



AGRICULTURAL DATA MANAGEMENT POLICY 2022

DRAFT RELEASE FOR PUBLIC
CONSULTATION

ISSUED BY:

AGRICULTURE & COOPERATION (A&C) DEPARTMENT,
GOVERNMENT OF TELANGANA

JULY 2022

NOTICE

The draft policy on agricultural data management is hereby published for the information of all persons likely to be affected thereby; and notice is hereby given that the said draft policy will be taken into consideration after 6th August 2022.

Suggestions or objections, if any, should be duly submitted through the online form: <https://forms.gle/nLVwCSgn2rUuyfzw6>. The comments may also be emailed to Smt. Rama Devi Lanka, OSD and Director of Emerging Technologies, ITE&C Department at osd_itc@telangana.gov.in with a copy to consultant-itc@telangana.gov.in with the subject line "Suggestions for draft Agricultural Data Management Policy 2022". Any suggestion or objection received with respect to the said draft rules before the expiry of the period specified above may be considered by the State Government.

All the comments and suggestions must be submitted in document form (docx or pdf) and follow the following template:

S. No.	Heading, Clause No., Page No.	Suggestions or Objections	Proposed Amendment
1.			

Only the comments and suggestions received as per the above format may be considered by the State Government and rest shall all be deemed as invalid submissions without bias.

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Preamble

The Government of Telangana has been giving a high priority to the development of the agriculture sector in the state, given that 5 million farmers depend on it and that the sector contributes to about 15% of the GSDP. The Government has been adopting a multipronged approach to elevate the status of the agriculture sector through major interventions like a quantum jump in enhancing the irrigation infrastructure, providing input assistance to the farmers, and promoting new varieties. The Government is keen to make a further impact on the levels of production, productivity, and profitability of the farmers by promoting digital agriculture and extensive use of technologies including the emerging technologies like AI, ML, IoT, Drones and satellite imagery. The aim is that the new technologies are deployed in a responsible manner to transform all the segments of the agricultural value chain and bring in significant benefits to the farmers and all other stakeholders of the agriculture ecosystem.

It is well established that data is the most critical resource on which the successful deployments of new technologies depend. It is therefore a necessary initial step to create a policy environment conducive to the systematic collection, processing, sharing, and usage of agricultural data in ways that support a wide range of use cases in the farm sector. Protection of the rights of the farmers and other stakeholders is of paramount importance simultaneously. In the absence of such a policy environment, organisations in the public and private sectors tend to create data in silos and hesitate to share it with other entities that can potentially produce new value out of innovative solutions using such data. This results in a sub-optimal situation and loss of a huge opportunity promised by the digital economy.

In the light of the above, the Government considers it expedient to streamline and codify the processes, responsibilities, norms, and practices relating to the management of agricultural data for the overall benefit of all the stakeholders, principally the farmers. The **Telangana Agricultural Data Management Policy 2022** intends to address this need precisely.

1. Aims and Objects

The objective of the Telangana Agricultural Data Management Policy 2022 (Policy) is to ensure that agricultural data is managed efficiently for the advancement of the agriculture sector, always protecting the rights of individuals.

2. Applicability

- a. This Policy shall be applicable to the following entities and individuals:
 - i. All the departments and agencies of the Government dealing with agriculture, horticulture, and allied activities.
 - ii. Information Technology and Communications Department of the Government
 - iii. All the providers and consumers of agricultural data.
 - iv. All the institutions dealing with research and innovation in agriculture and horticulture.
 - v. All the individuals, teams, entities who collect, process, or share personal data of any individuals associated with the agriculture sector.
- b. The Policy shall be applicable to the geographical areas to be notified from time to time.
- c. The Government may extend the applicability of the Policy to other departments associated with the agricultural initiatives, to be specified from time to time.

- d. This Policy shall be subject to, and superseded by, any provision of laws in effect as notified by the State of Telangana or the central government.

3. Definitions

In this Policy, unless the context otherwise requires:-

- i. "agricultural data" means such data that is created, collected, processed, shared or used in the agricultural sector.
- ii. "inter-departmental committee (IDC)" means the committee chaired by the Commissioner of Agriculture as specified in Clause 6 of this Policy.
- iii. "agriculture information provider (AIP)" means a person (including data principal), business entity or public and private organisation, who or which provides, creates, updates, secures and maintains agricultural data in accordance with this Policy.
- iv. "agriculture information user (AIU)" means a person, business entity or public and private organisation, who or which need and use data in accordance with this Policy.
- v. "data principal" means the natural person to whom the personal data relates to
- vi. "data service provider (DSP)" refers to entities that carry out the function of compiling datasets or databases capable of being used by AIUs for the purposes specified within Annexure II of this Policy
- vii. "consent" in relation to personal data shall mean an agreement which is:
 - i. free, having regard to whether it complies with the standard specified under section 14 of the Indian Contract Act, 1872;
 - ii. informed, having regard to whether the data provided has been provided with the information required as per applicable data protection laws;
 - iii. specific, having regard to whether the data provider can determine the scope of consent in respect of the purpose of processing;
 - iv. clear, having regard to whether it is indicated through an affirmative action that is meaningful in a given context; and
 - v. capable of being withdrawn, having regard to whether the ease of such withdrawal is comparable to the ease with which consent may be given
- viii. "data" means and includes a representation of information, facts, concepts, opinions, or instructions in a manner suitable for communication, interpretation, or processing by humans or by automated means.
- ix. "Government" means the State Government of Telangana, or agencies authorised by it to perform functions under this Policy, unless specified otherwise;
- x. "open data" means all sharable non-sensitive data available either in digital or analog forms but generated using public funds by various Ministries / Departments /Subordinate offices / organisations / agencies of the Governments.
- xi. "personal data" means data about or relating to a natural person who is directly or indirectly identifiable, having regard to any characteristic, trait, attribute or any other feature of the identity of such natural person, whether online or offline, or any combination of such features with any other information, and shall include any inference drawn from such data for the purpose of profiling.
- xii. "sensitive personal data" means such personal data, which may, reveal, be related to, or constitute— (i) financial data; (ii) health data; (iii) official identifier; (iv) sex life; (v) sexual orientation; (vi) biometric data; (vii) genetic data; (viii) transgender status; (ix) intersex status; (x) caste or tribe; (xi) religious or political belief or affiliation; or (xii) any other data categorised as sensitive personal data by the IDC

- xiii. “standard operating procedure” refers to any set of instructions, processes, best practices, guidelines, or directions issued by the IDC for the proper implementation of this Policy.
- xiv. “processing” means an operation or set of operations performed on personal data, and may include operations such as collection, recording, organisation, structuring, storage, adaptation, alteration, retrieval, use, alignment or combination, indexing, disclosure by transmission, dissemination or otherwise making available, restriction, erasure or destruction
- xv. “compliance officer” means a person having expertise in the area of information technology, computer systems, data science, data protection or privacy appointed by AIPs, AIUs and DSPs, who shall be responsible to ensure that it carries out its functions in accordance with this Policy.
- xvi. “data management officers” means the nodal officer appointed by a government department or agency having specialised knowledge of information technology, computer systems, data science, data protection, database technologies and agriculture domain, who is responsible for monitoring the data-related activities of the department or agency and providing guidance to all the functionaries managing agricultural data.
- xvii. “designated authority” is the person designated in the concerned public agency to prescribe processes on sharing non-personal agricultural data.

4. Principles of ADMP

The implementation of this Policy shall be guided by the following principles:

1. Notice:

Prior to collection of personal data for a specific purpose, data principals must be provided with clear and conspicuous notice. The privacy notice shall contain the following information:

- a. the purposes for which the personal data is to be processed;
- b. the identity and contact details of the data provider collecting the personal data;
- c. the right of the data principal to withdraw her/his consent, and the procedure for such withdrawal;
- d. the individuals or entities along with their contact details, including other data providers or data consumer with whom personal data may be shared, if applicable; and
- e. the period of time for which the personal data shall be retained, or where the period of retention is not known, then the criteria for determining such period.

2. Consent-based processing and sharing of personal data

Consent of the data principal is necessary before the commencement of processing of personal data. Personal data collected for a particular purpose may be used for any other permissible purpose only after obtaining the consent of the data principal in respect of personal data.

3. Purpose based limitation for processing agricultural data containing personal data

Processing of personal data under this Policy shall be carried out only for the purposes provided for by the Policy. Any additional purposes must be consented to by a data principal and must be proportional and necessary for the performance of functions under this Policy.

4. Collection based limitation

The collection of personal data must be fair, lawful and limited to that which is necessary for the purposes specified in Annexure II.

5. Responsibility and accountability in processing agricultural data

Each AIP, AIU and DSP under this Policy must designate a compliance officer to carry out their functions in accordance with the terms of this Policy.

6. Ease of access with responsible sharing

Agricultural data shall be accessible to the AIUs and DSPs in an easy and convenient manner to accelerate the development of innovative technology solutions and their deployment to benefit the stakeholders. The ease of access shall be balanced with the requirements of data protection specified in this Policy.

7. Quality of personal data and right to correction

Data principal shall be provided access to their personal data and informed of its uses and disclosures, if they send a written request. Data principal shall be able to seek amendment of the personal data if the same is not accurate or complete.

8. Technological and operational safeguards for data security and privacy

All entities dealing with agricultural data shall establish technological and operational safeguards for data security and privacy including security-by-design, privacy-by-design and the use of privacy-protecting technologies.

5. Classification of agricultural data

- (1) Agricultural data may be classified in certain categories, including inter alia, personal data, open data and anonymised data, depending on the purpose for which it is created or used, to ensure that due regard is given to the nature of the data, by data management officers and for designing data models and databases, for monitoring and compliance with the Policy.

Annexure I provides an illustrative list of agricultural data, described with attributes such as the source of generation and potential type of regulation applying to the data.

- (2) The classification provided above is non-exhaustive and AIPs, AIUs and data service providers may classify data into further categories to establish internal controls required for compliance with this Policy.

6. Inter-Departmental Committee

- (1) The IDC shall be chaired by the Commissioner of Agriculture and shall comprise officials representing the following departments:
 - (a) Irrigation & CAD Department;
 - (b) Planning Department;
 - (c) Agriculture and Cooperation Department;
 - (d) Land Administration;
 - (e) Agriculture Department;
 - (f) Telangana State Remote Application Centre; and
 - (g) Information Technology and Communications Department
- (2) In addition to the departments listed in Clause 6(1), the IDC may invite officials from any other department or agency of the Government dealing with agricultural, horticultural and allied activities as deemed necessary.
- (3) The Chairperson shall preside over the meetings of the IDC and have powers of general superintendence and directions in the conduct of the affairs of the IDC.
- (4) The IDC shall formulate its own procedure for the transaction of business at its meetings, including quorum at such meetings.
- (5) If for any reason the Chairperson is unable to attend a meeting of the IDC it shall be presided over by a Vice Chairperson nominated by him.

7. Classification of purpose of processing agricultural data containing personal data

- (1) The IDC shall specify the purposes for which personal data may be processed under this Policy in **Annexure II**.
- (2) Where AIUs and DSPs intend to use personal data, they should specify the nature of data proposed to be processed and the purpose for which such processing is to be done before the commencement of such processing.
- (3) Personal data collected for a particular purpose may be used for any other permissible purpose only after obtaining the consent of the data principal in respect of personal data.

8. Sharing of agricultural data

The following conditions shall apply to AIPs, AIUs and data service providers in respect of sharing or exchanging of such data:

- a. Agricultural data may be collected, shared, or processed strictly in accordance with this Policy and the Standard Operating Procedures issued by the IDC under Clause 9 of this Policy
- b. The IDC shall frame access control guidelines that shall provide varying levels of access to AIUs and DSPs for specific agricultural datasets. These guidelines may specify the levels of access offered to AIUs and DSP pertaining to various categories of agricultural datasets.
- c. The non-personal agricultural data acquired by any public agency at the cost of the exchequer shall be shared in such a manner and format as may be prescribed by the designated authority of the concerned department under the SOP issued by the IDC under Clause 9(e).
- d. Clause 8(c) does not apply to data of confidential nature, or data the disclosure of which would adversely affect the commercial interest of any entity.

- e. The IDC may identify certain agricultural datasets for which the concerned AIP may charge an access fee. The quantum of fees to be charged by the AIPs under this sub-clause shall be determined and notified by the IDC, where so required.

9. SOPs for agencies managing agricultural data

The IDC, in consultation with any additional departments to which this Policy applies, shall issue the Standard Operating Procedures (SOPs) for managing agricultural data by the entities to which this Policy applies. Such SOPs shall include appropriate procedures, guidelines, formats, checklists, and templates in relation to the following aspects of managing agricultural data.

(1) Data Management Officers

(i) Every department and agency to which this Policy applies shall appoint a Data Management Officer responsible for monitoring the data-related activities of the department or agency and providing guidance to all the functionaries managing agricultural data.

(ii) The IDC shall issue guidelines on the qualifications, method of appointment, role and responsibilities of Data Management Officers.

(2) Data Service Providers

(i) The IDC may issue appropriate procedures to qualify and/or empanel DSPs, and the terms of engagement of DSPs by the department and agencies.

(ii) The DSPs shall perform functions including collating, cleaning, annotating, ensuring machine readability and any other functions deemed necessary to transform raw data into usable datasets which are to be made available for further sharing and access.

(3) Technical methods for sharing of data

(i) The IDC may issue general technical guidelines on the methods recommended for sharing various classes and types of data specified in Clauses 5 and 7, including a model general licensing agreement for sharing and accessing the specified agricultural data to be signed by any AIU or DSP entity seeking to use that dataset .

(ii) Such guidelines shall be reviewed and updated once every six months.

(4) Access control

(i) The IDC may issue guidelines on the types of datasets available for access to specific stakeholders based on the purpose of the access.

(ii) These guidelines shall be periodically reviewed and updated annually.

(5) Quality of datasets

(i) The integrity and quality of datasets need to be ensured to derive potential or intended value.

(ii) The data should be accurate, free from errors, correctable, verifiable and reliable.

(iii) Agricultural data users should ensure that data adheres to a specified set of standards/protocols to ensure usability and interoperability.

(iv) The IDC shall notify minimum safeguards and technical standards to ensure appropriate data quality to be usable for prescribed purposes.

(6) De-identification and anonymization

(i) Personal data must be de-identified or anonymized to protect the privacy of the data principal.

(ii) De-identification or anonymization shall be carried out as per the specifications and processes notified under Clause 9(6)(iii) when the agricultural data record in question consists of either solely personal data, or a combination of personal and non-personal data.

(iii) The IDC shall notify appropriate technical specifications and processes to be adopted for anonymization and de-identification of personal data, occurring by itself or in combination with non-personal data.

(7) Compliance requirements

(i) All the entities and individuals to whom this Policy applies shall take reasonable steps to ensure full compliance with the requirements of this Policy.

(ii) The IDC shall prescribe lightweight reporting formats and requirements to ensure compliance, with a special focus on the obligations to report breaches.

(iii) The IDC shall also prescribe a process for AIUs and DSPs to have in-house compliance officer(s) who shall be responsible for ensuring compliance with the provisions of the ADMP and any processes issued thereunder.

(8) Capacity building

(i) The IDC, in coordination with the ITE&C department of the Government, shall issue an SOP for capacity building to ensure better data governance across the departments which form part of the IDC in Clause 6.

(ii) To further capacity building, the SOP may include conducting seminars, workshops, training and upskilling programs for officials in the concerned departments.

10. Grievance redressal

(i) Every AIP, AIU, DSP, government department or agency processing agricultural data under this Policy should designate a senior functionary as a grievance redressal officer.

(ii) A person aggrieved by processing of agricultural data under this Policy should make a complaint in the specified format to the grievance redressal officer so designated by the entity or government department or agency.

(iii) The grievance redressal officer should resolve the complaint within 30 working days of receipt of such complaint.

(iv) On due consideration of the complaint, the grievance redressal officer may order:

- (a) the entity or government department or agency to cease processing data in a manner that is in violation of the Policy
- (b) the data unauthorisedly accessed by the entity or government department or agency may be deleted

(v) If the complainant is not satisfied with the action taken by the grievance redressal officer or if 30 working days have passed without the grievance redressal officer initiating action on the complaint, the complainant may file an appeal with an appellate panel constituted by the government.

(vi) On due consideration of the complaint, the appellate panel may order:

- (a) the entity or government department or agency to cease processing data in a manner that is in violation of the Policy;
- (b) the data unauthorisedly accessed by the entity or government department or agency may be deleted; and
- (c) the entity or government department or agency institute processes to ensure that such violation of the Policy is not repeated

(vii) The contact details of the offices or officers designated for grievance management shall be widely publicised.

11. Data Governance Framework

The AIUs and DSPs shall formulate data governance frameworks based on the following guidelines to manage their data, with a view to derive maximum value from it while operating in a rights respecting environment:

- i. **Data architecture** – Standards, rules and policies shall be defined by the entity to describe how data is collected, stored, integrated, processed and used internally within the entity. A comprehensive data architecture should be laid out that specifies the various functionaries responsible for, and the processes and technology used in data management.
- ii. **Meta-data management** – The concerned entity shall devise a method to capture, manage and publish meta-data information with defined access controls.

- iii. **Data quality** – Standards and procedures should be adopted to maintain the integrity and quality of data, in accordance with standards and best practices.
- iv. **Auditability** – Decisions and processes related to data governance must be auditable, as per prescribed standards.
- v. **Accountability** – Accountability of different teams within an entity must be prescribed in a manner that introduces checks-and-balances between domain and technology teams, and between those who create/collect information, those who manage it, those who use it, and those who introduce standards and compliance requirements.

12. Protection of Intellectual Property Rights (IPR)

i. Protection of IPR in agricultural data

- (a) Entities that exercise some level of skill or creativity to make raw data usable by compiling a database or dataset must ensure that the compiled databases are duly protected in accordance with the Copyright Act, 1957 and its rules.
- (b) Copyright owners of compiled databases/ datasets of agricultural data must ensure that they are adequately compensated if their copyright is licensed or assigned to a third party, throughout the data lifecycle.

ii. Protection of IPR in agricultural domain

Any IPR in the agricultural sector, other than IPR in data (as described in Clause 12(i)) shall be governed by the applicable laws.

Annexure I: Illustrative list of types of agricultural data and its description

(Pl see clause 5 of the Policy)

Illustrative list of types of agricultural data and its description

Category of data	Description of the type of data
Agricultural operations and management	<ol style="list-style-type: none">1. Agricultural credit2. Agricultural insurance3. Supply chain-related data4. Rolling and fixed asset data5. Farm machinery6. Compliance-related data
Agricultural production	<ol style="list-style-type: none">1. Seed / variety sown2. Dates of sowing/ field operations3. Water management4. Pest and disease management5. Yield data6. Land records7. Field boundaries, GIS, GPS data8. Soil fertility/ health
General agricultural services	<ol style="list-style-type: none">1. Climate2. Weather3. Environment4. Commodity prices5. Market intelligence

Annexure II: Classification of purpose of processing agricultural data containing personal data

(Pl see clause 7 of the Policy)

Classification of purpose of processing agricultural data containing personal data

Code	Purpose	Description of the purpose of collection/ processing of personal data
Agriculture business purposes		
B1	Agricultural credit	<ul style="list-style-type: none"> ● Assessment of credit worthiness and extension of short, medium, and long-term loans to farmers and the associated processes like recovery. ● Extending credit to farmers basing on Negotiable Warehouse Receipts (NWR)
B2	Insurance	<ul style="list-style-type: none"> ● Providing crop insurance cover and disbursing of the amount assured on meeting the defined criteria. ● Providing insurance cover for farm machinery
B3	Logistics	Providing logistics services to the farmers for transportation of inputs and farm produce
B4	Storage-related services	Providing storage facilities – normal and cold- to the farmer during the post-harvest period
B5	Market-related services	<ul style="list-style-type: none"> ● Enabling the producers to access the markets – physical or digital – for selling of their produce. ● Providing personalised services relating to the sale of the produce, including hyper-local market intelligence.
B6	Payment services	Enabling electronic payments and receipts arising out of the transactions relating the purposes specified in this standard.
Agricultural production purposes		
P1	Farm advisories	<ul style="list-style-type: none"> ● The entire range of personalised advisory services required for enhancing the production, productivity, and profitability of the farmer, including those relating to weather, inputs and good agricultural practices (GAP) ● Digital extension services
P2	Pest and disease management	<ul style="list-style-type: none"> ● Prediction of pest and disease and provision of advisories on appropriate precautionary measures. ● Services relating to controlling pests and diseases on their actual incidence.
P3	Water management	Services and advisories relating to irrigation practices, including micro-irrigation and distress irrigation
P4	Quality assurance	<ul style="list-style-type: none"> ● Providing quality assaying and assurance services on the inputs and farm produce

		<ul style="list-style-type: none"> ● Providing traceability services for farm produce to the traders and end consumers
P5	Soil Health	<ul style="list-style-type: none"> ● Issuing Soil Health Cards (SHCs) to the farmers, in physical and electronic forms ● Monitoring soil health through field observations and remote sensing methods
General Agricultural Services		
G1	Benefits	<ul style="list-style-type: none"> ● Providing benefits to the farmer, in cash or kind by the central government, state governments and NGOs
G2	Land Records	<ul style="list-style-type: none"> ● Maintenance of land records and record of rights on land ● Creation and maintenance of cadastral records specifying the field boundaries of agricultural parcels, digital form including geo-referencing, using GIS and GPS
G3	Research	Agricultural research including applied research requiring experimentation and demonstration at the field level
G4	Innovation	Sample data in anonymized or de-identified conditions required for testing innovative solutions, including those involving emerging technologies like AI, ML, IoT.
G5	Education	Data required for agricultural education
G6	Data Principal use	Data required for use of the data principal for monitoring and decision-making at various stages of the agriculture cycle.