

# Case Studies on e-Governance in India

## e-Krishi Project of Kerala: An Ex-post Evaluation

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## About the Initiative

This publication is a part of the Capacity Building initiative under the National e-Governance Plan (NeGP) by NeGD with an aim to draw out learnings from various projects implemented in various States/ UTs and sharing this knowledge, in the form of case studies, with the decision makers and implementers to benefit them, by way of knowledge creation and skill building, from these experiences during planning and implementation of various projects under NeGP.

Conceptualised and overseen by the National e-Governance Division (NeGD) of Media lab Asia/DeitY these case studies are submitted by e-Governance Practitioners from Government and Industry/Research Institutions. The cases submitted by the authors are vetted by experts from outside and within the Government for learning and reference value, relevance to future project implementers, planners and to those involved in e-governance capacity Building programs before they are recommended for publication. National Institute for Smart Government (NISG), working on behalf of this NeGD provided program management support and interacted with the authors and subject matter experts in bringing out these published case studies. It is hoped that these case studies drawn from successful and failed e-Governance projects would help practitioners to understand the real-time issues involved, typical dilemmas faced by e-Governance project implementers, and possible solutions to resolve them.

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**Table of Contents**

- 1. Project Context .....4
- 2. Project Overview .....4
- 3. Impact of the Project.....10
- 4. Current Status of the Project.....12
- 5. Key Lessons.....14
- Case Fact sheet-e-Krishi Project.....17



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## Abstract

e-Krishi is a novel ICT initiative in the sphere of agricultural trade implemented by the Kerala State Information Technology Mission(KSITM), the apex ICT implementation agency of Kerala working under the Department of Information Technology. The aim of the project is to address the gap in the flow of agricultural information and transaction management. The vision of the project is to establish a community of connected farmer's throughout Kerala who have access to information on market demand, prices, good agricultural practices, quality agricultural inputs, expert advice supported by a technology enabled robust transaction platform that facilitates all their agricultural activities. The project was piloted in Malappuram district during January 2006 to June 2009 under the UNDP funding. After the successful implementation of the pilot project, rolling out of the project to a few more districts has been done. In this backdrop, the present study made an attempt to analyse the impact of the project in the light of its vision and objectives. Of the seven districts in which the e-Krishi Project is now in operation, we have selected Malappuram district for this case study as it is the district in which the pilot project was carried out. The revelations of the study are, however, reflective of the state as a whole.

Data collected from the stakeholders of the project led us to believe that the project was taken positively by all the main stakeholders viz., the farmers, buyers and Agri-Business Centres (ABCs). During the pilot stage, the project could collect details of about 1 lakh plus farmers (paddy, coconut, arecanut, cashew nut, vegetables, banana, rubber, medicinal plants, vanilla, honey growers etc.) and posted over 50,000 agricultural products including fruits, oil seeds, commercial crops, vegetables, livestock in the *sellers corner* of the e-Krishi website. In addition, more than 200 buyers registered in the portal as genuine buyers. Similarly, 73 farmers' clubs named as 'Bhoomi' Clubs, were also formed for providing training to the farmers in commodity posting and transactions. The Bhoomi Clubs were considered to be a resource hub of social capital. Direct posting by the farmers in the e-Krishi portal was, however, not allowed. The Akshaya Centres, which act as the ABCs, stood as intermediate technology enabled centres for connecting farmers and buyers. The main thrust of the project was to get maximum registration in the website. The ABCs were getting a payment for every posting and it has encouraged them to undertake campaign and do maximum posting in the website.

The registration of farmers in the portal was a mega data base for all agricultural planning not only at the local level but even at the state level. However, it was found that this information was not preserved for further local level planning. Similarly the co-ordination among the participating departments viz., KSITM, IIITM-K and Agricultural Department is not properly carried out and hence, the vision of the project has yet to be materialized fully. At present, the farmer awareness programmes and their participation in e-trading activities are low even in Malappuram district. Though a lot of data is already available on the e-krishi

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and associated websites, it is not being used effectively. The market information provided now is not dependable for want of regular updates. As a project for inter-connecting farmers and buyers, the pilot level implantation of e-Krishi was very successful in terms of registration of farmers, postings of commodities and transactions. However, of late, these activities were found to be rather slow. Now, it is understood that the KSITM is planning to make further changes in the project including the opening of a bilingual platform for the farmers and buyers.

(Key Words: Agri-business centres, e-Krishi, Kerala, KSITM, NISG, UNDP, Sustainability)

## Notes to Practitioners

e-Krishi, an ICT driven project evolved to address the existing gap in agricultural information flow and transaction management has been passing through a critical juncture. The vision of the project was to establish a connected farmer's community throughout Kerala who have access to information on market demand, prices, good agricultural practices, quality agricultural inputs supported by a technology enabled robust transaction platform that facilitate all their offline activities. Implemented through the Akshaya tele-centres and piloted in Malappuram district in 2006, e-Krishi has struck in its forward journey. There were exceptional cases and examples for the transactions through e-krishi platform, like transaction of special category flowers, natural resources, pets, vegetables, mushroom etc., but everything cited were small scale or less quantity transactions. While the project failed to scale up or make constant transactions in the same commodities.

The project has now been rolled out to more districts without giving due considerations to the learning at the pilot phase. For example, the web portal for the pilot phase was in English and hence, most of the farmers faced difficulties to access the portal. The effort in developing a local language portal has not materialized so far. Though there is a link for Malayalam version, it is not functional. Another problem identified was related to the postings. No direct posting by the farmers or the buyers were allowed. It has necessitated the farmers as well as buyers to visit or contact the ABCs for postings and transactions. An ICT based platform should be free from limitations of space and time. Similarly, the Call Centre was not effective. Only call receiving mechanism has been enabled, while proper reply from the experts, connecting to the correct channel etc., have not been implemented.

An analysis of the management of the e-Krishi project reveals interesting facts. At present, the e-krishi project is owned by the KSITM. But, the project has not visualized the active role and potential of the Department of Agriculture. Similarly, being a State known for its efforts in democratic decentralization, the e-Krishi project can be successful only when the supports of the Local Self Government Institutions (LSGIs) are ensured. As per the devolution of powers and functions, agriculture and animal husbandry comes under the

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ambit of LSGIs in the decentralized planning process adopted in the State. As agriculture and rural development lies in the domain of LSGIs, they should have a perspective plan to embrace ICT for the promotion of livelihoods among the farming community through projects like e-Krishi. If so, they can earmark funds for the sustenance of such projects even if external funding is stopped. These aspects have never been thought even in its roll-out phase.

One of the pertinent problems in externally funded project is its sustainability. A clear roadmap is needed after the pilot stage of those projects which has high impact on livelihoods of the marginalized groups. In the study area, about 146 e-Krishi Centres were working during the pilot stage. Now, hardly 10 centres carry out the project. When the UNDP and the NISG withdrew after the pilot implementation, it was seen that the project failed to properly define the roles and responsibilities of various stake holders. Still, the KSITM owns the project and makes try outs for the implementation through Akshaya Centres. But, the discussions with the ABCs revealed that due to insufficient monetary benefits out of the project, majority of them are not seriously accommodating the e-Krishi project. It is possible to have an integrated approach by the LSGD, IT and Agriculture departments to take lead roles for the large scale implementation of e-Krishi.

## 1. Project Context

Conventionally, farmers have been depending on the Department of Agriculture, Agricultural Universities, insurance companies, Government, etc., for various information and inputs such as weather, farming practices, market information, insurance and fertilizers. Farmers contact input retailers who source them from the wholesalers who are in direct contact with manufacturers. After the harvesting is over, the farmers largely depend on middlemen to sell off their produce. But with every intermediary, the cost of produce increases to the processor as intermediary adds his profit margin to the cost although the farmers get the lowest price and margin in the whole chain. Due to the presence of the intermediaries, the producers do not get the return they deserve. The exploitation by the middlemen makes the farming operations an unviable proposition. This is mainly attributed to asymmetric market information particularly about prices and buyers. An alternative to the existing practice of agricultural trade can only resolve the grievance of the producers. The evolution of e-Krishi project is a realization of such a dire need.

e-Krishi, an ICT for Development project envisioned to provide livelihood to rural people evolved in 2006, is implemented by the Kerala State Information Technology Mission (KSITM)[1] working under the IT Department of Government of Kerala. It was a joint venture of NISG, UNDP, KSITM, IIITM-K[2] and Agricultural Department. It was implemented as a pilot project in Malappuram district [3] of Kerala during 2006–09 through 146 e-krishi centres spread over 99 Grama Panchayats. The centres were so placed that a farmer need not travel more than three kilometres to reach any one of the e-krishi centres. Seeing the benefits of the project, the government expanded the e-krishi activities to 6 more districts in the state. The project visualized to enable farmers to interact with agri-service providers. Through this interaction marketing of agricultural produce, agricultural advisory services and soil testing services are delivered. The Agri-Business Centres attached with the Akshaya e-Kendras[4] work as delivery points. In brief, e-Krishi facilitates web-based solution for market prices of agricultural products and agricultural equipments. The project addresses the existing gap in agriculture information flow and transaction management.

## 2. Project Overview

The changes in the sectoral contribution of the National Income as happened in India are seen in Kerala as well. In 2004-05, agriculture and related activities accounted for only 22 per cent of state income and 37 per cent of employment compared to 22 per cent and 57 per cent respectively for India as a whole. Data for 2008-09 showed that in Kerala the share of agriculture and related activities in state income has come down to between 11 per cent and 12 per cent, while the share of employment hovered around 30 per cent(Kannan, 2011)[5]. However, shortage of labour, high agricultural wage, low sectoral productivity etc., have made agriculture in the state an unviable proposition. In addition to these, increasing farmer suicides, fast conversion of agricultural land to non-agricultural purposes,

exodus of young people moving away from agriculture, slow absorption of technology etc., accentuate the already plagued crisis of the state of agriculture in the state. In order to come out of this malaise, a pragmatic approach was considered necessary and e-Krishi project is seen as a practical intervention towards rejuvenating the ailing agricultural sector in Kerala. Kerala has a comparatively better edge over other regions in the country in terms of literacy and inclusive development. A relatively high level of educational attainment among the farmer community, high density of farmers' organizations, vast network of formal credit institutions, well spread out network of research and extension agencies in agriculture and institutionalization of Panchyati Raj Institutions have made it easily possible for the Keralite to embrace ICT for improving the rural livelihoods. Capitalizing on these favorable factors existing in Kerala, the KSITM evolved a project under the title 'e-Krishi'.

### **2.1. The Vision and Mission of the Project**

The vision of the project is to establish a connected farmers' community throughout Kerala who have access to information on market demand, prices, good agricultural practices, quality agricultural inputs supported by a technology enabled robust transaction platform that facilitates all their offline activities. The project addresses the existing gap in agriculture information flow and transaction management. The objectives of the initiative include (i) aggregation of responsive farmer community of about 100,000 with a cumulative farm land of 100,000 hectares cultivating priority crops as determined by the market demand (ii) enrollment of buyers in key markets including manufacturers (iii) enrollment of agricultural input providers , (iv) Warehousing facility providers (v) enrollment of logistics services support providers (vi) enrollment of banks and insurers (vii) legal, accounting, documentation support, and, (vii) establishment of a robust IT enabled platform where the members can seek information, transact and make or receive electronic payments.

### **2.2. Institutional Arrangements**

The Project envisages an extensive institutional framework for its execution. The KSITM looks after the project management where as IIITM-K takes care of the web related matters. Agriculture Department provides resource persons for various training programmes arranged by the project and also help to identify progressive and interested farmers. They also play an active role in publicizing the project. Agricultural Officers functioned as the advisors of the Bhoomi clubs. The Director of the KSITM monitors all the e-Krishi activities with the help of the Head, e-Krishi. At the district level, the District Project office is the nodal agency to implement the e-Krishi project. The Department of Agriculture under the Principal Agriculture Officer helps the District Mission Team, comprising of project co-ordinators and field co-ordinators to implement the project activities on time. District level co-

ordination committee chaired by District Collector evaluates the project once in three months.

### **2.3. Institutional tie-ups**

The project envisions extensive institutional tie-ups so as to materialize its vision. The institutions listed for tie-ups include the Departments of Agriculture, Animal husbandry, Horticulture, Fisheries, Dairy Extension, Horti-corporation, Kerala Agricultural University, CPCRI, CTCRI, VFPCK, KVK, Rubber Board, Coconut Board, RAIDCO, KAICO, KAMCO, CERIFED, Khadi Board, Agricultural Banks, NABARD, Co-operative Societies, Organic certification agencies, Agmarknet, NIC, Kudumbashree, SHGs etc.

### **2.4. e-Krishi Portal**

The project e-Krishi relies heavily on the portal ([www.e-krishi.org](http://www.e-krishi.org)) developed for the purpose. The features of the portal include a home page with a lot of other menus useful for the purpose. It contains information about farm advisory services, resource library, agricultural market information etc. Trade takes through the Trade Centre Corner where the sellers as well as buyers can register themselves. The sellers (farmers) and buyers (merchants) register through the nearest Akshaya Centre or log on to [www.e-krishi.org](http://www.e-krishi.org). They post the materials for selling/buying. The buyers and sellers post and view advertisements and in the final stage virtual meeting of buyer and sellers through the web effecting transaction is the substance of the e-Krishi project. A toll free Call Centre (1800-425-1661) is also functional with the aim of helping farmers and buyers in solving trade related doubts and providing details on good agricultural practices including local weather. It is being managed by qualified agricultural specialists. A view of the home page of the e-krishi portal is provided here for the reference of readers.



HOME PAGE
UTILITIES
UPDATES
COMMODITY EXCHANGE
LINKS

[Choose your language: English / Malayalam](#)

**BROWSE FOR DETAILS**

- ▶ About E - Krishi
- ▶ Need of the Project
- ▶ Project Component
- ▶ Project Benefits
- ▶ UNDP / ICTD Program
- ▶ Project Partners
- ▶ Implementation Committee
- ▶ Services Envisaged
- ▶ Photo Gallery
- ▶ Dept. of Agriculture
- ▶ Other Links
- ▶ Resource Library

Welcome to e-Krishi

Market Driven Agricultural Initiative through IT enabled Agri Business Centres in Kerala State implemented by Kerala State IT Mission (KSITM) & Indian Institute of Information Technology & Management - Kerala (IIITM-K) in collaboration with Department of Agriculture.

**Trade Login**

Email

Password

Login

Forgot Password?

**FEATURED ITEM**

**Agri Trade Centre**

- ▶ Free Registration
- ▶ Buyers Corner
- ▶ Sellers Corner
- ▶ Search Ads
- ▶ Search Requirements
- ▶ Old postings

**Farm Advisory Services**

- ▶ Crop Information
- ▶ Weather Information
- ▶ Fertiliser Recommendation
- ▶ Planting Material Availability
- ▶ Fertilizers & Pesticides

**Resource Library**

- ▶ e-Krishi Eco System
- ▶ e-Krishi information centers

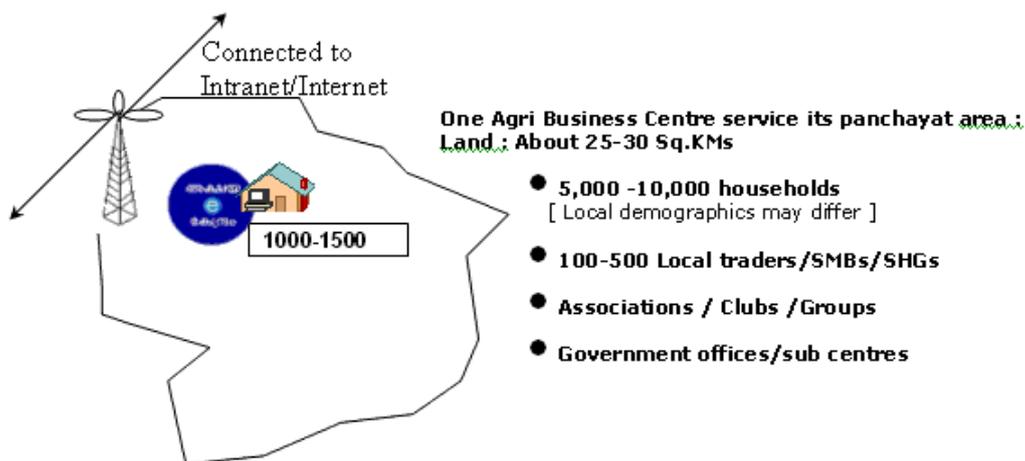
**E - Krishi News**

on Agri Business centres, we are launching this portal for the benefit of all farmers in Malappuram. Pls contact your nearest Akshaya centre for making best use of the program.

Agri Trade Links Launched

## 2.5. Akshaya Business Centres

The activities under e-Krishi programme were planned to be run utilizing the ICT infrastructure and the existing linkages of the Akshaya e- Kendra entrepreneurs with the local community of farmers, Local Self Government institutions, the Government offices and the traders in the locality. It was envisioned that spatial planning of Akshaya e- Kendras and infrastructure available at each Akshaya e-Centre would enable the project to take off immediately. The Agri-Business Centres(ABCs) based at Akshaya e Centres are the nodal point for service delivery. These centres connected on a Local Area Network to the Network Operating Centre and eventually to the Data Centre form the comprehensive facility for all participating stakeholders.



It was envisioned that one ABC of minimum 7 members with the Akshaya e-Kendra entrepreneur as Information Officer shall be established at each of the Grama Panchayats, making firm arrangements with sales-warehouse/transaction points and buyers, dealers in agricultural inputs etc. These ABCs shall register 100 farmers each in their respective Panchayats noting their vital information such as: acreage by product, number of plants, age, seeds used, harvesting skill, expected quantity by month etc. The ABCs shall also register the agriculture input providers, other stakeholders like agri-buyers/ exporters, agri-product manufacturers, banks, insurers, documentation specialists, accountants, payment gateway services, government offices/resources, agricultural institutions, NGOs and so on. All the necessary information sheets, content forms, application forms and transaction forms shall be made available online and training given for the information officers in every panchayat .

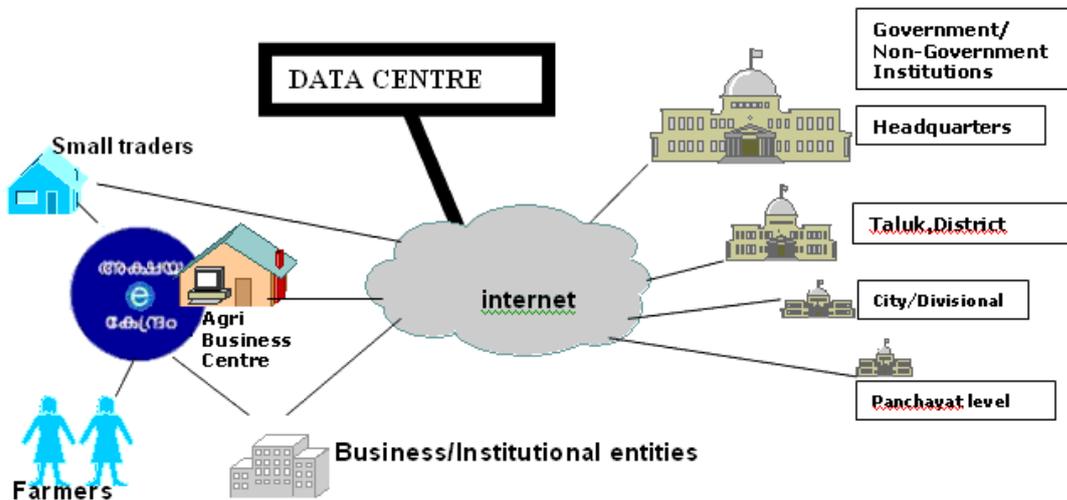
## 2.6. Bhoomi Clubs

This club consists of all those who are actually involved in the production and marketing of the agricultural produce of the area. The club consists of leading farmers of the panchayats and representatives from various farmers' committees such as Padassekara Samiti, farmers' Self Help Groups (SHGs), Kerasamities, Harithasangam etc. The Panchayath President of the area is the chief patron of the club and the local Agricultural Officer is the adviser. A total of 73 Bhoomi clubs were formed in 53 panchayats of the Malappuram district during the pilot stage. Some of the panchayats had more than one Bhoomi club. The Bhoomi clubs co-ordinate e-krisi activities with the support of Akshaya entrepreneurs and field coordinators attached to the project. Various activities were organized under the auspices of Bhoomi clubs in different parts of the district such as pest disease management training, farmer's day celebration, organic farming etc. Apart from this, the members also work out strategies to get better prices for their commodities by aggregating the produce and selling to major traders. The ABCs were instrumental in enrolling

members in the club through a registration system in which the entire agricultural particulars of the member farmers were collected and entered in the e-Krishi site.

## 2.7. Technical Architecture

The technical architecture of the project is so evolved to connect with several entities to facilitate agricultural trade as given in the figure given below.



## 2.8. Business Model

As a project run on PPP basis, the business model of the project is very important. The project envisages income stream from transaction fees, administrative charges, advertisement income, campaign fees, training fees etc. Similarly, the expenses include charges for data centre management, content development, maintenance of data, ABC office administration expenses etc. In the initial stage, the Akshaya entrepreneurs were provided Rs.10/- each for posting the registration of each farmer in the portal. Other benefits to the Akshaya Centres were not defined. So, the income stream envisaged in the project was limited to the registration fee of farmers in the portal. Other sources were not tapped fully.

### 3. Impact of the Project

Over a period of seven years since its implementation, e-Krishi has been successful in setting an atmosphere whereby the small and marginal farmers can also do business through a web platform. An examination of the impact the project has made on the stakeholders of the project is meaningful in this context.

#### 3.1. Overall performance

The e-Krishi project could collect details of more than 40,000 farmers (paddy, coconut, areca nut, cashew nut, vegetables, banana, rubber, medicinal plants, vanilla, honey growers etc.) and posted above 25,000 major farmers in e-krishi web portal for selling their commodities in Malappuram District alone. The project could collect the requirements from more than 400 buyers (including local buyers, institutional buyers, exporters, large scale buyers etc.) and posted nearly 160 buyers on the e-krishi web portal. The project could identify the small and large buyer groups within the district and also identified 177 exporters of vegetables, cashew, coconut, arecanut and banana. Identification of more institutional buyers like Orphanages, Convents etc., was mooted. Under the banner of e-Krishi, about 50 training programmes have been conducted for farmers, ABC entrepreneurs, agricultural officers and panchayath members. The project could establish 114 e-krishi centres across the district and established a toll free call centre '1800- 425-1661' for agriculture trading. Transaction of paddy, coconut, copra, medicinal plants, flowers, mushrooms, tapioca, honey, vegetables etc., took place. It has also succeeded in establishing 108 rural agricultural libraries at e-krishi centres. Bhoomi clubs were established in 73 panchayats. Within the short span of its working, e-Krishi bagged several awards considering the concept viz., CSI- Nihilent e-Governance Awards 2008- 2009 for the best G2B project; the Manthan South Asia Award 2010 for the projects on Digital Inclusion for Development and National e-Governance Sectoral Focus Award – "Silver Icon" in the focus area of Agriculture for the year 2011.

#### 3.2. Farmers

An analysis of the impact of e-Krishi on farming community has been analysed by looking at the effect of the project on cultivation practices, postings on the web portal, awareness of the e-commerce, quality of farm advisory services etc. The respondents of the study pointed out that their experience with the project as valuable. The possibility of trading through the web without the middlemen was found to be a new experience to all of them. There were instances among a few farmers that they could adopt new cultivation practices utilizing the customized knowledge available in the portal. Though the farm advisory services envisaged in

the portal were useful, most of the farmers could not make use of it fruitfully for want of co-operation from other extension agencies. The postings on the web were also a new experience to all the farmers contacted. However, it was unfortunate to note that not even 25 per cent of the postings could be transacted due to the smallness in quantity, lack of genuine buyers, etc. This is the case of products like mushrooms, vegetables and oil seeds. Similarly, most of them were reluctant to forward posting on the ground that they were uncertain about whether they could provide the product in future which is bound on nature.

There were instances of better income benefits to the farmers through the aggregation of commodities. For example, ball copra which was used to be sold at Rs.8/- per piece in the local market was sold at Rs.10/- per piece when a major buyer wanted a big consignment. The revival of mushroom cultivation is also found to be another striking development through the project.

### **3.3. Buyers**

Only 160 buyers were found registered with the e-Krishi portal by 2009, the latest year for which data is available. Interaction with a few buyers indicated that small quantity of farmer posting, difficulty in aggregation; product quality related issues etc., were the major hurdles in the way of transaction. Again the skepticism among the sellers in e-trade also made a serious blow to the growth of transaction. Hence, the number of transactions through e-Krishi was very low. There was also an attitudinal issue. The farmers, though they are educated, were not exposed to trade through a web platform and as such there were the problem of acceptability of transaction through the e-Krishi site.

### **3.4. Transactions of Commodities**

One of the most important activities of the e-Krishi project was to facilitate transaction of agricultural products without the intervention of middlemen. For that, the portal of e-Krishi provides for farmers' postings and buyers' postings. An evaluation of the postings showed that in the initial years, a good numbers of ABCs had substantial number of postings from the part of the farmers. The postings of buyers were also commendable, yet not up to the expectation of the visionaries of the project. During 2008-09, an amount of Rs.2.71 crore worth benefits was able to be passed on to the farmers. The major products transacted include coconut, copra, coconut oil, vegetable seeds, vegetables, banana, fruits, paddy, goat, milk, coconut shell, medicinal plants, betel leaf, arecanut, pepper and honey. There was the problem of aggregation of commodities also. The small quantity postings of the farmers, unless it is aggregated at least at the panchayat level, the buyers found it unprofitable to purchase from different locations. For example, during 2006-07 only 35 transactions could be effected in the district as a whole. It had risen to 300

transactions during 2007-08, i.e., on an average three postings per ABC. Actually, the project had failed even to extent the required awareness among the farmers about the uses and abuses of trade through e-Krishi project. Another most important weak link in the transaction process of the project is lack of a warehousing hub.

#### **4. Current Status of the Project**

The project has been rolled out to a few more districts of Kerala after its pilot stage. Now, 7 districts out of 14 have initiated e-Krishi project. Most of the central agencies of the project viz., UNDP, NISG and IIITM-K have been de-linked from the e-Krishi project since 2009. Currently the entire project is carried out by the KSITM. The head of e-Krishi project is co-coordinating the project and reporting to Director, KSITM. The sustainability of the project itself is in question in the context of the repeated transfer and posting of the officers in charge. During 2006 – 2013, it is learned that 6 persons took over the charge of e-Krishi head. All of them were loaded with other additional charges as well. It is a reality that the partner organizations, especially the Agriculture Department and the Local Self Government Department were not aligned with the project meaningfully. The role of partner organizations as well as the heads of these organizations which do have a major role in its roll out had not been seriously thought of in the project's sustainability.

Though almost 20+ links in the portal were active in the initial years of its operation, of late, some of them became inactive. Presently, it is seen that only less than 5 links are working effectively. The stakeholders have been demanding for a local language portal for e-krishi for a quite a long time. But, so far no progress in this direction has come up. As most of the farmers are not well versed with English, the contents available in the existing portal are not useful to them. Kelkar[6] had pointed out this issue in 2009 itself. When this issue was discussed with the management, they stated that an effort in developing the software in local language is in progress.

The project can be successful only when tie-ups with various agencies like buyers are strengthened. An examination of the working of the tie-ups leads us to conclude that it was not at all effectively carried out so far. For example, though the project had collected requirements from more than 400 buyers but posted only 160 buyers on the e-krishi web portal. Similarly, the identification of small and large buyer groups and their details at the panchayat level were also inadequate. In addition, the institutional buyers and local bulk buyers are to be promoted for more effective transactions, since mega buyers cannot be co-ordinated for local purchase. The bulk buyers argue for aggregation of the products, at least at the panchayat level, to make the transactions effective. This argument is found true considering the innumerable small growers in the region. The project though envisaged a

warehouse at the block level; it has also not materialized yet. However, the project could have utilized the services of institutions like SHGs, Co operative Societies, Kudumbasree etc., for more effective results. Though a toll free call centre '1800-425-1661' for agriculture trading was established under the project with qualified agricultural graduates, it has become dysfunctional within a short span. It was centrally co-ordinated, but, no mechanism is in place to provide the required service.

The analysis of the ABCs revealed that an ideal situation as mentioned in the project document has been in place in e-Krishi project. The ABC entrepreneur has been assigned the role of a technology enabled supporter for farmers, local buyers etc. But, it has not worked well in e-Krishi. The initial enthusiasm shown by the ABCs was not seen of late. The ABCs were not trained in the e-Krishi functions especially marketing of agricultural products. The ABC has been degenerated as a centre to post agricultural products, if any, with the registered farmers. The 114 ABCs in the study area which had been active in enrolling more farmers during the pilot stage lost their enthusiasm during its full roll out. An enquiry into the lethargy on their part revealed that it was mainly due to the inertia on the part of the implementing agencies especially, the KSITM, Agriculture Department and Local Self Government Institutions. The ABCs had also not shown keen interest in facilitating trade on a large scale after the pilot stage. There were 300+ trading activity during 2008-2009, when the pilot phase was completed. But, there were no trading activity recorded after that.

One of the vital components of the e-Krishi viz., the Bhoomi Club, is found to be dysfunctional after its piloting stage. For example, in 2006-07, there were only 20 Bhoomi Clubs and it had increased to 73 by 2008-09 in the study area. But after that, since the project is in its snoozing disposition, the activities of the Bhoomi Club were also stagnant. Practically, not even a single Bhoomi Club is currently functional evocatively in the district. Even the most valuable data once collected through the Bhoomi club formation were found lost. It is understood that the e-Krishi site will preserve data entered by the farmer or ABCs only for six months. Only 50,000 farmers were registered with the e-Krishi portal compared to the target of 100,000. An interaction with the ABC entrepreneurs to understand the effectiveness of Bhoomi clubs revealed that most of the entrepreneurs saw it as an opportunity to expand their other business too. Similarly, most of the members of the Bhoomi Club found their meetings as a social gathering to expand their networks and improve their agricultural practices. Despite these positive attitudes from the key stakeholders of the project, the destiny of the Club is appalling. Ideally it was planned to have at least one Bhoomi Club under each ABC and if so, there would have been 245 Clubs in the study area.

## 5. Key Lessons

The concept of e-Krishi has been viewed as a *manthra* for rural livelihood promotion. It was implemented through the Akshaya tele-centres in Malappuram district, Kerala as a pilot project with the support of the UNDP fund through NISG. It was supposed to withdraw the UNDP support after the pilot phase and aim to roll out to other districts with the support of the state and local bodies. This study was focused to understand the background and present status of the project. The key lessons learnt from the project are as follows.

➤ **Pilot phase was effective and benefited to the stake holders**

The project had worked extremely well during the pilot stage. In terms of buyers and sellers registration, postings in the web portal, transactions effected etc., the project had no parallel in the country. There were instances of improved cultivation practices, revival of closed agricultural production units and improved incomes to the farmers through the project operation.

➤ **The project has been rolled to seven districts in the state but not materialized as envisaged.**

Developments in the pilot phase were attributed to the consistent and co-operative working of the participating departments. However, once the external funding was over, the project could not be carried over in a scale and strength as envisaged in the blue print of the project.

➤ **Technology frame was not familiar to grass root level users**

From the second phase of the implementation of the pilot itself, the farmers and other stakeholders were demanding for a web portal in regional language/bilingual. This is yet to be implemented.

➤ **Participation of Local Self Government Institutions(LSGIs)**

Though, agriculture has been the main domain of activities of the LSGIs, most of them has not put any serious thought in supporting initiatives like e-Krishi. There are possibilities for incorporating e-Krishi in their annual budgets. However, the experience in the selected panchayat shows that the expected co-operation from the LSGs has not come up.

➤ **Inter -department co ordination is pivotal**

The success of a project like e-Krishi requires the co-ordination and co-operation of various departments. This point has been highlighted in the concept paper of the project itself. However, during the course of the operation of the project, many departments have been de-linked from it. For example, the IITM-K has de-linked

from the project in 2009 itself. The Agriculture, LSGD, IT and many other departments were also supposed to line up for this project, but, not really materialized. Hence, there is need for a state level policy for a perfect intervention of these departments.

➤ **Political will is an important component of projects like e-Krishi**

It should be noted that development projects should not be judged on political considerations. One of the weakest links in the project was lack of political will. As and when a political change comes in the state, the functionaries were also found to be changed. The top positions in these types of development projects are being occupied by persons with high political affiliation to the party in power. They neither have the vision nor the experience in running such projects. E-Krishi is not an exception. This has negatively affected the onward journey of the project. At least the key functionaries should be posted permanently and the government should have a perspective plan for its roll out rather than a piecemeal agenda. It is appropriate to repeat the views of the NISG[7] in this context that : ‘much of what e-Krishi can do and how the Akshaya model can trigger gender transformative change seems to lie in the realm of the future, and will therefore need appropriate and dynamic political vision’.

➤ **Proper role to the ABCs**

The project in the present form is successful mainly because it is being piggy-backed on the existing Akshaya Centres, currently the Common Service Centres. Since the ABC is the central platform in the e-Krishi project, its selection and working is highly important. As the Akshaya tele-centre has high acceptance in the village all over Kerala, at least one Akshaya tele-centre should be selected for hosting e-Krishi service in each grama panchayat. Hence, the Akshaya centre can act as the co-ordinator of the knowledge community and a representative of farming community. They should be given frequent training in the sphere of agricultural trade, insurance and cultivation practices.

➤ **Appropriate Knowledge about rural markets and linkages**

Rural markets everywhere are characterized by asymmetric information. In Kerala, with a large segment of small and marginal farmers, the problem gets more complicated. Hence, a deep knowledge about the production of various crops, its time of harvesting, local prices, local markets etc., should be clear to the management of the e-Krishi. Extensive data collection at the micro level covering all aspects of agricultural operation could only strengthen the project.

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➤ **Networking with Grass root level agencies:**

The success of e-Krishi rests on how far the project is successful in networking with the high density of farmers' organizations, vast network of formal credit institutions, well spread out network of research and extension agencies in agriculture and panchyati raj institutions. In addition, Kerala has deep-rooted civil society organizations led by NGOs, voluntary organizations, and even the State Government's Kudumbashree NHGs. Networking with these agencies would surely strengthen the e-Krishi project. A perspective plan for networking with these agencies would promote transaction on a higher scale.

➤ **Sustainability**

One of the serious problems of any development project is its long term sustainability. However, in the case of e-Krishi, there is no reason to lament about it because of several reasons. The project is sustainable as it is in the public- private-partnership mode. The ABCs can charge a minimum amount for the transaction. They can also earn revenue through the advertisements given in the portal. If the participating departments provide all the backend support, the forward support can be ensured through the ABCs and hence the project can be sustainable.

## Case Fact sheet-e-Krishi Project

Item	Description
Project title	e-Krishi: IT-enabled Agri. Business Centres in Kerala
Sector	Agriculture
Vision of the project	To establish a connected farmer's community throughout Kerala who have access to information on market demand, prices, good agricultural practices, quality agricultural inputs supported by a technology enabled robust transaction platform that facilitates all their offline activities.
Owner of the project	Kerala State IT Mission(KSITM)
Partners of the project in its pilot stage	UNDP, NISG, KSIITM, Dept. Of Agriculture
Stakeholders impacted by the project	The primary target groups included: <ul style="list-style-type: none"> <li>• Farmers, Self Help Groups (SHG), agri - buyers/exporters, agri-product manufacturers</li> <li>• Agri -input providers</li> <li>• Other stakeholders like Banks, Insurance agencies, Government offices/resources, Agricultural institutions, NGOs</li> </ul>
Year and location of Pilot implementation of the project	January 2006, Malappuram district of Kerala
Period of Pilot stage	2006-2009
Scaling up	Rolled out to seven districts
Services envisaged through the project	<ul style="list-style-type: none"> <li>• Farm Advisory Services</li> <li>• Market information</li> <li>• Resource Library</li> <li>• Trade centre with toll-free number</li> <li>• Farmers data base</li> </ul>
Mode of service delivery	Piggy backed on the existing Akshaya(CSCs)Centres working under the principle of PPP.
Operating System	RH Linux Enterprise Edition
Web Server	Apache Tomcat
Database Server	MySQL
Web Technology	LAVA, JSP
Hosted by	Kerala State e-Governance Data Centre

## References

- [1] Kerala State Information Technology Mission (KSITM) is a Society registered under the Travancore Cochin Literary Scientific and Charitable Societies Registration Act (Act 12 of 1955). It is an autonomous nodal IT implementation agency for Department of Information Technology, Government of Kerala which provides managerial support to various initiatives of the Department.
- [2] IITM-K is a premier institution of excellence in Science, Technology and Management related to Information that develops professionals and leaders of high calibre imbued with values of entrepreneurship, ethics and social responsibility. IITM-K will actively promote higher education and industry across Kerala and beyond through its IT facilitated education programmes and services.
- [3] Malappuram is considered as one of the backward districts of Kerala. The district is known for the concentration of Minority communities and the highest percentage of international migration especially to the Middle East countries.
- [4] The state government of Kerala put into place a project called Akshaya in November 2002 , piloted in Malappuram, with the goal of training one person in every family to be computer literate in that district. It was the first district-wide e-literacy project in India and one of the largest known Internet Protocol (IP) based wireless networks in the world. Later on the project was scaled up to the entire state which is working on the principle of public-private partnership.
- [5] Kannan, K.P, "Agricultural Development in an Emerging Non-agrarian Regional Economy: Kerala's Challenges", *Economic and Political Weekly*, Vol.XLVI, No.9. Pp.64-70, 2011.
- [6] Kelkar, Rathan, "e-Krishi- Market Driven Agricultural Initiative through IT enabled Agri Business Centres in KeralaState" , *Paper presented in the Regional e-Governement Knowledge Sharing Summit*", June 4-6, 2009
- [7] NSIG, *Locating Gender in ICTD Projects: Five Cases from India*, A Research Study Undertaken by the IT for Change, May, 2008.

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## Methodology Adopted for Writing the Case Study

The study made use of multiple data source. For collecting primary data from the farmers a multi-stage random sampling procedure was adopted. In the first stage, since the project is carried out on a district level, a district viz., Malappuram was selected as the study area on the ground that the project was piloted in this district. In the second stage, twenty ABCs were selected randomly from this district for selecting the ultimate farmers for survey. In the third stage, 100 farmers attached to the selected ABCs were selected at random. Primary data were also collected from various stakeholders of the project especially the Akshaya centre Entrepreneurs and buyers, the vital link in the success of the project. Discussions with the project team were also held. Interviews with the Head, e-Krishi, and Consultant of the project were also carried out. Secondary data on the functioning of the project was gathered from both the published and unpublished sources. Various journals, reports etc., were also used to make the study more realistic in approach.

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