To,
The Chairperson,
Task Force for the development of Centralised Farmers' Database and creation of framework for Digital Ecosystem of Agriculture

Cc:
1. Secretary, Ministry of Electronics & Information Technology
2. Secretary, Ministry of Agriculture & Farmers Welfare

Subject: Response to Consultation Paper on IDEA-India Digital Ecosystem of Agriculture

Dear Sir,

We welcome the step of publishing a [Consultation Paper on IDEA-India Digital Ecosystem of Agriculture](#)[1] and seeking responses. This is a joint response by all the signatories of this letter to the Consultation Paper on IDEA-India Digital Ecosystem of Agriculture that was put in the public domain by the Ministry of Agriculture and Farmers Welfare on 1st June, 2021.

At the outset, we agree that it is necessary to make into a reality some potential benefits of digital technology for empowerment of farmers in India and for improving their livelihoods. It is, however, absolutely essential that any such digital infrastructure developed is owned and controlled by the government and not in private hands. Further, we are deeply concerned with the manner in which this is being done. In this effort, for instance, the beginning point is not an enumeration of farmers' needs in a digital ecosystem through deliberative democratic processes. Instead, somehow, the beginning point seems to be existing databases with the government with all their underlying problems and shortcomings, on which something is being sought to be built. Similarly, the goal is not around a mission of enhancing environmental sustainability, ensuring social equity and securing economic viability that this ecosystem architecture is being designed and created. The lack of such objectives is not in the best interests of farmers.

Therefore, we urge the Government of India in general and the Task Force for the development of Centralised Farmers' Database and creation of framework for Digital Ecosystem of Agriculture in particular to **stop implementation until there are far more extensive and meaningful consultations** with all concerned stakeholders, and make farmers' needs as the beginning point of this endeavour. After all, it is their data that is being used primarily in this ecosystem creation!

Our concerns are the following:
1. **Execution before consultation**: Implementation seems to have begun even before the consultation process began, through the [signing of MoUs with several IT corporations](#)[2]. Even these pilots could have easily waited until the broad framework was created in a participatory approach.

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[1] https://agricoop.nic.in/consultationpaper
[2] https://agricoop.nic.in/en/farmingagreement

2. **Language of the consultation paper** being only English and filled with technical jargon. As a result, meaningful consultations cannot take place since the contents of this paper are inaccessible to the average farmer.
3. The proposition of a **"farmers' database" based on digitised land records will lead to problems and exclusions**, given the seriously flawed condition of the digitised land records themselves and their failure to capture the information of actual cultivators and those operating the landholding.
4. **Ownership of IDEA / AgriStack** and its various components is unclear. As a matter of principle and policy, the digital infrastructure being developed for the agriculture sector must be housed in, belong to and be controlled by central and state governments.
5. **Who will benefit from this system**: There are no mechanisms to ensure that the economic interests of farmers are ensured whereas the revenue models that will be adopted for entities getting involved in this ecosystem are predictable. It is also unclear what happens to the farmers who are excluded from this ecosystem; there is no clarity on grievance redressal mechanisms and whether they would be farmer-friendly. Accountability mechanisms have not been spelt out for various players including state departments and agencies.
6. **Data Sovereignty and Farmers' Consent:** Stronger consent framework to protect economic interests is necessary by giving farmers better control over their data. Any system that uses a person's data must have that person as a stakeholder in the decision-making and governance process of that system.
7. With **no data protection law in place**, this exercise is taking place in a legal vacuum, with no protection for the interests of the farmers whose data is being used.
8. **Restrictions on coping of raw data** through data exchanges are necessary to ensure that farmers are in control of their data.
9. **No farmer representation** in the existing task force or the governance framework of IDEA.
10. **Impinging on federalism** as per the Indian Constitution by constraining states to adopt and implement this project, and linking financing to the adoption of this project. Preliminary anecdotal reports and experience indicate that the Union Government is denying states access to the aggregated database, whereas states are the ones which have provided the databases in the first instance.
11. **Insufficient digital access and literacy in the nation**, with existing asymmetries creating a non-level playing field. It is unclear what autonomy does a farmer have, if s/he wants to be included in a limited manner, or wants to opt out. It is also unclear what happens to the farmers who are excluded from this ecosystem; there is no clarity on grievance redressal mechanisms and whether they would be farmer-friendly.

All the above would require a careful sequencing of processes, rather than rushing into a digitisation process, as is being currently undertaken. As an example, the digitization of land records in most states took place without a complete re-survey of lands being done to capture the true position on the ground including the information of the operational landholders and cultivators, resulting in enormous problems including dispossession of land and erasing the rights of large numbers of small and marginal farmers.

An elaboration of these concerns is in Annexure 2, the contents of which may kindly be perused and considered a part of this response. Preceded by it, in Annexure 1, is a position paper on digitisation in agriculture, which seeks to articulate the perspectives based on which our response has been drafted. Lastly, Annexure 3 contains responses to the specific questions asked in the consultation paper put out for feedback.

We, therefore, urge a drastic reconsideration of the consultation paper and consideration of alternate vision drafts and proposals for identifying the place for digital technology in agriculture. **As a principle, we urge you to avoid rushing this process of digitization because it can result in newer problems, as has been seen in earlier experiences including the digitization of land records.** Software code must not replace law and digital architecture design must not replace policy making. We fear that here is a paper which is going to affect the agricultural sector policy in a fundamental manner that is being passed as a technical document.

As mentioned earlier, this is a welcome first step of public consultation. However, in order to make it a truly meaningful, participatory approach and to protect the interests and rights of the farmers, we demand the following:
1. The deadline should be extended to enable meaningful inputs from farmer bodies and the general public. This should be accompanied by presenting the content of the consultation paper in multiple Indian languages in a manner that a lay person finds easy to understand and comprehend, and translating and disseminating it in all major Indian languages.
2. Consultations and oral hearings should be held to enable the participation of farmers and their organizations, as well as experts in various related fields.
3. All implementation of pilots should be suspended until the above consultation process is completed and the inputs from the consultation are duly incorporated, since personal data is being shared with private entities without necessary safeguards in place.

We submit that as the government is seeking public inputs on the process of building a digital ecosystem of agriculture, the task force should be ready to make fundamental changes in approach taking into consideration the concerns raised in this letter including the Annexures, as well as other inputs in the broader consultation process outlined above.

Sincerely,
1. Agri Insight
2. All India Union of Forest Working People (AIUFWP)
3. Alliance for Sustainable and Holistic Agriculture (ASHA) - Kisan Swaraj network
4. Alternative Law Forum
5. Anantha
6. Andhra Pradesh Vyavasaya Vruthidarula Union (APVVU)
7. Anna Adhikar Abhiyan, Maharashtra
8. Article 21 Trust
9. Balya Foundation
10. Bharat Krishak Samaj
11. Bharatiya Kisan Union
12. Bhoo Shakti Kendra

13. Bhoomgaadi Organic Farmer's Producer Co. Ltd
14. Centre for Holistic Learning
15. Citizens Forum for Mangalore Development
16. Dalit Bahujan Front (DBF)
17. Department of Horticulture, SGRR School of Agricultural Sciences, SGRR University
18. Deshi Bihan Surakshya Mancha Odisha
19. Desi Seed Producer Company Limited
20. EQUINOCT-Community Sourced Modelling Solutions
21. Farmers Organisation for Research Welfare Agriculture and Rural Development
22. Federation of Tamil Nadu Rice Mill Owners Association
23. Foundation for Ecological Security
24. GoOrganicLife
25. Gram Seva Sangh
26. Gram Vaani
27. Gramin Vikas Setkari Gat
28. Gramya Resource Center for Women
29. Growthwatch
30. Hasgeek
31. Hasiru Sene
32. Human Rights Forum
33. Inclusive Media for Change, Common Cause
34. Indian Social Action Forum (INSAF)
35. Internet Freedom Foundation
36. IT For Change
37. Jagrit Adivasi Dalit Sangathan
38. Jai Kisan Andolan
39. Jai Kisan Andolan, Odisha
40. Jaljeevika
41. Jan Jagran Shakti Sangathan
42. Janapara Foundation
43. Jatan Trust
44. Karavali Karnataka Janabhivriddhi Vedike
45. Karnataka Rajya Raitha Sangha
46. Krantikari Kisan Union
47. Mahila Kisan Adhikaar Manch (MAKAAM)
48. Mahila Kisan Adhikaar Manch (MAKAAM), Maharashtra
49. Mazdoor Kisan Shakti Sangathan
50. Mewat Kisan Panchyat
51. Nalla Sandhai
52. Nari Atyachar Virodhi Manch
53. National Alliance of People's Movements (NAPM)
54. National Alliance of People's Movements (NAPM), Gujarat
55. National Alliance of People's Movements (NAPM), Kerala
56. National Centre for Advocacy Studies
57. National Hawker Federation
58. Organic Farmers Market (OFM)
59. Orissa State Volunteers and Social Workers Association
60. Paschim Banga Khet Majoor Samity

61. Paschima Odisha Krushak Sangathan Samanya Samiti
62. Popular Education & Action Centre (PEACE)
63. Prakriti Food
64. Prakriti Vyavasaya Samakhya
65. Prayas
66. Reodar Welfare Foundation
67. reStore
68. Restore Gardens
69. Rethink Aadhaar
70. Right to Food and Work Campaign, West Bengal
71. Rythu Swarajya Vedika
72. Safe Food Alliance
73. Samanvaya Social Ventures Pvt. Ltd.
74. Save Our Rice Campaign Network
75. Self Employed Women's Association (SEWA)
76. Software Freedom Law Centre, India (SFLC.in)
77. South Indian Coordination Committee of Farmers Movements (SICCFM)
78. SRIJAN (Self-Reliant Initiatives through Joint Action)
79. Swathanthra Malayalam Computing (SMC)
80. Tamil Nadu Organic Farmers Federation
81. Thaalanmai Uzhavar Iyakam
82. Tharchaarbu Iyakkam
83. Thirunelly Agri Producer Company Limited
84. Thiruvallur Organic Farmers Group
85. Thondaimandalam Foundation
86. Torang Trust
87. Tula India
88. United Artists Association
89. Vizhuthgal
90. Vrutti
91. Wayanad Farmers Collective

Annexure 1

Position paper on digitisation in agriculture

Developments in information technology have revolutionised human life and continue to do so. These are, however, technologies that can be put to both good and bad use. Almost everyone is aware of the benefits of these technologies and they may not need recounting. Potential downsides[3], such as omnipresent surveillance leading to a fear of freely expressing one's views, profiling for commercial profiteering, exacerbation of existing inequities in our society as well as compromise of national security by fundamentally affecting democracy through undue influence on electoral processes by domestic and foreign actors, must also be kept in mind when developing any digital policy or programme. Digital technologies are not error-free and algorithms are susceptible to bias, discrimination and exclusion. It is with this holistic perspective that the position outlined in this paper has been arrived at.

The beginning point of such initiatives should be farmers' stated needs, captured through deliberative democratic processes, to find the role of digital technology in agriculture.

The beginning of the building of any digital technology infrastructure in agriculture must be the stated needs of the farmer which is arrived at through a deliberative and participatory process. One must not approach problems through the perspective of only technology but rather a perspective where farmers identify the problems. It may be that not all the solutions are rooted in technology.

Digital access and literacy in India: nothing digital should be compulsory or even 'voluntarily mandatory'

At the time of drafting of this paper, a vast number of the citizens in India have experienced the frustration of trying to book COVID-19 vaccine appointments through exclusively digital means. While even the English speaking, tech savvy middle and upper classes of Indian society in urban centres have struggled with the online booking process, a majority of the rural population speaking in vernacular languages who are not as digitally literate cannot even hope to begin engaging with such digital processes. Further, despite the high sales of smartphones in India, one cannot automatically assume that there is always access to the internet when it is needed, especially in the remote parts of the country. Therefore, while a digital option may be provided to take advantage of the efficiencies that it might provide, there must always be a fall back non-digital option for those who cannot engage with the digital process for any reason.

Processes of digitisation must also be undertaken at a pace which is in keeping with ground realities and limitations that may be out of one's control. Forcing and rushing digitisation by making it compulsory or 'voluntarily mandatory' to access legal entitlements or government services is unjust in a country where digital access and literacy is still at levels which are far from desirable and where significant inequities exist in this domain too. This is not to stop or limit advancements in information technology in governance. Such developments must be

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[3] https://scholarspace.manoa.hawaii.edu/bitstream/10125/60285/intro-60.pdf

undertaken in order for the nation to be prepared for the coming digital age. But there must be no exclusion or coercion and dis-incentivisation of those who cannot engage with this process.

While the rollout of Aadhaar may be the most infamous example of how digitisation has lead to exclusions[4] in legal entitlements and government services, what may be a more pertinent example in the agriculture sector is the digitisation of land records. Being an exercise led by states, implementation across the nation is uneven. But if there is one common thread across all states, it is probably the issue of how digitisation has replicated the pre-existing structural problems at best and at worst created further problems in land records.

Particular modes of technology use can widen inequalities and affect people's rights: Lessons from land record digitisation

The experience of digitisation of land records teaches us that only technology cannot solve underlying social problems. It is our legacy that land records in India are messy, while land ownership is inequitable. By merely digitising these records - without first undertaking the hard task of a proper re-survey and settlement of the lands to ensure that what is recorded in the document in fact matches the reality through 'ground truthing' - one is simply recreating the existing problem in the digital space. While fundamental inequalities in land ownership are yet to be addressed, simply digitising will not magically solve even the mess in India's land records.

Worse yet, experience has shown that the digitization process actually resulted in dispossession of land from large numbers of small and marginal farmers. Failure to re-survey the lands, to record actual cultivators, and to recognize and incorporate customary rights in the digital records led to farmers losing access to land which they have been operating for generations. In addition, errors in data entry, whether intentional or otherwise, have actually made matters worse for the average farmer. Getting such errors corrected means running pillar to post, often to little avail. During such times, digitised governance makes it "presenceless" and remote; and grievance redressal is much harder than even the earlier not-easily-accessible or rent-seeking behaviour of having to deal with an official in a government office. The aspiration of making governance "presence-less" often translates into a reality that makes governance disappear for the average farmer.

Furthermore, there are reports that the more powerful in society sometimes use their influence to intentionally change land records during data entry to their benefit. Power to modify land records exists now with data entry operators rather than with revenue officials. Often - and sometimes by design - the system does not capture change logs and hence those who undertake such unscrupulous activities, cannot be held to account. Unless it is consciously built otherwise, such digitisation can camouflage any footprints of tampering of records. In this manner, digitisation can further aggravate existing power imbalances in society.

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[4]
https://fert.nic.in/sites/default/files/2019-07/Final%20Report_Assessment_of_AeFDS_Aadhaar_enabled_Fertilizer_Distribution_System_Pilot_0.pdf

It is also the experience of farmers that when it comes to a divergence between hard copy land records and the digitised version, the latter is prevailing and not the former. It is not clear on what basis has it been decided that the digitised version is the final, authenticated version when experience is pointing otherwise.

Moreover, accurate digitised land ownership details are also not proof of a citizen being a farmer, or a real cultivator. As the digitised architecture is used for Direct Benefit Transfer (DBT) payments under various schemes, the stake of the non-cultivator land owner in perpetuating the existing records increases, at the expense of denial of numerous services and support systems to the real cultivator.

Data sovereignty first with the individual

Another lesson that one can draw from the experience so far with digitisation of land records is that an individual must have control over her/his data. Accessing data about an individual (in this case, an individual's land records) by any entity, including the state, should not be possible without the prior, informed, free, revocable, granular and limited consent of the person to whom the data (and, in this case, land) belongs. What is implied by each of these terms is expanded on below:

1. Prior consent: consent must be obtained before the data is accessed
2. Informed consent: the individual giving the consent must understand in plain terms the implications of providing the consent
3. Free consent: consent must not be obtained through coercion of any kind. Mandating people to "voluntarily" share Aadhaar details to access entitlements and services cannot be considered meaningful consent, for instance. Similarly, changing the terms of use of a service once a person is locked in also cannot be considered meaningful consent. An example of the latter is WhatsApp changing its terms[5] to show that it is allowed to share users' data with Facebook. WhatsApp's terms did not have such a provision when it got popular and many people started using it. Once there was a sufficiently high barrier of exit since a large number of people started using it for communication (also called the network effect[6]) then changing the terms and asking users to leave if they did not consent cannot be considered an example of free consent.
4. Revocable consent: it must be possible for the consent that is given to be revoked
5. Granular consent: if data is being shared for various purposes, it must be possible to consent to some purposes and reject other purposes, or give access to only particular fields of data and not everything that is available
6. Limited consent: the data must be used only for the purpose that the consent has been given for and cannot be used for additional purposes without getting consent once again

Any system that uses a person's data must have that person as a stakeholder in the decision-making and governance process of that system

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[5] https://www.wired.com/story/whatsapp-privacy-policy-facebook-data-sharing/
[6] https://en.wikipedia.org/wiki/Network_effect

Consent has become the basis for data protection in legal regimes. There are also critiques that [consent is broken](7). There is some truth to this. The aforementioned WhatsApp example shows how once a user is locked into a particular service, then consenting to changing terms of engagement often only offers an illusion of choice. Unfortunately, this increasingly seems to be the modus operandi of many digital companies. They often offer exciting terms of service when they enter the market. As users get locked in, then they slowly begin to change the terms of engagement and people find it hard to leave.

An example is the way Ola and Uber have operated. They enticed drivers by initially offering high rates, at a loss to the company. Once drivers invested in vehicles and had to pay equated monthly installments (EMIs), these ride hailing apps reduced the rates offered to the drivers. By then, however, drivers had little choice but to comply since they are locked into the system financially through the EMIs that they have to pay. Such economic lock-ins might easily get replicated in the agriculture sector as well since the IDEA consultation paper specifically mentions "Uberized farm machinery services" as an example of "Smart Farming-as-a-Service" on page 29 of the document.

In the light of the three farm laws passed in September 2020, such risks to farmers increase manifold. As post-harvest purchase from farmers has been deregulated along with the permitting of contract farming with legal provisions that facilitate the sponsor's business more than protecting the farmer's livelihood, it is not far fetched to imagine a scenario where an e-commerce website ties up with a farmer offering to connect them directly to consumers, like ride-hailing apps promise to connect drivers with riders. Such an e-commerce website may initially even offer good rates to farmers, like the ride-hailing apps initially offered good rates to drivers. Once the traditional post-harvest supply chain of the farmers is broken and the farmers have no choice but to supply to the e-commerce company, the e-commerce websites could start paying the farmers less. They will also use the knowledge gained from the artificial intelligence to surge price consumers for the food they are buying from the underpaid farmers. The present conception of IDEA, along with the enactment of the three farm laws as they have been passed will, knowingly or unknowingly, enable such e-commerce in the agriculture sector.

Mere consent to data sharing is not enough to stop such practices. Consent is vital and necessary but it is not sufficient. In order to make not just the consent but the choice being offered for consent meaningful, individuals whose data is being used by any entity or system need to be consulted **before** any change is made not just in the use and sharing of data but any change with respect to the terms of service is made. And, if a majority of users disagree to a particular change in the terms of service, the entity must not be allowed to proceed with that change to the terms of service. Bait-and-switch, where users are locked in under favourable terms and then, once locked in, consent is given to unfavourable terms with a gun to the head, must not be allowed.

Similarly, in order to protect the economic interests of farmers in a system like IDEA, farmers' representatives will have to be a part of the governance of such a system. It is possible that the average farmer may not understand the implications of terms being proposed by a digital service provider. The farmer representative can be the first point of check to ensure that

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[7] https://indianexpress.com/article/opinion/columns/privacy-policy-online-consent-illegible-7150434/

what is being proposed is not against the interest of the farmer. Over and above that, consent has to be obtained from each and every user of the system. If and only if a majority of the users of the system agree to the terms proposed by the digital service provider will the service provider be allowed to go ahead with the terms being proposed. Similarly, the farmer representatives in the governance of such a system may also be elected by the farmer users of the service.

Only such a system will ensure that bait-and-switch tactics of the kind being increasingly employed by digital service providers are prevented and the economic interests of users are secured. This will also enable supervision and control of the kind of use cases that are being developed and ensure that no use cases are developed which are against the interests of the users. Rather farmers and ethical social enterprises engaging with farmers to ensure they receive a fair share of end sales of farmer produce must find a seat at the table to help design use cases which are desirable and which not so.

Decentralised digital infrastructure

Agriculture is a state subject and so the role of the central government must be only to facilitate the creation of IDEA / AgriStack. The control in such a system must lie as much as possible on the peripheries: with state governments, panchayati raj institutions and even further than that with the farmers themselves. Otherwise, there are strong fears that agriculture as a state subject will end up coming under the control of the central government through such digital architecture. Were such a thing to happen, it would go against the provisions of the Constitution of India.

Code cannot be law and architecture cannot be policy

It has been experienced, unfortunately often enough, that software code (programs) become the law because the administration is done through IT systems which do not allow human administrators to account for genuine exceptions through human judgment. Similarly, the architecture of a digital system becomes the default government policy, like in this IDEA Consultation Paper the lack of any accountability measures in the architecture mean that the government is doing away with regulation in the agriculture domain. Architectures of digital infrastructure systems must remain open and amenable to all possible agricultural policy changes and regulations that may come in the future and any level of government. Policy choices must not be constrained by what an IT system can or cannot do. This must be kept in mind when architecting platforms of the kind IDEA seeks to be.

Conclusion

A summary of the principles outlined in this position paper is presented as a conclusion:
1. The beginning point of such initiatives should be farmers' stated needs, captured through deliberative democratic processes
2. No digital initiative must be compulsory. Citizens must have a non-digital pen-and-paper option.
3. One must be wary of techno-solutionism. Only technology cannot solve social problems. Unless there is a conscious and persistent effort to do otherwise,

technology will at best recreate existing power inequities and dynamics in the digital space and at worst, further exacerbate them.

4. Individual citizens have primary sovereignty over their data and any change or access to their data must be with prior, informed, free, revocable and limited consent.
5. The architecture must be decentralised, moving control from the central governments to not just state governments but also panchayati raj institutions.
6. Code cannot be law and architecture cannot be policy.

Annexure 2

Concerns with IDEA-India Digital Ecosystem of Agriculture

This annexure elaborates on the concerns which have been listed in the main body of the response.

1. Execution before consultation

The consultation paper was put in the public domain for feedback on 1st June, 2021. However, the Government of India has signed MoUs with various corporations as early as 13th April, 2021 to begin implementation of these ideas through pilots. It is not clear on what basis these corporations were chosen. Patanjali Organic Research Institute is not known as a tech group with expertise in Artificial Intelligence, for instance.

These MoUs set in motion the creation of AgriStack / IDEA on certain proprietary, closed source platforms, such as Azure in the case of the MoU with Microsoft to create the underlying digital infrastructure (like the Unified Farmer Service Interface) on which everything else will be built. One doesn't know if any tendering process was done to zero in on these corporations, such as Microsoft for the UFSI or Amazon for the startups ecosystem, as the vendor for this process since this is supposedly being done *pro bono*. As a result, if these proofs of concepts are deemed successful, the entire digital infrastructure of agriculture in India will get locked into proprietary platforms since migrating out of such a fundamental aspect of this ecosystem will be extremely challenging and the government might have to pay Microsoft, Amazon and other partners whatever they may charge to maintain this system. If these proofs of concepts are deemed successful, we will also never know if any other vendor could have built anything better or cheaper.

Further, solutions like Azure are closed source and go against the principle of '*Open, Open and Open: Design the digital systems to be built on open source, to be published as open source, and to conform to open standards*' mentioned in page 10 of the paper. The reason for making this exception has not been provided. Such a blatant violation of self-professed principles makes one suspect that there are one set of principles in theory and another set in practice. Additionally, Amazon, which is supposed to help build the startup ecosystem, has a history of [cannibalising open source startups and pursuing monopolistic practices](#)[8]. The selection of such partners even before beginning the consultation process makes one wonder if this consultation is being done as a mere formality or if the government is serious in this exercise.

Lastly, the MoUs also state that farmers data will be shared with these companies but that the 'ownership' of the data will remain with the Ministry of Agriculture. This is problematic on at least two counts. First, one does not know if consent was obtained from farmers for providing their data to these companies. Secondly, the government cannot claim ownership of data that belongs to the farmers. Casual sharing of data and use of such language

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[8] https://www.nytimes.com/2019/12/15/technology/amazon-aws-cloud-competition.html

claiming ownership over farmers' data do not inspire confidence about the trust that may be placed with the government to do the right thing when in possession of peoples' information.

2. Language of the consultation paper

The consultation paper that has been put out is only in English. A vast majority of the stakeholders who will be affected by these developments are farmers who primarily speak the various regional languages spoken in India. It is necessary to put out this paper in major Indian languages in order for this exercise to be meaningful. Additionally, even for an English speaking farmer, the language used in the paper is filled with technical jargon. No attempt seems to have been made to make the content accessible to non-technical readers who are going to be affected by these far-reaching developments. Therefore, we request the government to extend the deadline of this consultation, put out the paper in vernacular languages and give it adequate publicity so that there is more widespread engagement with these issues by potentially affected people, such as farmers[9].

3. Farmers' database based on digitised land records will lead to problems and exclusions

The opening sentence of the office memorandum constituting the government task force to work on these developments in Annexure 1 states that the government seeks to create a "*... centralised farmer database based on land revenue records ...*" to access various services. The [SOP][10] released along with the Microsoft MoU also looks at matching farmers in various schemes with their land records. By making land records the basis for this farmer database, the government will exclude women farmers (since land ownership is mostly in the name of the male head of the household), agricultural labourers, sharecroppers, tenant farmers, those associated in allied activities such as fishing, beekeeping, poultry, forest-gathering, animal husbandry, pastoralism, sericulture, vermiculture and agro-forestry from accessing these services on the digital platform because they may not own agricultural land. It must be said here that the National Policy for Farmers adopted by the Government of India defines all these categories of people to be farmers as well. So, the first reason that a farmer database should not be based on land records is that this proposition will lead to the exclusion of large categories of farmers.

The next concern is that land records themselves are [not accurate and up-to-date] in India[11]. Whether digitised or not, the hard task of undertaking resurvey of land records is the first requirement before any accurate database can be built on the basis of this. The Government

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[9] The requirement for adequate consultation is not just a principle of fairness, but has been recognised as a requirement by our Courts. The Gunning Principles, first laid down in *R (Moseley) v. London Borough of Haringey, 1985 84 LGR 168,* and affirmed in Justice Khanna's dissenting judgement in *Rajeev Suri v. Delhi Development Area* 2021 SCC OnLine SC 7, state: "*First, that consultation must be at a time when proposals are still at a formative stage. Second, that the proposer must give sufficient reasons for any proposal to permit of intelligent consideration and response. Third,… that adequate time must be given for consideration and response and, finally, fourth, that the product of consultation must be conscientiously taken into account in finalising any statutory proposals.*"

[10] https://drive.google.com/file/d/146TcaGm1BGjpJxsXbWoMK2iGHiEkR5fn/view

[11] https://thewire.in/rights/land-digitisation-ulpin-land-records-legacy-digital-india

of India also probably realises this, which is why as a part of the MoUs, the [SOP][12] for matching farmers in various schemes with their land records is being undertaken. It is highly unfortunate that despite being cognisant of this, the government has chosen to go ahead with creating a database based on land records. There is an adage in computer science called garbage in, garbage out (GIGO). What this basically means is that, if incorrect information is the input for any process, the output of the process will also be incorrect. Given that it is common knowledge that land record information in India is outdated and incorrect, it is highly ill-advised to base any digital database of farmers on this before first undertaking resurveys and correcting and bringing up-to-date the land records in India.

4. Ownership of IDEA / AgriStack

Implementation of IDEA / AgriStack has already begun with MoUs being signed with various private corporations. The terms in these MoUs do not state explicitly anywhere that what is being developed through these MoUs will belong to the government. Nowhere in the Consultation Paper is there anything mentioned about the ownership structure of IDEA. It must be explicitly stated as a matter of policy and principle that the ownership of this digital infrastructure being put into place will be public.

5. Who will benefit from this system

There are no mechanisms built in to ensure that farmers have a say in the way that the system is designed and functions. Specifically, there are no safeguards in place to ensure the economic interest of farmers. If an unethical actor in this digital ecosystem cheats or takes unfair economic advantage of a farmer through a service or a transaction, there is no grievance redressal mechanism in place. There is no talk of methods to log complaints, or how redressal will be accessible to a marginal farmer. How are actors in this digital ecosystem to be held accountable for their actions? For example, in a sector like agriculture where there isn't sufficient access to formal credit to begin with, applications such as credit-scoring need to be looked at very critically. But it is unclear who will do so in this system.

The ideas placed in this consultation paper must also be seen from the larger context of the developments in the agriculture sector. The Government of India has recently passed three farm laws. These laws seek to deregulate the agriculture sector and have almost no checks and balances if anyone commits financial fraud with a farmer. While prevention of exploitation is required whether in the physical or virtual market, two of the recent laws even do away with the farmers' right to judicial recourse if the farmer has been cheated. A similar mindset seems to inform the conception of IDEA.

Although more ambitious in scope, among other things, IDEA also seeks to enable e-commerce in agriculture. It is not far-fetched to imagine online mandis or contracts with online retailers who will buy directly from farmers. One of the MoUs with Agribazaar, among other things, seeks a proof of concept of such online marketplaces. It is sorely disappointing that when embarking on such a mission, there seems to be no thought put into creating mechanisms that protect the economic and other interests of farmers. Without such

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[12] https://drive.google.com/file/d/146TcaGm1BGjpJxsXbWoMK2iGHiEkR5fn/view

mechanisms, farmers would not be wrong to think that IDEA (among other ambitious goals) seeks to create the very future that farmers fear in light of the new farm laws in a virtual space, where developments are much faster than physical spaces.

Ironically, among the few places that the word regulation is mentioned in this document, it is mentioned in the context of ease-of-doing-business and how this digital architecture can make dealing with regulation easy. The perspectives of businesses seem to find voice in the document and the perspective of the farmer only has a loud silence.

Using existing databases, merely because they exist, for doing what commercial entities might want to use such databases for should not be the basis for IDEA. There is no clarity about who will regulate this system and how rules will be arrived at and enforced to ensure that the farmer benefits from this system. In the absence of any regulation, monopolies and oligopolies may emerge.

Roles and responsibilities of various actors in the system need to be clearly defined. Based on this, accountability systems need to be put into place to ensure for all players in the system, including state departments and agencies. It might also be necessary to imagine new horizontal, rather than the traditional hierarchical, structures in government to deal with such cross cutting developments like digital technologies.

6. Data Sovereignty and Farmers' Consent

The IndEA Framework seeks to lay the underlying foundation for e-governance in India and there are various sectoral initiatives towards digitisation like, for example, AgriStack in the agriculture sector and the Health Stack in the health sector. Specifically, IDEA seeks to use the consent management application of IndEA rather than developing a separate independent application for this. The implementation of consent management is fundamental to ensuring rights of the person to whom the data belongs. Using an external application for this purpose fundamentally limits the way in which meaningful changes to the consent management framework can be proposed since it would be outside the scope of the document that has been put up for consultation.

The section '*Any system that uses a person's data must have that person as a stakeholder in the decision-making and governance process of that system*' in Annexure 1 highlights how consent is necessary but not sufficient to ensure farmers' interests and how consent needs to be strengthened for this purpose. A typical consent management framework, like employed in IndEA and by extension in IDEA, will not be strong enough to protect the economic interests of farmers as imagined in Annexure 1. Therefore, one of the two options listed below can be the way forward:
1. The Ministry of Agriculture must choose to implement a separate consent management framework for IDEA / AgriStack. This will, however, not be in keeping with the Government of India's overall goal of harmonising digital governance frameworks across government for uniformity.
2. The Ministry of Electronic and Information Technology, which is in-charge of development of the IndEA framework, must agree to modify the consent management application to ensure farmers interests are safeguarded.

7. No data protection law in place

In a couple of places, there is a cursory reference to compliance with data protection regulations. It might be prudent to mention that India currently does not yet have a data protection law. There is a data protection bill in Parliament which may be passed sooner or later and the references to data protection regulation may be forward looking. Nonetheless, the entire exercise is presently taking place in a legal vacuum. We strongly urge that IDEA must not be implemented until a data protection law is passed. Farmers' data is already being shared with corporations and it is unclear if consent has been obtained or not. Farmers will have no legal recourse if there is any misuse of their data.

8. Restrictions on coping of raw data

There are benefits, economic and otherwise, to be had by discerning patterns from large data sets. But better mechanisms must be thought of to gain these benefits without having to give copies of the raw data. Rather than giving away the data itself, it might be more prudent to give programs access to the data without giving a copy of the underlying raw data. This way, programs and entities analysing data can get their analysis without ever getting access to the data itself. An example of this is presented in response to question 5A on data exchanges in Annexure 3.

Having said that, the farmer *must* have access to raw data about her / him without being charged for it behind a paywall. There are concerns, for example, about how farmers can access data about their farms which are being gathered by satellites and drones without the consent or knowledge of the farmers. How can farmers ensure that they have primary access and control to such data about their business? Satellite data and the usage of drones, as well as just the fact that there is one single repository with all the agricultural data of all the farmers of India, also pose immense national security risks that must be properly thought through and addressed.

There must also be rules and criteria on who (apart from the farmers themselves who should have access by default) will get access to the data. There also need to be rules about if and how access to this data may or may not be shared further. How such data will be monetised also needs to be made clear. A policy paper needs to be put out and agreed upon and only then must a digital architecture be put in place as per what has been agreed upon in policy.

9. No farmer representation

The task force that has prepared this consultation paper and the various working groups that had other invitees did not include a single farmer representative. This is reflected in the lack of the perspective or concerns of farmers in the document. Furthermore, whatever governance structure is going to oversee the implementation and running of AgriStack / IDEA must have sufficient farmer representation in it at all levels. Without this, the entire exercise will have lesser legitimacy and insufficient confidence of farmers.

10. Impinging on federalism

Agriculture is a state subject and implementation of various agriculture schemes of the central government also depends on state governments. Although some bureaucrats from some states have been a part of the teams that have worked on this consultation paper, this development has far-reaching consequences for not just farmers but also the way state governments can implement their schemes in the agriculture sector. Therefore, apart from putting this paper out and seeking feedback from, among other stakeholders, various state governments, the Government of India must hold meetings to take on board the views of state governments.

Further, there must be no coercion on state governments to adopt what is being proposed by the centre. What is being proposed must have sufficient inherent value that states see merit in going along with the centre. This would be cooperative federalism at its best. Rather, what one sees in this document is an attempt to coerce state governments into toeing the line. There is a line in Chapter 6 on implementation that states, "*The adoption of IDEA may be incentivized by linking a portion of the central assistance in the agriculture sector to the progress achieved in implementing IDEA.*" This is objectionable. When a particular state government may choose not to adopt or go slow in the implementation of IDEA, by tightening the purse strings, the central government will be adversely affecting the farmers of that state for decisions and actions (or lack thereof) over which the farmers had little or no say. This approach should not be adopted.

Lastly, there have been instances where the central government has collected information from states for schemes such as the Pradhan Mantri Fasal Bima Yojana (PMFBY) or the Pradhan Mantri - Kisan Samman Nidhi (PM-KISAN) through online management information system (MIS) where there is provision for the states to do data entry and not shared the aggregated, analysed information back with the states. Given this past experience, there is valid reason to fear that centralisation of information though IDEA may also lead to loss of access to this information by states. We urge the Government of India to make it a matter of policy and practice that information given by states to the centre must be shared back with the states.

11. Insufficient digital access and literacy

India has a history of digital processes being thrust upon the nation. Aadhaar, which is the root of the developments of various other digital stacks being built across sectors, has seen widespread adoption only because it has been made 'voluntarily mandatory' to access most legal entitlements and government services. The latest digital imposition was making booking of appointments through the Cowin app compulsory to get vaccines. Given this track record, there are grounds to fear that this will also be a system that citizens will have little choice but to accept. A better way, that will instill more confidence in the process, would be to create a system that is so good that people will not want to miss out and they will sign on to it of their own free will. While we strongly hope that there will be no coercion in the roll out of AgriStack / IDEA. At the bare minimum, none of what is being developed must be made mandatory for any purpose. Doing so would lead to widespread exclusions.

Further, there must be a clearly outlined process for those who cannot access digital technologies to engage with the system through pen-and-paper. There must also be an option to opt out of the entire system and to only engage in a limited manner.

Before this exercise is carried out, there needs to be a proper mapping of the digital capabilities of various actors in this system, including farmers as well as government departments and agencies. Often those working within the administration are also found wanting in technical capabilities. Once such a mapping is done, there also needs to be a clear roadmap for building the capacities of all actors in the system upto the level necessary to be able to deal with the system such as IDEA / AgriStack in an informed manner.

Annexure 3

Responses to the Issues for Consultation

1. Vision and Objectives

1A – Is the idea of IDEA necessary for India' Agriculture?

IDEA, in keeping the principles outlined in the position paper in Annexure 1, may be useful . However, it is not necessary in the current circumstances. It is certainly not desirable in the form outlined in the consultation paper and the way implementation through MoUs has begun.

What is most definitely necessary before any such endeavour takes place, however, is the passage of a data protection law and legal protections in place to ensure farmers' interests in the marketplace.

1B- Is IDEA feasible?

The government may choose to continue work in this direction but digital access and literacy in India are not at a stage where this can be practically rolled out to every farmer in India. Therefore, this must not be made mandatory.

2. IDEA Architecture

2A – Is the 3-level Architecture proposed for IDEA appropriate?

Rather than limit to a federated structure upto the state level, it might be better to have a distributed and decentralised structure where the data is stored as close to the users as possible. If feasible, there must be data centres at the district level or even the block level. There must be provisions to involve panchayati raj institutions too. Among other things, requiring this will ensure that the necessary infrastructure to access these services will be available to farmers across India rather than in a remote national or state capital. It will also ensure that these skills slowly get transferred to people living in the mofussil. Lastly, there have been instances when the centre has collected information and not shared it back with the states. By having a decentralised architecture, there is a greater likelihood that data belonging to a locality is accessible by that locality.

2B – Does IDEA capture the spirit of Federated Architecture correctly and adequately?

The paper, unfortunately, restricts itself narrowly to only technological concepts and does not seek to address other larger issues of governance. Although there is mention of 'Federated Governance', the real spirit of cooperative federalism can only be captured if there is meaningful consultation with the states on this proposal on a state subject such as agriculture. Merely following federated architecture in technical terms does not mean that the spirit of federated systems has been captured. Centralising governance command and control in a technical federated system does not capture the spirit of federated architecture adequately or correctly. Moreover, there might be the need to think creatively of new

horizontal structures to govern such wide, cross-cutting architectures rather than the traditional hierarchical administrative structures.

2C –IDEA Architecture is designed in terms of Building Blocks. Is this appropriate?

Among other things, reference building blocks are also inherited from IndEA, such as for consent management. As outlined elsewhere in the document, the consent management as designed in the IndEA Framework is inadequate to meet the way we think consent should be. Another reference building block is on data exchanges. Restrictions on coping of raw data through data exchanges are necessary to ensure that farmers are in control of their data.

3. IDEA Standards

3A – Is the approach to development and adoption of Standards proposed in IDEA appropriate?

It is necessary to adopt standards for a system like IDEA to function in varying contexts. There is no disagreement with the broad areas that have been identified for standardisation. This list of broad areas, however, may not be complete and additional areas that require standardisation may continue to come up as the system is further developed. Hence, the process of creating and communicating standards across the system will have to be an on-going one and cannot be a one-time exercise.

3B – Is FAIR feasible? [Fast Agriculture Interoperability Resource]

The document lays out the need to have FAIR and the impact of having FAIR. But it does not really explain what FAIR is except for saying that it is like FHIR. In order to be able to comment on the feasibility of FAIR, one will have to first understand what FAIR is and the consultation paper does not help in this matter.

In any case, the principle of interoperability must not be adopted in the absence of data privacy laws.

4. IDEA Implementation Framework

4A – IDEA proposes development of a PPP framework for its implementation. How to develop such a framework?

While there is no objection in principle to involving the private sector, the private sector must also be accountable for their actions. And there mustn't be financial incentives for actions that are against peoples' interest.

For example, people are charged to make any changes to their Aadhaar data[13]. As a result, many private enrollers intentionally made incorrect data entries so that they could then charge for making subsequent corrections. There have also been reports of similar practices

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[13] https://www.newsclick.in/UIDAI-Made-Rs-240-Crore-eKYC-Authentication-21-Months-RTI

during digitisation of land records where land records were deliberately entered incorrectly in order to later make money. It might be best to think of models where people can log in and enter their own data, which can then be verified and validated by concerned officials. This way, there is less chance of incorrect data entry (be it intentional or unintentional) - whether by a private entity or a public servant.

Another PPP model that must be used is a public-people-partnership in which citizen involvement in the design and implementation of this entire system is encouraged.

4B – Can IDEA attract/ facilitate fresh investments in Digital Agriculture?

The MoUs that the government has already signed even before this consultation paper was put out has already demonstrated that the private sector sees this as a money making possibility.

5. Agri Data Economy

5A – Is Agri Data Exchange[ADEx] necessary?

There must be an attempt to have as few copies of data as possible. There is the 'single source of truth' and maybe a couple of backup copies.

Instead of giving a copy of the data through the exchange to anyone who wants it an alternative needs to be thought off. Below is a tentative proposal, whose feasibility might be need to be studied more:
- First, any program that wants access to data will need to be vetted / audited first. This is similar to how all the apps in the Apple App Store are first vetted by Apple. In the team of people who will supervise this vetting process, there must be representatives of farmers. The audit process must check for the following:
  - That the program is in fact doing what it claims to do
  - That the program does not do anything more than it claims to do
  - What the program does is in the best interest of farmers
- The approved programs must run on data servers where the data is stored and only the output of the program must be shared with the entity that made the program. The underlying raw data must never be shared - whether anonymised or otherwise. The best that any entity can do with the data is that they can get programs vetted, have their programs process the data without getting access to the data and get the results of the data processing.

  As a practical example to better illustrate, consider the example of 'Uberized farm machinery services' that is mentioned in the consultation paper. Presently, the way that ride hailing apps function, a rider and a driver need to share their location, contact details and payment details to use the service seamlessly. Currently and conventionally, the ride hailing app collects this information about its users to be able to provide this service.

  What is being proposed as an alternative is that the location, contact details and payment details exist in a central database. This information is NOT shared with the

'Uberized farm machinery services' app. Instead, the backend software of the app, after being duly vetted and audited, will be deployed on the central data server where this data is stored and will run from there. The only data that the entity will get access to is metadata about the usage of the app and the service commission that the service provider has earned through these transactions. The app will never get access to the raw data about users location, contact details or payment details.

5B – What should be the implementation model for ADEx?

This has been covered in response to the immediately preceding question.

5C – What are the regulatory requirements for ADEx?

The proposed regulatory provisions in the Personal Data Protection Bill and the Report on Non-Personal Data Governance Framework are currently tentative. One does not know the final form that both these regulatory provisions will take. Hence, it is prudent to design and implement IDEA only AFTER these policies have been finalised.

Secondly, the provisions in the present draft of the Personal Data Protection Bill are insufficient as per the conception of consent as outlined in this document. Please see the section titled '*Any system that uses a person's data must have that person as a stakeholder in the decision making and governance process of that system*' in Annexure 1.

Lastly, only that data which is necessary must be collected in this system. Data must not be collected just because it is possible to collect it.

6. Innovation around IDEA

6A – Is IDEA Sandbox [I-Box] necessary?

Yes, having a sandbox is a good idea.

6B – What should be the implementation model for I-Box?

The sandbox must be government-led. Incentives may not be needed to promote sandboxes. There is already sufficient interest by various entities to innovate and create applications in the agri-digital space.

7. Other Suggestions

Please see Annexures 1 and 2, apart from the main body of this letter.