Wetlands International Indonesia / Yayasan Lahan Basah

Hydrology Expert

***Terms of Reference* (ToR)**

Position Title : **Hydrology Expert**
Location : Bogor, Indonesia
Working Hours : Full-time

Candidate Profile Requirement

Hydrologists have a crucial role in understanding and managing various wetland ecosystems: Delta and Coast, Peatlands Streams, Rivers and Lakes. Extensive experience in related fields particularly in Hydrology, Water Management, Oceanografi, and Geotechnical /Geoengineering-related Sciences.

Technical qualification and skills

- **Delta and Coast stream**

  1. Good understanding in mangrove ecosystem functionings and mangrove's conservation and rehabilitation issues.
  2. Understand the concept, formulation, and implementation of the technical design of mangrove conservation and rehabilitation.
  3. Understand the concept, formulation, and implementation of the technical design of planning, implementation, and monitoring related to the observation of land subsidence, accretion erosion, bathymetry, physiochemical, tidal soil GHG, and hydrodynamic data.
  4. Hydrodynamic modeling for inundation duration and sediment transport.
  5. Design and implement hydrological restoration efforts to restore natural water flow conditions in degraded mangrove areas. This involves creating waterways, regulating water levels, and unblocking water flow.
  6. Assist in designing hydrological layouts of Silvofishery systems that combine aquaculture with mangrove presence. This system can increase pond production and productivity while preserving the mangrove ecosystem.

- **Peat stream**

  1. Good understanding of peatland's ecosystem functioning and peatland's conservation and restoration issues.
  2. Understand the concept, formulation, and implementation of technical design for peat conservation and restoration.
  3. Understand the concepts, formulation, and implementation of technical design for planning, implementation, and monitoring related to land subsidence, peat GHG, and peatland rewetting.

4. Hydrodynamic modeling for water balance, and impacts area of peatland re-wetting through Blocking Canal activities.
5. Monitoring changes in water level, water quality, and vegetation growth after peat restoration.

- **Rivers and Lakes stream**

1. Good understanding of the functions and issues related to the impact of land use scenarios on watersheds
2. Understand the concept, formulation, and implementation of technical design for soil and water conservation.
3. Understand the concept, formulation, and implementation of technical design for planning, implementation, and monitoring related to field erosion, water quality, sedimentation, and microplastics in rivers.
4. Create Hydrodynamic modeling for water balance in watersheds and effective lifetime of the lake forecasting

- **Familiar with the software used :**

1. GIS / QGIS
2. Autocad/Civil 3D
3. Hydrological model (MIKE SHE, Soil water assessment tool, HEC-RAS, etc)

Application Process

Interested applicants should submit a CV, a cover letter explaining their suitability for the role, and contact details for three references by 25 November 2024 to admin@wetlands.or.id