Case Study

Samrakshane

Transparent and farmer friendly system for enrolment, registering claims, compensation calculation and payment of compensation to farmers under the Crop Insurance Schemes

e-Governance Secretariat, Government of Karnataka

Website: https://www.samrakshane.karnataka.gov.in

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I.   Executive Summary

Project Samrakshane of Government of Karnataka is transparent and farmer friendly system for enrolment, registering claims, compensation calculation and payment of compensation to farmers under the Crop Insurance Schemes. It aims to simplify and speed up the disbursement of claims within 8 to 12 weeks from the harvest date and credit the same directly into the farmer's Aadhaar linked account. It also facilitates transparent conduct of Crop Cutting Experiment involving all stakeholders by publishing the videos and photos of the conducted experiments. It helps to prevent people from misusing the scheme by registering for crop insurance enrolment on land belonging to others or by registering multiple crop insurance enrolments on their own land or for registering for crops which have not been planted. It captures digitally the Term Sheets used for payment calculation in Restructured Weather Based Crop Insurance Scheme (RWBCIS) on online database and uses weather data available in electronic form from Karnataka State Natural Disaster Management Centre (KSNDMC) in pay-out calculation.

Samarakshane has resulted in easy enrolment of farmers for crop insurance. For Kharif 2017-18 season, 14,11,684 applications with a sum insured amounting to Rs. 8918 Crore and premium totaling Rs. 239 Crore has been handled through the system. For Rabi 2016-17 season, 11.99 lakhs applications were processed through the system. For Kharif 2016-17 season, 10.46 lakh applications were processed through the system.

1.   INTRODUCTION

Agriculture in Karnataka is prone to variety of risks as more than 66% percent of Agricultural area is dependent on rain fed system. The state has been continuously reeling under drought for six years and in the last 16-years nature has been kind only 3 times. 78 % farmers are small and marginal and therefore suffer much more from such risk. Climate change is adding to the complexity of the problem.

It is in this background that efficient Crop Insurance system acquires much more relevance and importance. A well designed Crop Insurance system which is transparent and quick in providing relief largely de-risk the farmers and helps in even catalyzing private investment / capital formation in Agriculture sector.

2. OVERVIEW OF THE CHAMPION AND THE TEAM

The project head of Samrakshane is Shri T M Vijay Bhaskar, Additional Chief Secretary in the State Government of Karnataka, India. In his 34 years of service, he has worked in various capacities at national and state levels in the fields of education, rural development, agriculture, etc. His interest is in development, especially human development and improvement in quality of life. He led the implementation of Samrakshane project in the State of Karnataka. He, with the support of Shri Rajeev Chawla, Additional Chief Secretary, e-Governance; Shri Maheshwar Rao, Secretary, Agriculture & Horticulture; Shri Satish, Commissioner, Agriculture and the District Administration ensured that the system was used by 9,000 bank branches, 20,000 Government officials and all the Insurance Companies. This ensured that during the second season of enrolment, i.e. Rabi 2016-17, the enrolment went up by 360% compared to the previous corresponding season (11.99 lakhs in Rabi 2016-17 vs 3.25 lakh in Rabi 2015-16).

Shri B. Vinaya, State Informatics Officer, NIC; Shri N. R. Samartharam, Technical Director, NIC; Shri K. Satish Shankar, Principal System Analyst, NIC; Shri J. R. Kumar , Principal System Analyst, NIC and Shri M.N. Srivatsa, Section Officer are the other prominent team members.

3. PROJECT OVERVIEW/HISTORY OF THE PROJECT

Agriculture in Karnataka is dependent mostly on rain fed system. Hence, it is prone to a variety of risks. The Government of India realized the shortcomings in National Agriculture Insurance Scheme (NAIS) and MNAIS (Modified National Agriculture Insurance Scheme - earlier crop insurance scheme) and introduced Pradhan Mantri Fasal Bima Yojana with new features.

The coverage of Crop Insurance Schemes in Karnataka has been one of the lowest amongst other States. The average number of farmers covered has not exceeded 15 % in Kharif and 30-40% in Rabi with most of the covered farmers as loanee farmers (65% of total insured farmers). The involvement of Agriculture and Horticulture Department in Scheme implementation was minimal with its role largely limited to issue of Crop Insurance notifications and release of some advertisement. District administration involvement was also to say the least, minimal. Collectors hardly owned the schemes. Perhaps, they were never impressed upon regarding this priority of State Govt. The insurance agencies worked with banks and a very opaque and closed system existed with no information on details of farmers covered, the lands or the crop was available with the State Govt.

The system of Crop Cutting Experiment was again extremely neglected and opaque. Manual system ensured that yield data came as late as three months after crop harvest was over with no way for any stakeholder including farmers to verify or challenge the correctness of data. The claim settlement was always delayed by months together. There was no way for Government or farmers to know which farmers got the claims and when they actually got the money into their bank account. Therefore, the farmers lost interest in Crop Insurance scheme.

4.   SITUATION IN CHAMPION'S STATE/ DISTRICT

4.1   Problems Identified:

The following limitations were observed in the system:

1. The system was not user-friendly to the farmers. Banks were the only place to go for information and they were indifferent towards the farmers.
2. While Government had computerized database of land ownership, there was no mechanism to make the data available to banks to verify ownership of farmers. Their inability to verify the ownership of land and extent of area for which crop insurance was requested for was a problem. Government lacked verified ownership information that could be made available to banks and insurance companies to prevent fraud.
3. Duplicate crop insurance applications and inability to quickly identify duplicate applications
4. Randomization of Crop Cutting Experiments itself was a lengthy process to implement. Department of Economics & Statistics mandated to conduct Crop Cutting Experiments was unable to effectively monitor the crop cutting experiments happening simultaneously across the state.
5. Significant delay in compiling results of crop cutting experiments and sending officially approved data to stakeholders. (Minimum 3 months were required to compile the data)
6. Manual process of compiling of reports of insurance for applications, sending premiums, sending claims and disputes resulted in significant delay, needed large effort and was prone to human errors causing lack of coverage for a portion of the farmers who enrolled.
7. Threat of application of acreage discrepancy factor :- Manual system was not able to prevent bogus registration by unscrupulous elements in the name of farmers. These elements would find out which farmer was not registering his crop under the programme and would steal his identity and register in his place and put his own bank account number. Further some farmers used to register multiple times as there was no check. Farmers needed to pay only highly discounted premium while remaining premium came from Government. With heavy outgo from Government towards its share of premium and on the other side the real farmers only got a fraction of the crop loss as insurance settlement. The "acreage discrepancy factor" was applied resulting in reduction in payment if area enrolled under a crop exceeds total sown area for a crop in an insurance unit.
8. Lack of timely information to the stakeholders – farmers, banks, Government and Insurance Companies.
9. Lack of confidence in the process from all stakeholders
10. Long delay in settling of claims – 12-18 months from the date of enrolment. The Kharif 2015 was settled during June to December 2016.
11. The manual system paid farmer much after he had taken loan at high interest and sown his next Kharif crop.

4.2 Strategy Adopted

4.2.1   Implementation model

- As far as enrolment was concerned, there was no pilot because the scheme was to be rolled out all across the State in one go. During the enrolment phase Additional Chief Secretary (ACS), Horticulture had regular interactions with the bank nodal officers. The bankers were asked to appoint one nodal officer and ACS used to have weekly meetings to resolve implementation hurdles, if any.
- Pilot implementation was done in a Gram Panchayat (GP) of Bidar district for claim processing and settlement of claims were completed by 13.01.2017.
- All stakeholders were taken into confidence before switching over to online system.
- A State level workshop on Samrakshane portal was conducted under chairmanship of Hon'ble Agriculture Minister, Government of Karnataka inviting Additional chief Secretaries/Principal Secretaries/ Secretaries of stakeholder departments, Joint Directors of Agriculture, Deputy Directors of Horticulture, District Statistical Officers and District Informatics Officers from all districts.
- Capacity Building through trainings was adopted. 800 young officials of Agriculture, Horticulture, Banks and Revenue Department were trained in Bangalore on philosophy and use of the Samrakshane IT system who acted as Master Trainers for handholding 18000 bank officials. Additional Chief Secretary held 8 Video Conferences of 3 hours each to address and communicate the intentions behind the new initiative to bank officials.
- Approximately 12000 officials attended the VC. Each Master Trainer was allocated with definite number of branches to act as first point of contact for bankers.
- The system is being actively tuned to incorporate additional features and reduce any issues that require special handling by stakeholders concerned.
- Additional Chief Secretary, Horticulture who was in charge of Samrakshane IT system was transferred from Horticulture Department. However, a special order was issued by State Government making him in charge of Samrakshane system. This demonstrates the political will that existed to make IT system sustainable.

4.2.2   Communication and dissemination strategy and approach used

State help desk and 30 district help desks were set up to support the bankers in adoption of the new system. Incidentally all these help desks were populated with departmental officials as there was lack of domain knowledge outside Government and also realizing that time was too short to make private sector learn the domain. The help desk worked for 14 hours a day and helped the bank officials

5.   MODALITIES OF THE NEW SYSTEM (SOLUTION)

5.1.   Technology Platform used:

5.1.1   Description

The system has been designed and developed by NIC, Karnataka State Unit. Front-end forms are developed using ASP.net with C# as scripting language using framework 4.0. Backend database is based on MSSQL Server 2008. Local language interface is developed using Unicode. Android SDK API Level 24 has been used for developing crop cutting experiments app on mobile.

5.1.2   Interoperability

Since Samrakshane is web based software, it has been designed to work on all the popular web browsers like Internet Explorer, Google Chrome, Firefox and Safari. Mobile application is android based as Government is supplying devices and there is no requirement of interoperability which puts performance overhead.

The System has electronic integration with following systems

a.   Integration with Aadhar for Demo authentication with respect to name of the proposer and Aadhar number.
b.   Bhoomi – Land Record System of Karnataka
c.   SMS Gateway
d.   Real-time weather data – provided by Karnataka Natural Disaster Management Centre
e.   PAYGOV for electronic money transfer to insurance company from banks and Common Service Centre – Village Level Entrepreneurs (CSC-VLE's).
f.   e-Sign for digitally signing proposals and acknowledgment using farmer's and CSC-VLE's e-sign.
g.   Aadhaar enabled payment system – for transferring payments to farmers' account
h.   Integration with Digi locker to post the proposal and acknowledgement to respective proposer's Digi-locker and all proposals to insurance companies' Digi-locker accounts.

5.1.3   Security concerns

Samrakshane has been hosted on server with HTTPS certificate and has been approved by banks for access within Bank's secure environment. This capability was required to enable bank users for accessing the system. This permission was provided after security review conducted by security team of banks.

The application is hosted in an ISO 270001 certified datacenter. As part of datacenter requirements, the application is required to be compliant with web security standards and must go through a security vulnerability assessment conducted by STQC approved vendor. The application has passed vulnerability assessment and has been certified to be free from major security defects.

5.1.4 Any issue with the technology used

At this time, no issues have been reported with the technology used. The system is currently under active maintenance by NIC, Karnataka State Unit.

5.1.5 Service level Agreements (SLAs)

The system is well supported by NIC, Karnataka State Unit. The system is continually updated to provide additional features as well as fix any bugs being reported.

5.2 **Citizen Centricity**

5.2.1 Impact on effort, time and cost incurred by user

The application is centered on enabling all eligible farmers in Karnataka to be able to enrol in crop insurance schemes provided by Government of India and Government of Karnataka. The application is designed to provide all features required by stakeholders for successful enrolment of eligible farmers in Karnataka.

The successful rollout of the application has ensured significant increase in enrolment. It increased from 10 lakh enrolments in Kharif 2016 (5% increase in enrolments in first season) to 16 lakh enrolments in Rabi (up from 35% to 94% coverage). The process cycle time for compensation payment reduced almost by 10 months.

5.2.2 Feedback/grievance redressal mechanism

During regular consultations with Bank representatives and insurance companies during each crop season**,** feedback is sought on the experience and issues reported (if any) are addressed at the earliest. In addition, a help-desk has been provided for supporting bank officials in using the application portal. A separate help-desk has been provided for Government officials during crop season.

5.2.3 Audit Trails

The software provides for audit trails as required for performing transactions performed in the system. Following data is captured as part of audit trail **:-**

1. All logins including unsuccessful ones
2. IP address of the request along with time stamp
3. User logins maintained against each activity performed on the portal.

5.2.4 Interactive platform for service delivery

The application portal along with mobile app provides end-to-end platform for notifying crops, insurance enrolment, status checking, identifying plots for conducting Crop Cutting Experiments

(CCE), facilitates conduct of CCE, notifying prevented sowing and mid-term adversity, facility to farmers to raise requests for post-harvest losses and localized calamities, raising disputes (if any) and settlement of insurance claims.

5.3. User convenience

5.3.1 Service delivery channels

- The application platform provides web-enabled portal for enrolment of crop insurance by farmers. The system is supported on most versions of browsers.
- Farmers receive periodic updates on status of crop insurance through SMS.
- Farmers can visit any of the 5000 CSC centers or 9000 Banks branches or 746 Raitha Samparka Kendra (Farmer Facilitation centres) and avail services pertaining to crop Insurance.
- Farmers can also ring the call centres and raise a request though OTP on various midterm calamity claims.

5.3.2 Completeness of information provided to the users

The portal is designed to provide end-to-end enrolment, tracking, conduct of crop-cutting experiments and settlement of claims under crop insurance schemes funded by the state and Central Government.

- Farmers are informed about the status of their application and claim amount for which they are eligible.
- Insurance Companies come to know about the number of applications received, crop wise premium applicable and Status of CCE conducted and the total claims needs to be paid crop and Insurance Unit wise.
- The Agriculture, Horticulture and DES Departments are informed of the enrolment details and the schedule of CCEs.

5.3.3 Accessibility

The service is accessible 24 hours x 7 days a week x 365 days in a year (except for periodic maintenance windows which are scheduled during off hours)

5.3.4 Availability of Access Points

The portal is accessed by 5000+ CSC agents, Farmer Facilitation Centres & 9000 bank branches by users located in 6000+ Gram Panchayats in Karnataka. Most farmers can access the portal from their own Gram Panchayat, and almost no one needs to travel to Hobli (Sub taluk) head-quarters to avail the services.

5.3.5 Facility for online/offline download and online submission of forms

The forms, calculations, submissions are all done online. Farmer is provided a hardcopy printout after enrolment for reference. Thereafter, the farmers who have enrolled in CSCs, their documents are stored in their digilocker.

5.3.6 Status tracking

In addition to status updates communicated via SMS, farmer can check the status of the crop-enrolment online by logging on to https://www.samrakshane.karnataka.gov.in/

Transparency in the system with extra focus with respect to check status facility which will provide following details:-

1. Enrolment status.
2. Crop cutting experiment details pertaining to farmers' Insurance Unit.
3. Claim details and payment details with UTR number.
4. If claims processed under prevented sowing and Mid- term adversity, details of the same.
5. Status of reported losses under post-harvest loss and local calamities.

5.4. **Efficiency Enhancement**

(i) Volume of transactions processed: As of 24/11/2017, 14,39,938 crop-insurance applications have been received in Samrakshane portal during 2017-18 Kharif season. Of this, 10,38,522 proposals with a total sum assured of 6427 crores has been processed and a premium of 191.7 Crores has been paid through the system.

(ii) Coping with transaction volume growth: The system is well designed to handle the requirements of the stakeholders for serving farmers in Karnataka.

(iii) Time taken to process transactions: The System has outperformed manual system by several folds while ensuring validation of critical parameters as well as reducing data entry. All computations required in crop insurance are computed by the application portal and has provided excellent interactive response to stakeholders.

(iv) Accuracy of output: The Samrakshane system has been in place from 2016 Kharif season. The reports and outputs of the systems have been thoroughly checked and are accurate.

(v) Elimination of delays in service delivery: Samrakshane system has been put in place to overcome delays. No delay in service delivery has been reported except for some connectivity issues which were addressed by respective banks by providing additional bandwidth. The MIS reports produced by the system are routinely reviewed to ensure gaps in service delivery addressed. The MIS reports are available district-wise, bank-wise and insurance company-wise as well as any other slicing required.

6. IMPACT ON THE STAKEHOLDERS/BENEFICIARIES

6.1 To Organization

- Increased coverage of farmers: After getting stabilized during kharif, 2016 the results of Samrakshane are very clear on the ground. As against Rabi 2015 coverage of just 3.23 lakh

farmers (approx. 30%), the coverage during Rabi 2016 is 13 lakhs which is about 400% more. The efficient, hassle free and quick registration process for farmers saw coverage of non loanee farmers jump from 2.99 lakh to 11.5 lakhs which is 300% increase. The non loanee farmers reposed full confidence in the transparent system including the fully revamped and transparent IT enabled crop cutting experiment system. The Prime Minister's vision of 50% coverage was so hugely surpassed with coverage of more than 90% in rabi 2016. The farmers whole-heartedly embraced the system.

- De-duplication of Land: No one can register more land than what he owns. Thanks to integration with BHOOMI (Land Records database), the Aadhaar enabled payment ensures touts cannot make fake registration in their names.

- Easy detection of bogus registration: The Samrakshane system has facilitated deployment of field workers, armed with power of enrolment data onto smart phones. While the system has facilitated genuine farmers to easily enrol under the scheme, it would equally help Government to detect the only one possible mischief which can be played with the system, i.e. insurance of the crops which farmer has not grown. The pilot in Kharif has showed how easy it is to find out such unscrupulous elements that were playing with the system. Thus on one side the system rewards honest farmers, on other side it prevents any foul play- thanks to timely availability of enrolment data with crop information when crop is actually standing in the field.

6.2   To citizens

- Genuine farmers can easily enrol for Crop Insurance under both schemes through 5000+ CSCs and 9000+ bank branches. Now, the farmers can get final settlement of claims as early as 3 months and much before sowing for same season next year. Reduction of 6-10 months in settlement of claims has been achieved. Eligible farmers can get status updates during the season on the status of the crop insurance enrolment and claims settlement.

6.3   Other stakeholders

- Directorate of Economics & Statistics - Timely & Transparent crop cutting experiment system: The new IT enabled CCE ensures timely availability of CCE data is just one advantage – the insurance companies were able to witness the experiments – thanks to Insurance companies having web reports as to when experiments were to be carried out. Transparency is ensured through videos and photos taken during CCEs

- Insurance Companies - Are able to dispute crop cutting experiments immediately. Also any dispute regarding acreage of sowing area may be disputed by insurance companies and conduct physical verification on the field before harvest. Manual paperwork is replaced with workflow based system for approvals & online money transfers.

- Government of India – Accurate updates are available on Government of India through automatic updates from Samrakshane portal.

7. Future Roadmap/ Sustainability

The system is available in both English and Kannada.

Samrakshane system is hosted in State Data Centre on virtualized hosts. The application is developed on current technology standards including ASP.net with C# for front-end, backend on MSSQL Server 2008 and Android for the app.

The system is not intended to generate revenue for the Government. Instead it ensures that all farmers in the state are given maximum coverage through best use of available funds to ensure that the crops grown in the State are covered under existing Crop Insurance Schemes. The system on one side saves the Government money through effective implementation of the scheme; on the other hand, the system provides farmers with a responsive crop insurance system geared to meet the needs to agricultural economy in the State.

It is proposed to set up separate Directorate for Crop Insurance. The unit will be headed by an All India Service officer and will have domain experts from the field of Agriculture, Horticulture, Statistics, Banking and Insurances. Other than the large number of Government Staff, the unit will also have technical resources like Project Manager, Project Consultant, Database Administration (DBA), System Administrator, Testers, etc. to be hired on outsourced basis. This will ensure that the IT system is self-sustainable on its own and will also ensure that there is focus on the Crop Insurance scheme by a full set of dedicated resources.

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8. __Teaching Notes__

Samrakshane

__Transparent and farmer friendly system for enrolment, registering claims, compensation calculation and payment of compensation to farmers under Crop Insurance Schemes__

1. __OVERVIEW__

Transparent and farmer friendly system for enrolment, registering claims, compensation calculation and payment of compensation to farmers under Crop Insurance Schemes. It aims to simplify and speed up the disbursement of claims within 8 to 12 weeks from the harvest date and credit the same directly into the farmer's Aadhaar linked account. It also facilitates transparent conduct of crop cutting experiment involving all stakeholders by publishing the videos and photos of the conducted experiments. It helps to prevent people from misusing the scheme by registering for crop insurance enrolment on land belonging to others or by registering multiple crop insurance enrolments on their own land or for registering for crops which have not been planted. It captures digitally the Term Sheets used for payment calculation in Restructured Weather Based Crop Insurance Scheme (RWBCIS) on online database and uses weather data available in electronic form from Karnataka State Natural Disaster Management Centre (KSNDMC) in pay-out calculation.

Samarakshane has resulted in easy enrolment of farmers for crop insurance. For Kharif 2017-18 season, 14,11,684 applications with a sum insured amounting to Rs. 8918 Crore and premium totalling Rs. 239 Crore has been handled through the system. For Rabi 2016-17 season, 11.99 lakhs applications were processed through the system. For Kharif 2016-17 season, 10.46 lakh applications were processed through the system.

2. __TEACHING OBJECTIVES__

➢ __Learning Objectives__

- As-is situation analysis and identification of pain points in the existing service process.
- Convenience to the citizens by simplification of processes
- Importance of innovation and technology to bring transparency and proper accountability.

➢ __Challenges/Issues Faced__

1. The system was not user-friendly to the farmers. Banks were the only place to go for information and they were indifferent towards the farmers.
2. While Government had computerized database of land ownership, there were no mechanisms to make the data available to banks to verify ownership of farmers and the inability to verify the ownership of land & extent of area for which crop insurance is requested for was a problem. Government lacked verified ownership information that could be made available to banks & insurance companies to prevent fraud.

3. Duplicate crop insurance applications & inability to quickly identify duplicate applications

4. Randomization of Crop Cutting Experiments itself was a lengthy process to implement. Department of Economics & Statistics mandated to conduct Crop Cutting Experiments was unable to effectively monitor the crop cutting experiments happening simultaneously across the State.

5. Significant delay in compiling results of crop cutting experiments conducted and sending officially approved data to stakeholders. (Minimum 3 months were required to compile the data).

6. Manual process of compiling of reports of insurance for applications, sending premiums, sending claims and disputes resulted in significant delay, time & effort, human errors causing lack of coverage for a portion of the farmers who enrolled.

7. Threat of application of acreage discrepancy factor - Manual system was not able to prevent bogus registration by unscrupulous elements in name of farmers. These elements would find out which farmer is not registering his crop under the programme and would steal his identity and register in his place and put his bank account number. Further some farmers used to register multiple times as there was no check. Farmers/elements needed to pay only highly discounted premium while remaining premium came from Government. With heavy outgo from Government towards its share of premium and on the other side the real farmers only got fraction of the crop loss as insurance settlement as "acreage discrepancy factor" was applied resulting in reduction in payment if area enrolled under a crop exceeds total sown area for a crop in an insurance unit.

8. Lack of timely information to the stakeholders – farmers, banks, Government and Insurance Companies.

9. Lack of confidence in the process from all stakeholders

10. Long delay in settling of claims – 12-18 months from the date of enrolment. The Kharif 2015 was settled during June to December 2016.

11. The manual system paid farmer much after he had taken loan at higher rate of interest and sown his next Kharif crop.

➢ **Ways to Improve the Situation**

Major Features-

1. Transparent and farmer friendly system for enrolment, registering claims, compensation calculation and payment of compensation to farmers under the Crop Insurance Schemes.

2. To simplify and speed up the disbursement of claims within 8 to 12 weeks from the harvest date and credit the same directly into the farmers Aadhaar linked account.

3. Transparent conduct of crop cutting experiment involving all stakeholders and publishing the videos and photos of the conducted experiments.

4. To capture digitally the Term Sheets used for payment calculation in RWBCIS on online database and to use weather data available in electronically form from Karnataka State Natural Disaster Management Centre (KSNDMC) in pay-out calculation.

Strategy Adopted-

- As far as enrolment was concerned, there was no pilot as there was need to rollout all across the state at a single instance. During the enrolment phase ACS, Horticulture had regular interactions with the bank nodal officers. The bankers were asked to appoint one nodal officer and ACS used to have weekly meetings to resolve implementation hurdles, if any.

- Pilot implementation was done in a GP of Bidar district for claim processing and settlement of claims were completed by 13.01.2017.

- All stakeholders were taken into confidence before switching over to online system.

- A State level workshop on Samrakshane portal was conducted under chairmanship of Hon'ble Agriculture Minister, Government of Karnataka inviting Additional Chief Secretaries/Principal Secretaries/ Secretaries of stakeholder Departments, Joint Directors of Agriculture, Deputy Directors of Horticulture, District Statistical Officers and District Informatics Officers from all districts.

- Capacity Building through trainings was adopted. 800 young officials of Agriculture, Horticulture, Banks and Revenue Department were trained in Bangalore on philosophy and use of the Samrakshane IT system who acted as Master Trainers for handholding 18000 bank officials. Additional Chief Secretary held 8 Video Conferences of 3 hours each to address and communicate the intentions behind the new initiative to bank officials.

- Approximately 12000 officials attended the VC. Each Master Trainer was allocated with definite number of branches to act as first point of contact for bankers.

- The system is being actively tuned to incorporate additional features and reduce any issues that require special handling by stakeholders concerned.

3. SUGGESTED QUESTIONS & ANALYSIS

a) What changes were brought in the system using the Samrakshane Project?

Process re-engineering undertaken for the project

Before Samrakshane	After Samrakshane
The system was not user-friendly to the farmers. Banks were the only place to go for information. They were indifferent and farmers had no way of knowing which crops were notified for their land.	Consultations were held with bank officials through Video Conference to ensure all bank branches and insurance companies provide a farmer-friendly environment for crop insurance. Through CSC-SPV CSC-VLEs were roped in to support enrolment and submit claims on behalf of farmers. This allowed 5000+

	additional centres available for enrolment and claim submission.
For the Government, inability to verify the ownership of land & extent of area for which crop insurance is requested for was a problem. Government lacked verified ownership information that could be made available to banks & insurance companies to prevent fraud.	The Samrakshane system was designed to be connected to Aadhaar for authentication and Bhoomi for land record details. This enabled e-verification of authenticity of land ownership and owner details.
Duplicate crop insurance applications & inability to quickly identify duplicate applications	Through successful implementation of Samrakshane system and ensuring that all crop-insurance activities are conducted using the online system, duplicate applications are systematically detected in the online system. MIS reports are routinely reviewed and action taken
Randomization of Crop Cutting Experiments itself was a lengthy process to implement. Department of Economics & Statistics mandated to conduct Crop Cutting Experiments was unable to effectively monitor the crop cutting experiments happening simultaneously across the State. Significant delay in compiling results of Crop Cutting Experiments conducted and sending officially approved data to stakeholders. (Minimum 3 months were required to compile the data)	Crop Cutting Experiments (CCEs) are now effectively monitored by the stakeholders themselves. Through the Samrakshane system, Insurance companies have updated information on where CCEs are conducted and the time to allowing insurance companies to deploy their agents to witness the experiments.
Manual process of compiling reports of insurance for applications, sending premiums, sending claims and disputes resulted in significant delay, time & effort, human errors causing lack of coverage for a portion of the farmers who enrolled.	Computerized system completely eliminated need for manual system. Through systematic change management process, the use of system has been mandated through State Level Coordination Committee for Crop Insurance.
Threat of application of acreage reduction factor - Manual system facilitates bogus registration by unscrupulous elements in name of farmers. Real farmers only got fraction of the crop loss as insurance settlement as "acreage reduction factor" was applied resulting in reduction in payment if area enrolled under a crop exceeds total sown	By rooting out false claims, online verification and dispute resolution process, this dreaded problem in crop insurance has been resolved.

area for a crop in an insurance unit.	
Uploading of data to Government of India portal took significant effort and manpower	The system automatically uploads data to Government of India portal.
Lack of timely information to the stakeholders – farmers, banks, Government and Insurance Companies	All stakeholders are informed in close to real-time through Samrakshane portal. Farmers receive SMS message from the portal during enrolment and settling of claims. Bank officials, Department officials and Insurance companies can access online portal to get latest reports. Reports available on Samrakshane portal are routinely reviewed by senior officers for monitoring purposes.
Lack of confidence in the process from all stakeholders	Thanks to responsive crop insurance eco-system, all stakeholders have faith in the system. This is visible from the increase seen in non-loanee farmer enrolment. For the first time, crop insurance is being delivered to all eligible farmers in the system in a systematic fashion.
Long delay in settling of claims – 12-18 months from the date of enrolment. The Kharif 2015 was settled during June to December 2016. The manual system paid farmer much after he had taken loan at high interest and sown his next Kharif crop.	Claims are now settled quickly as early as 21 days from the date of submission of claims. In the manual system, this was not possible for 6 months after harvest due to long time required for compilation of data, submission of claims and the processing required.

b)   What are the distinctive features or accomplishments of the project?

1. For Kharif 2017-18 season, 14,11,684 applications with a sum insured amounting to Rs.8918 Crore and premium totaling Rs. 239 Crore has been handled through the system.
2. For Rabi 2016-17 season, 11.99 lakhs applications were processed through the system.
3. For 2016-17 season, 10.46 lakh applications were processed through the system.
4. De-duplication of Land: No one can register more land than what he owns. Because of integration with *Bhoomi* (a Land Records management system), the Aadhaar enabled payment ensures touts cannot make fake registration in their names.
5. Easy detection of bogus registration: The Samrakshane system has facilitated deployment of field workers armed with power of enrolment data onto smart phones.

4.   CLASSROOM MANAGEMENT

➢   **Group Discussion**

Divide the participants in groups of 4 -5 and discuss the case on following aspects. Each group should take one aspect:

1. Discuss Change management and Communication as some of the key factors to project success.
2. Challenges, issues and risks if the project is to be rolled across other States.
3. What is next for the project?

Please have an open brainstorming session regarding how this project can be evolved and replicated in other States. Each group should present their findings in a short 5-10 minutes presentation afterwards.

➢ **Group Activity (30 -40 minutes)**

Make two groups of participants. One group has to act as major stakeholders i.e., land owners/farmers and officers/users of the system and other to act as Government.

Major Stakeholders: The task of the stakeholder group is to come up with novel and different (but realistic) service requirements that they want from a project like Samrakshane. They should consider all the problems they face or they can face in future and build up a suggestion around them. They should also build a justifiable timeframe against each service they want to build in the system.

Government: The task of the Government group is to see how they can provide such services within shortest possible time. They should hold discussion with stakeholders to devise roadmap and implementation plan.
The objective of this exercise is to highlight expectations of stakeholders and the readiness of Government in meeting them. It is a role play type of exercise which offers plenty of flexibility in the way services can be further augmented.

Hands On/ Field Training (if required): Training to agriculture officials for conducting Crop Cutting Experiments. Within Group activity, workshops and group training to be incorporated for better use and efficient adoption rate to change the system.

➢ **Summary- Key lessons learnt (15 minutes)**

Each participant shall write down a summary in not more than 500 words highlighting key learning from the case.

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Abbreviations and Acronyms

Abbreviation	Explanation
RWBCIS	Restructured Weather Based Crop Insurance Scheme
KSNDMC	Karnataka State Natural Disaster Management Centre
NAIS	National Agriculture Insurance Scheme
MNAIS	Modified National Agriculture Insurance Scheme
ACS	Additional Chief Secretary
GP	Gram Panchayat
VC	Video Conference
NIC	National Informatics Centre
MS SQL	Microsoft Structured Query Language
SDK	Software Development Kit
API	Application Programming Interface
CSC-VLE	Common Service Centre – Village Level Entrepreneurs
HTTPS	Hypertext Transfer Protocol Secure
ISO	International Organization for Standardization
STQC	Standardisation Testing and Quality Certification
IP	Internet Protocol
CCE	Crop Cutting Experiments
OTP	One Time Password
UTR	Unique Taxpayer Reference
MIS	Management Information System
BHOOMI	Karnataka Land Records
DBA	Database Administrator

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