

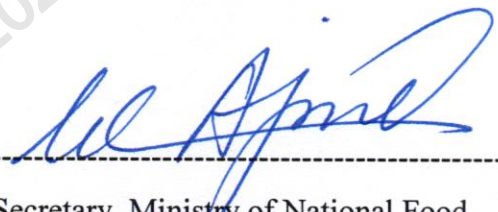
Government of Pakistan  
Ministry of National Food Security and Research  
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**NEED ASSESSMENT FORM FOR SPECIALIST IN DATA GOVERNANCE AND  
INTEROPERABILITY (SPPS-III)**

S. No.	Category	Details
1	Name of Ministry/Division/Organization	Ministry of National Food Security and Research
2	Title of the Position (Technical Advisor, Consultant, Research Associate)	Specialist in Data Governance and Interoperability (SPPS-III)
3	Duration & Location	1 year (extendable). Islamabad
4	Disqualification	Annex-I
5	<b>Need Assessment</b> a) Identified Challenge / Gap b) Area of Expertise c) Requisite qualifications d) Requisite experience/skills e) Level of Role and Responsibility f) Reporting Channel	<b>Annex-II</b>
6	Expected impact on Performance of Ministry	Annex-III
7	Job Description	Annex-IV
8	Key Performance Indicators, Targets, Timelines and Deliverables	Annex-V
9	Performance Evaluation	Annex-VI

(to be signed and Stamped by the concerned Secretary/PAO)

Signature

  
Secretary, Ministry of National Food  
Security and Research

## Annex-I

### Disqualification Criteria for the Position of Specialist in Data Governance and Interoperability (SPPS-III)

1. Lack of a Master's degree (18 years) or above in Computer Science, Data Science, Information Science, Business Analytics or related field.
2. Less than 7 years of professional experience in Data Science, governance, ICT policy or digital transformation initiatives.
3. No formal education or training in core areas such as Data Governance, Interoperability, Cloud Computing, and Security.
4. Absence of relevant certifications in Data Governance, Enterprise Architecture, or Interoperability Frameworks.
5. Inadequate knowledge of standards, frameworks, and technologies relevant to data interoperability and system integration.
6. Record of ethical misconduct, data privacy violations, or breach of professional standards.
7. Conflict of interest in working with the Ministry or its affiliated institutions.

## Annex-II

### Need Assessment: Specialist in Data Governance and Interoperability (SPPS-III)

#### a) Identified Challenge / Gap:

The Ministry faces challenges due to fragmented, siloed data systems across federal and provincial platforms, which limit efficient decision-making, forecasting, and coordination. The lack of standardization, poor data architecture, and absence of interoperability frameworks impedes digital transformation and smart agriculture initiatives. A specialist is needed to establish comprehensive data governance mechanisms, ensure secure data sharing, and enable cross-platform integration to support real-time data-driven planning and policy.

#### b) Area of Expertise:

Expertise in Data Governance, Interoperability Frameworks, Enterprise Architecture, Big Data Analytics, Cloud Computing, Metadata Management, Information Security, Federated Systems, and ICT strategy implementation in the agriculture or public sector.

#### c) Requisite Qualifications:

Master's degree (18 years or above) in Computer Science, Data Science, Information Science, Business Analytics, or related field from an HEC-recognized institution. Preference for certifications in Enterprise Architecture, Information Security, Interoperability Standards, or Data Governance.

#### d) Requisite Experience/Skills:

- Minimum 7 years of relevant experience.
- Hands-on expertise in Collibra, Apache Atlas, SQL Server, PostgreSQL, AWS, Azure.
- Experience with frameworks like DCAT, NIEM, ISO 27001.



- Data security compliance (GDPR, IAM, encryption).
- Knowledge of interoperability and federated system design.
- Python scripting and API integrations.
- AgriGIS Mapping and digital agriculture systems.
- Project management and stakeholder engagement skills.

**e) Level of Role and Responsibility:**

- Develop National Data Governance Policy.
- Establish data warehousing and interoperability frameworks.
- Draft MoUs, SOPs for data sharing.
- Lead metadata standardization.
- Advise on integration of digital agri-platforms and decision-support systems.
- Coordinate stakeholder alignment and data harmonization.

**f) Reporting Channel:**

Reports to the Joint Secretary / Additional Secretary, MNFSR or as designated by the Secretary.

**Annex-III**

**Expected Impact on the Performance of the Ministry**

- Enhanced interoperability between federal and provincial agriculture data systems.
- Real-time, data-driven decision-making support.
- Improved traceability, transparency, and planning.
- Harmonized data standards enabling smoother operations across departments.
- Informed policy and strategy development based on analytics.
- Secure, scalable infrastructure for national agri-data exchange.

**Annex-IV**

**Job Description**

- Develop National Data Governance Framework and Interoperability Blueprint.
- Recommend and implement data warehousing strategies.
- Define data standards, taxonomies, metadata protocols.
- Build SOPs and legal instruments for secure inter-agency data exchange.
- Conduct data maturity assessments of MNFSR entities.
- Design data security protocols and ensure compliance.
- Oversee integration of digital agriculture systems with national data architecture.
- Prepare periodic reports, reviews, and strategic insights.
- Advise on technologies for data processing, storage, analytics, and GIS mapping.
- Any other assignment related to data governance or digital systems integration.

**Annex-V****Key Performance Indicators, Targets, Timelines and Deliverables**

Key Performance Indicators (KPIs)	Quantitative Targets
National Data Governance Policy	Complete framework within 4 months
Centralized Data Warehouse Plan	Architecture & roadmap by Month 6
Interoperability Blueprint	By end of 6th month
Metadata and Standard Protocols	Fully documented protocols by Month 7
Signed SOPs and MoUs	At least 3 finalized by Month 8
Monthly Reports & Final Report	12 monthly + 1 comprehensive report
Trainings & Stakeholder Workshops	4 technical sessions conducted

**Annex-VI****Performance Evaluation**

Key Performance Indicators (KPIs)	Quantitative Targets	% Target Achieved	Weightage (%)	Score
Data Governance Framework	Complete within 4 months	90	25	2250
Interoperability Architecture	Delivered by Month 6	90	20	1800
SOPs and MoUs	3 agreements finalized	85	15	1275
Metadata Standards Finalization	100% protocols documented	80	10	800
Data Maturity Assessment	Conducted for MNFSR entities	90	10	900
Capacity Building Sessions	4 workshops	80	10	800
Monthly/Final Reports	All reports submitted	90	10	900