under Sub-component 1.3 when requested by supervisor. * Clean data in and manage the PMIS. * Modify and upload data to PMIS. * Assist or possibly develop android/IO’s application for farmer field schools.   The intern may also provide support FAO Pakistan’s project other than the above-mentioned project that require IT-related contribution. | | | | |
| key performance indicators | | | | |
| **Expected Outputs**: | | | | Required Completion Date: |
| 1. Android Application for farmer field schools 2. Improved PMIS 3. Review comments on delivery materials from the developer of the ACWA Portal. 4. FAO’s data uploaded to the ACWA portal. The completion date is for the initially readily available data. For new data that will become available later, the expected completion date is within 1 week after supervisor’s request. 5. Inputs to terms of reference (TOR) for ACWA portal upgrading. The completion date is for the initially upgrading activities. Additional tools and further upgrading to ACWA portal will be proposed later in several batches until 2024. The expected completion date to provide inputs to ToRs for further upgrading is 1 week after request. 6. Meeting minutes and event reports 7. End of assignment report | | | | 1. May 15, 2023 2. June 15, 2023 3. Within 1 week after request 4. Aug 15, 2023 5. Sep 15, 2023 6. Within 1 week after the meeting/event 7. 1 week before the contract termination date. |
| **REQUIRED COMPETENCIES** | | | | |
| **Minimum requirements:**   * Enrolled in an under-graduate, graduate degree programme in Agriculture, Natural Sciences, in IT, GIS, Computer Science, or related field in a “bona fide” educational institution at the time of application or recent graduate. Please note that FAO only considers higher educational qualifications obtained from an institution accredited/recognized in the World Higher Education Database (WHED), a list updated by the International Association of Universities (IAU)/United Nations Educational, Scientific and Cultural Organization (UNESCO). The list can be accessed at [http://www.whed.net/](http://www.whed.net/home.php). * Fluency in English. * Excellent oral and written communication and presentation skills are desired. * Candidates should be aged between 21 and 30. * Candidates should be able to adapt to an international multicultural environment.   **Assets:**   * Experience in using IT in the context climate, agriculture, and/or water data. * Experience in coding (basics of programming: Python, JavaScript, html, Css, SQL, Git, Jira or related). * Experience in of geodata portal dealing with climate, agriculture and/or water, GIS, Remote Sensing. * Experience in development of technical contents of contracts (for both personnel and organization). * Work experience with government organization related to natural resources management and research organization. * Experience in development of information tools for farmers. * Experience of development or basic knowledge of Android/IOs applications. * Basic knowledge of Google Data Studio, WordPress or Wix, Google Forms and Google spread sheets. | | | | |
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