

# ODISHA- LINKING FARMERS TO ELECTRONIC MARKETS (ENAM)

## CURRENT SCENARIO AND A WAY FORWARD



Odisha State Agricultural Marketing  
Board,  
Gov of Odisha



CCS National Institute of Agricultural  
Marketing  
MoA&FW, Gov. of India



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**ODISHA- Linking Farmers to Electronic Markets (ENAM)  
Current Scenario and a Way Forward**

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## ***Executive Summary***

*Efficient markets require good governance and policy – infrastructure, institutions and services that provide market information, establish grades and standards, manage risk and create better opportunity to enhance income and upgrade the existing markets and marketing system to integrate with National Markets.*

*The State of Odisha is making its markets ready to transform the existing market to Electronic, National and Agricultural Markets (eNAM). The issues in bringing this transformations are intricate and have wide implications on farming community as well as economy of the State. The challenges in integrating with the emerging changes i.e. electronic market, model act, warehousing, pledge loan, contract farming etc. requires a shift in approach. This approach has to be based on technology, investment and marketing extension.*

*The Union Government has urged the Odisha Government to make amendments to Agriculture Produce Market Committees (APMC) Act to facilitate in establishment of National Agriculture Market (e-NAM) so that the existing APMCs of the State can integrate with a PAN India Electronic Trading Portal.*

*The Odisha State Agricultural Marketing Board has identified ten markets to be integrated with the eNAM portal in the first phase. However, there are challenges in achieving the integration of markets through eNAM being faced by the State owing to the –*

- (i) Low levels of arrival in APMC*
- (ii) Absence of Trading in markets*
- (iii) Inadequacy of marketing Infrastructure*
- (iv) Inappropriate locations of markets*

*With the above context, the study brings forth the factors responsible for poor arrivals and reasons for dys-functioning of markets as it is well understood that these are the prerequisites for integration of APMC with eNAM. The observation in the report are based on interaction with stakeholders, collection of data from buyers, sellers and discussion with officers and marketing secretaries.*

*In Odisha institutions and policy for agriculture market are in place but State suffers from poor marketing linkages, non-remunerative price to farmers, ineffective markets and uncoordinated supply chain leading to value loss and loss of opportunities by farmers to enhance income.*

*The study has formulated problem statements to bring clarity in the issues of integrating farmers with market. At the same time study suggests the action plan to overcome the challenge of having large number of smallholders with small surplus in the State on one hand and challenge of implementing technology intensive marketing format. Systematic orientation of farmers to markets and at the same time making markets responsive and remunerative to both buyers and sellers will be prerequisite to bring a successful transformation in linking farmers to a national E National Agriculture Market.*

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## **Chapter 1: Introduction**

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### **1.1. INTRODUCTION**

Emerging changes in agriculture marketing environment of the country i.e. electronic market reforms Model Act, warehousing, pledge loan, contract farming is ushering in opportunities for new formats of marketing of agriculture and investment in infrastructure, technology and capacity building. Agriculture being a state subject, disparities in agriculture production, regulations and agriculture marketing environment, growth rate is discernible amongst the States of the country. State of Odisha was declining agricultural growth rate, conflicts in regulation, increasing level of poverty and unemployment. It is required to revitalize agriculture through marketing and diffusion of information technology so that it can come to a level playing field with the other States like Karnataka, Madhya Pradesh and Gujarat.

The emerging developments are required to be taken forward by the State of Odisha so that farmers have better physical and financial linkages with markets. However, the farmer linkages with markets has been weak and performance of agri markets has been inefficient owing to poor marketing infrastructure, inadequate support service and weak institutions

The poor performance of markets is a matter of concern as it affects livelihood, welfare, food security particularly for poor household. Well-functioning agriculture marketing lead to transparency in price discovery, efficiency in supply chain and opportunity to scale up in the value chain. By linking markets, these marketing systems transmit right signals to farmers on new market opportunities and guide their production to meet preferences for quantity, quality and varieties.

### **1.2. ODISHA – AGRICULTURE ECONOMY**

In Odisha, agriculture contributes 13.07% to the Gross State Domestic Product (GSDP). It is seen that agriculture sector (which includes agriculture and animal husbandry, forestry and fisheries sub sector). In the State, Gross Domestic Product has been declining over the years, still this sector continues to be vital for State economy. About 60% of population of State draws its sustenance fully or partially from the agriculture sector.

Odisha has geographical area of 1,55, 707 sq. km. and is divided in ten agro climatic zones. The total cultivated land of the State is 61.80 lacs hectare out of which 54% of cultivated land is irrigated. Majority of the farmers are small and marginal and have limited access to resources. As per agricultural census 2010-11, the number of operational holding of the States is 46.67 lacs with operational area, 48.52 lacs ha. The State witnessed declining in operational area, accordingly the average size of land holding has declined to 1.04 ha.

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Lower Capital Formation, very small per capita availability of cultivable land, pre-dominant presence of marginal and small farmers, inadequate infrastructure facilities, inaccessible markets, lack of extension services are main impediments of agriculture growth. <sup>1</sup>

The agriculture marketing system in Odisha is governed by Odisha Agricultural Produce Markets Act (OAPMA). State has 428 market yards /sub-yards operating under 65 regulated market communities. In addition to these markets there are temporary yards developed to facilitate procurement of paddy in the State. To facilitate and supervise the functioning of Regulated Market Committees, the Odisha State Agricultural Marketing Board was established under the Act in 1984 as the Apex Agricultural Marketing Institutions.

In Odisha institutions and policy for agriculture market are in place but State suffers from poor marketing linkages, non-remunerative price to farmers, ineffective markets and uncoordinated supply chain leading to value loss and loss of opportunities by farmers to enhance income.

The Union Government has urged the Odisha Government to make amendments to Agriculture Produce Market Committees (APMC) Act to facilitate in establishment of National Agriculture Market (e-NAM) so that the existing APMCs of the State can integrate with a PAN India Electronic Trading Portal.

The Odisha State Agricultural Marketing Board has identified ten markets to be integrated with the eNAM portal in the first phase. However, there are challenges in achieving the integration of markets through eNAM being faced by the State owing to the –

- (v) Low levels of arrival in APMC
- (vi) Absence of Trading in markets
- (vii) Inadequacy of marketing Infrastructure
- (viii) Inappropriate locations of markets

With the above context, the study aims to bring forth the factors responsible for poor arrivals and reasons for dys-functioning of markets as it is well understood that these are the prerequisites for integration of APMC with eNAM.

The study suggests the appropriate strategies to overcome the limitations so that these markets can be made operational and integrated with eNAM.

### **1.3. OBJECTIVES OF THE STUDY**

The objectives of the study are:

To study the factors responsible for non-arrivals in the selected markets with the ultimate aim to connect them to eNAM platform

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<sup>1</sup> Jagannath Lenka (2016) Promote Agro Based Industries to boost agricultural productivity.



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To study the existing markets and prevailing practices

To map factors limiting farmers and other stakeholders access to identified RMC wholesale markets

To make comprehensive recommendations based on the findings of the above

#### 1.4. METHODOLOGY

The study was based largely on primary information collected from different stakeholders like farmers, traders, commission agents, processors, institutional procurer etc. In addition, secondary information was also being utilised for fulfilling various objectives of the study. Primary information on various aspects was collected by adopting suitable tools like questionnaire or focussed group discussion (FGD) taking selected RMC wholesale markets as the centre/unit for sample design. The data so collected was analyzed.

The Study is based on the data collected from 10 markets elected by Odisha State Marketing Board

*Table 1.1: Markets selected for Study*

Sr. No.	Name of the Markets	Name of the District	Proposed Commodity
1.	Nawarangpur	(Nawarangpur Dist)	Maize
2.	Tikabali	(Kandhamal Dist)	Turmeric
3.	Rayagada	(Rayagada Dist)	Cotton
4.	Parlakemundi	(Gajapati Dist)	Cashew, Maize
5.	Kendupatna	(Cuttack Dist)	Pulses
6.	Nayagarh	(Nayagarh Dist)	Pulses
7.	Kuchinda	(Sambalpur Dist)	Chillies
8.	Sakhigopal	(Puri Dist)	Coconut
9.	Kantabanji	(Bolangir Dist)	Onion
10.	Koraput	(Koraput Dist)	Ginger, Cashew

#### 1.5. STRUCTURE OF REPORT

The study is divided into six chapters. Chapter-1 is about introduction to study. Chapter-2 describes the status of agricultural marketing in Odisha. The concept of national agricultural marketing (eNAM) and its different critical aspects have been covered under Chapter-3. Chapter-4 discusses the analysis of readiness of markets identified by the Board for integration with eNAM in terms of legal provisions, infrastructure, human resource and facilities required for implementation of various provisions envisaged under NAM. An attempt has been made to capture the perception of different stakeholders under Chapter-4 on their willingness to participate on eNAM market and what they feel would be required to make the initiative successful. The Non-functionality of markets is a major bottleneck for reaping the benefits available to different stakeholders under eNAM. This issue along with other challenges has been covered in Chapter-5 by formulating problems statements. Chapter-6 offers suggestions for integrating farmers to markets so as to facilitate the implementation of concept to be developed into a real game changer for agriculture in the state of Odisha.

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## **Chapter 2: Agricultural Marketing Environment**

### **2.1. AGRICULTURE MARKETING REGULATION**

Regulation of agricultural marketing system in Odisha came into force with the enactment of Odisha Agricultural Produce Markets Act 1956 and the Rules made there under in 1958. Regulated Market Committees (RMCs) have been established in the State as per the provision of the Act for regulating the transactions of buying and selling of agricultural produce. The regulations were introduced to have a marketing system ensuring remunerative price realization by the farmers and availability of quality produce to the consumers at reasonable prices. The State has a total of 428 market yards/ sub-yards operating under 65 RMCs covering 55 Revenue Sub-Divisions of the State. In addition to these markets, there are temporary yards developed to facilitate procurement of paddy in the state. State has also developed 43 Krushak Bazars to enhance farmer's access to market.

To facilitate the creation, supervision and control of the Regulated Market Committees operating as per the provisions of the Act, the Odisha State Agricultural Marketing Board was established under the Act in 1984 as the apex Agricultural Marketing Institution in the state. A separate Directorate of Agricultural Marketing was established in 1996.

The regulated marketing system in the state was introduced to enhance farmers access to markets but on an average only half of the surplus is being marketed through RMCs and rest of the surplus is moving through different marketing channels depending on the type of community and quantity of surplus like village market, aggregation, wholesaler, cooperatives and direct procurement by processors.

The enforcement of the Act and markets operating as per the roles and functions defined under the Act was observed to be weak in the state leading to development of markets under ownership and management of different agencies like RMCs, Municipalities, Gram Panchayats and private persons/ associations. The control of private players in such markets lead to distorted and inefficient trade limiting smooth access to market by farmers for sale of their produce.

The market committees established under the APMR Act are entitled to charge a fee in lieu of the services they provide to farmers and other stakeholders to meet their expenditure. At present, many of the markets are observed to collecting market fee through check gate established at the major roads. In the absence of produce arriving in market, many of the interests of farmers envisaged to be protected through establishment of such RMC are not being safeguarded.

### **2.2. MARKETING INFRASTRUCTURE**

Availability of sufficient and appropriate marketing infrastructure has become important for the benefits of the market participants in the changing agricultural marketing scenario. Most

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of the markets in the State are found to have inadequate infrastructure. The infrastructure availability is even poorer in case of markets under Gram Panchayats, municipal and markets managed by other local bodies and private markets. Majority of the *haats* and private markets are operating only on open land without any basic infrastructure.

The Act as well as Bye-Laws of Market Committee suggests the sale of agricultural produce in the market yards through open auction or open negotiation as discovery of transparent and efficient price of agricultural produce is an important function of the market. However, the open auction method of sale could not be introduced in many of the RMCs for various reasons like low arrivals, non-functioning of markets, lack of infrastructure and absence of dedicated staff at market level for conducting auction. The study by World Bank also revealed that auction is taking place only at 5 percent of the markets.

Review of different RMC bye-laws indicates that market charges mentioned by different RMCs are not uniform. This requires amendment in RMC bye-laws to have uniform market fee structure across state to facilitate the implementation of concept like eNAM.

In the absence of all the traders being registered / operating from the RMC, effective implementation of market regulation cannot be ensured. This makes RMCs ineffective in ensuring prompt payment of farmers for their produce as many farmers have reported the issue of delayed payment. In such situation, proper payment another important aspect in regulation, can be ensured.

The state must now enact the Model APLM act (2017) and adopt measures to integrate selected market and makes them operational on eNAM platform.

### **2.3. MARKET PROFILES**

The market profiles of the selected RMC which have been identified for integration with ENAM is as follows:

#### **2.3.1. RMC Sakhigopal**

Sakhigopal is one of the best functioning markets under the purview of Odisha State Agricultural Marketing Board. The market was established in the year 1961 and spread across 25 acres of area situated in a very ideal place beside National Highway and easily accessible location. According to traders, on an average annually 100 to 120 million numbers of coconuts are grown in the whole Puri District. Out of which 30 to 40 Million are coming through the RMC and rest are sold through private traders. At present the RMC has 5 permanent staffs and 10 daily contracted staffs. This market operates in all weekdays except Thursday from 7 AM to 11 AM. Every day open auction takes place by supervision of RMC staff. Large, Wide and cemented Auction platforms are available in the market yard. The area of market has a distinct boundary. Some basic facilities such as toilet, water supply, rest rooms and storage place for farmers and traders are absent in the premise. Retailers dealing in vegetable, fish, meat and daily provision suppliers have taken shops of RMC on rent. RMC

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has given license to 127 semi whole seller and whole sellers for operating the coconut trading inside the market.

### **2.3.2. RMC Kantabanji**

Kantabanji (KBJ) is a small town in Bolangir district of Odisha. The town is in the western part of Odisha and is a commerce centre of the region. The major crops of the district are Paddy, Cotton and Onion which attracts a variety of buyers from the locality. Paddy is procured mainly by Government agencies while onion and cotton are procured from farmers by market intermediaries functioning locally. Kantabanji is also popular for the trading of cattle. At the time of establishment, the RMC was functioning as Cattle Market (Goru Bazar) and it is still popular with the name “Goru Bazar”.

RMC Kantabanji is one of the oldest RMC of Odisha established in the year 1964. The RMC has been operating in 5-blocks namely Titilagarh, Bongomunda, Tureikela, Muribahal, and Sindheikela having 3-SubYard and 1-Main Market Yard at Kantabanji. Presently, Onion is one of the listed agricultural commodities besides, cotton and paddy. It is covering entire Sub-division of Titilagarh. At present, RMC Kantabanji is having 12-Supervisory and Seven Administrative Staff. In addition to this, there is 1 supervisor and 3 administrative support staffs are also working on part time basis.

### **2.3.3. RMC Kendupatna**

Kendupatan RMC is in Nishanta Koili Block of Cuttack District. Kendupatana RMC is around 30 KM from Cuttack and 56 KM from State capital Bhubaneswar. With limited industrialization, the people of this District depend mainly on agriculture as their source of livelihood, with about 76 percent population being dependent on it. Rice, pulses, oil seeds, jute, sugarcane, and coconut are the major crops grown in the district. This District is a major trade centre for cash crops specifically all seasonal vegetables, which in turn contributes immensely towards its economic growth.

The Regulated Market Committee started functioning from 1st December 1959. To extend the provision of O.A.P.M. Act, 1956 and Rules made there under, the Regulated Market Committee was established at Kendupatna in the year 1958-59 vide govt. notification No. 19744 dated 28.5.59. Initially, the RMC was established to become a trade centre for Jute. However, due to shifting in cropping pattern and change in climate, cultivation of Jute has declined. Accordingly, the RMC has taken pulses as their focus crop.

A well-laid-out market yard has been established at Kulia which is also the main market yard. Various infrastructures like shop-cum-godown, auction platform, shops, cattle shed, watchman shed, secretary's quarter, tube-well, one dug well, internal road, boundary wall and plantation of coconut trees have been provided in the main market yard beside an administrative building with sanitary arrangements. Except for use of some godowns on rent basis, no transaction is made in the main market yard. Over the years the RMC main function is collecting Market fees through its 8 strategic check points.

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#### **2.3.4. RMC Kuchinda**

In Odisha Kuchinda is very much popular and highly recognised as a trade centre for Red Chilly, Mustard and Til. The area and soil is quite suitable for these items conventionally with right climatic condition. RMC Kuchinda is in Kundaposi, a place 2 km away from Kuchinda NAC. At this RMC, almost all the basic infrastructure required to operate a RMC is basic infrastructure required for any APMC to function. It has an area of 2-Acre added with minimum basic infrastructure for farmers and traders inside the premises. The RMC Kuchinda is covering 3-blocks of Sambalpur district namely Jamankira, Bamanda and Kuchinda.

The Kuchinda RMC was established in the year 2002. Facilities available in the RMC yard comprise of open yard, paved yard, warehouses, rest room for farmers with an area of 600-Sq.ft. and Farmers' Information Centre added with display board. The RMC has weighing facilities, 24-hrs water supply with 2-bore well. The RMC is fully electrified and sufficient power and lighting arrangements are made available. It has concrete boundary wall for the safety of commodities and goods stored and 2-entrance gates for exit and entry. The APMC is linked with concrete approach road in good conditions. The campus is guarded with watchman for security and safety of the RMC at entrance for 24-hrs. In the night time inside the campus there are street lights. The campus is well cleaned and well maintained by the RMC personnel.

The RMC has 14-regular staffs which is headed by Sub-collector of Kuchinda Sub-division (acting as Chairperson of RMC). The major items dealt in this RMC are Paddy and Chilly. While Paddy is being procured by government, Red Chilly is being procured by traders and further sold to buyers from Bilaspur, Kolkata, Mumbai and Delhi. Besides, Red Chilly is supplied also to Berhampur, Bhubaneswar, Cuttack and other major cities of Odisha.

#### **2.3.5. RMC Nayagarha**

Originally RMC Nayagarha was started in 1960 for livestock trading in Bahadajola. However recently in the year 2013 the new RMC market yard started in the Nayagarh district headquarter. The market yard is situated on the side of easily accessible Nayagarh-Khandapada road. The RMC has its own administrative building along with all other necessary facilities like auction platform, water and toilet, different size storage complexes, wide roads and parking places. The storage complexes are used by civil supply department for storing paddy. However, the RMC is yet to start trading of its focus crop i.e. Pulses. The RMC has two sub yards at Saranakul and Odogaon. The RMC has dedicated a room to establish a laboratory for quality assaying and grading. Although it has given licence to 22 traders but all are trading directly with farmers through their specific aggregators.

#### **2.3.6. RMC Rayagada & Gunpur**

In Rayagada district, agricultural activities are popular among the tribal population. Paddy, pulses, oil seeds and vegetables are major crop of the district. The Regulated Market

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Committed (RMC), Rayagada started functioning from 1968. The main objective to establish the R.M.C. to sale the agricultural produces of the Farmers in the reasonable rate. The R.M.C has established its principal Market Yard at Rayagada and is operating 14 Nos. of rural Markets under its control. It has installed 7 nos. of Check Points at different Places.

Gunupur, a town situated on the banks of river Vansadhara, is the Headquarters of the Sub Division in Rayagada District of Southern Orissa. The Area is endowed with very fertile soil of Vansadhara Valley. The RMC, established in the year 1961 to regulate trade and marketing of agricultural goods, has become the pioneer in the state in creating exemplary facilities for marketing of Agricultural produce. Over the years, mainly Paddy, Ragi, Pineapple, Jackfruit, Tamarind, Turmeric, Hill Gram and pulses have been grown in this area. But, recently large tracts of lands have come under cotton cultivation. This trend is visible in all the blocks of this Sub-division.

The place has witnessed arrival of traders/buyers from across the state as well as from outside the state. Traders are arriving from places like Kesinga, Baragarh, Bolangir, Guntur (AP), Kolkota (WB), and Maharastra.

#### **2.3.7. RMC Paralkhemandi**

The RMC Paralkhemandi was established in the year 1965. Around two decades back, RMC Paralkhemandi was dealing mostly in sugarcane which was the focus crop of the area. That time two sugar factories were there which were already closed since last twenty years. Now RMC is mostly dealing with Cotton, Maize and small quantity of cashew.

The RMC office and market yard is established in 7.11 acre of land. It has got very good infrastructure like internal road communication, spacious parking place, open pindis, cover sheds, Big size godowns and auction platforms, farmers rest room, sanitary arrangements etc. It has got 7 sub market yards across the district. Recently RMC already established the grading laboratory inside the market yard with all equipments.

#### **2.3.8. RMC Tikabali**

The RMC Tikabali was established in the year 1958. It has 4 sub yards at Daringbadi, G Udayagiri Tikabali and Baliguda. Since last two years, no full-time market secretary has been appointed at this RMC. The accountant has been given the charge of the secretary. It is situated in the middle of the town, in a very accessible area beside the State express highway. It has got an area of around 15 acres. However, at present the market has utilised two and half acre of land. The market yard is protected with a pucca boundary wall with two big gates, one for entry and other for exit. It has got 16 storage warehouses. Out of which 4 are 500 mt, 1 is 250 mt and rest 12 are 50 mt. In addition to this facility the RMC has got three 100 meter each open pindis with roof, two spacious close pindis and newly built two storied auction platforms of length 50 meters. It has got restroom for farmers.

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Currently the RMC is dealing with turmeric as the focus product. However, they are collecting market fees from heal gram (local name Kandula), sal seed and mahua flowers. Although the traders are paying market fees but presently neither farmer nor traders are coming to market yard and neither auction is taking place since last two years.

**Conclusion:**

To summarize the markets suffer from the problem of low usage by buyers and sellers which leads to failure of function of marketing. The prime function of the marketing is to enable the producers to reap the best value. This function is facilitated by markets as they provide required infrastructure and services to support the selling of produce at the optimal price. However, the ten markets that are preparing to integrate with national agriculture markets have a challenge of getting buyers and sellers to visit these markets and utilize the available infrastructure. A strategic plan to divert the flow of produce to these RMCs by aggregation and transportation needs to be in place otherwise the problem of unutilization of markets can be compounded when infrastructure required for integration with eNAM is added to the existing one.

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## **Chapter 3: National Agriculture Market (eNAM)**

### **3.1. ABOUT ENAM**

National Agriculture Market (NAM) is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities.

The NAM Portal provides a single window service for all APMC related information and services. This includes commodity arrivals & prices, buy & sell trade offers, provision to respond to trade offers, among other services. While material flow (agriculture produce) continues to happen through mandis, an online market reduces transaction costs and information asymmetry.<sup>2</sup>

NAM addresses challenges of marketing by creating a unified market through online trading platform, both, at State and National level and promotes uniformity, streamlining of procedures across the integrated markets, removes information asymmetry between buyers and sellers and promotes real time price discovery, based on actual demand and supply, promotes transparency in auction process, and access to a nationwide market for the farmer, with prices commensurate with quality of his produce and online payment and availability of better quality produce and at more reasonable prices to the consumer.

A national e-market platform will facilitate transparent sale transactions and price discovery initially in regulated markets. The willing States are accordingly required to enact suitable provisions in their APMC Act for promotion of e-trading by their State Agricultural Marketing Board/APMC.

National market for agricultural is a platform for price discovery on a pan India basis with participants trading seamlessly from across the length and breadth of the country without any restriction. This is possible only when virtual integration of market complements the physical market. Leveraging technology in all market operations will be a key factor in achieving such integration. A well designed electronic platform with capacity to accommodate large number of participants like the capacity of commodity exchanges with facilities of e-auction/ e-trading will turn out to be an effective model for price discovery. The other provisions required are traders licensing system (single licensing on a pan India basis), supporting infrastructure (assaying, sorting, grading, storage and transportation), electronic payment system and tax reforms (in the form of GST).

#### **3.1.1. Functions and benefits to different stakeholders**

Each stakeholder namely farmers, commission agents, traders and the APMCs is required to perform specific functions to avail the benefits available under the scheme on NAM. A brief of functions and benefits is provided below:

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<sup>2</sup> [http://www.enam.gov.in/NAM/home/about\\_nam.html#](http://www.enam.gov.in/NAM/home/about_nam.html#)



<b>Stakeholders</b>	<b>Functions</b>	<b>Benefits</b>
<i>Farmers</i>	<i>Bring clean produce to the market place Get their name registered Vigilant about sale proceed, SMS notification and payment settlement</i>	<i>Access to market and information Transparent price discovery Competitive price Quick payment settlement Quality based Premium Price Better Placed Producers Incentive to quality Direct money transfer Reduction in transaction cost Encourages farmers' participation</i>
<i>Commission Agents</i>	<i>Obtaining license Facilitating grading and quality testing of the commodities by the assayers Display of commodity for buyers Display of quality specification and lot code Arranging weighing of commodity</i>	<i>Increase value and volume will lead to better commission May vertically integrate and enhance business base</i>
<i>Traders, Processors, Exporters, Retailers</i>	<i>Obtaining license and registration Depositing prescribed amount as margin money before participating in on line bidding. A bidding timing of trade</i>	<i>Availability of larger commodity base Direct purchase will lead to reduced cost May operating in many mandies through single license Reduction in transaction cost</i>
<i>APMC</i>	<i>Registration of farmers Necessary arrangements for assaying of commodities Required infrastructure like hardware, software, internet, continuous power supply, assaying equipments, personnel, etc. Shift in focus from regulation to efficiency</i>	<i>Larger volume of arrivals Efficient operations Book keeping and reporting system Collection and distribution of reliable information Efficient delivery of duties Better monitoring Improvement in fee collection Reduction in transaction cost</i>

*Source: Concept Note, NIAM 2016*

### **3.2. MAJOR REQUIREMENTS FOR PROPOSED NAM**

For integration of markets at National Level, the State will require more of support services than just a trading platform. However, trading in a virtual market will be possible only if there is a proper grading system with harmonized standards which is reflected in market price. This is imperative for the NAM as the traders across the nation would participate in trading without personal physical verification of the items which is being traded. Once a reliable and foolproof grading and standards are established, another issue which may arise will be logistics part. Most of the market yards in the country lack supportive infrastructure i.e. warehousing and cold storages. It is common practice in market yards that commodity arrives in Mandi in the morning hours and the same should be lifted by buyer on the same day. Once the e platform will be operational in Odisha through eNAM, there will be

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requirement of array of services which must be made available for wider participation of the market functionaries.

The requirements for integration of RMC of Odisha with eNAM are as follows:

### **3.2.1. Infrastructure Requirements**

RMC of Odisha are required to have orientation for being service provider by facilitating the major participants of the market i.e. buyers and sellers. At present, most of the RMC in Odisha lacks facilities such as assaying, sorting and grading machines, weighing machines, warehouse, cold storage, testing labs etc. There is a scope for sub yards to function as collection centre for e-auction platform, thus, the modernization and up gradation of infrastructure of RMCs and its sub yards for such facilitation and service will be imperative in establishment of eNAM in Odisha

### **3.2.2. Harmonized Grading System**

One of the most crucial factors for the success of NAM will be arrangement of assaying and grading facilities at market yards. Trading on virtual platform will require a strong and well-established standardizing and grading system. Harmonisation of quality standards of agricultural produce and provision for assaying (quality testing) infrastructure in every market to enable informed bidding by buyers will be required. Besides this disseminating and communicating the same with market participants needs to be in place for harmonization of quality standards across the state, which in turn will result into increased number of participants.

### **3.2.3. Warehouse Receipt System in the APMC Yards**

The other crucial factor will be creation of logistic network and a portal through which one can easily access or avail logistics services for physical delivery. Since the commodities will be traded on virtual platform, buyer may be from distant place and thus will require transportation and storage facilities before physical movement of commodity. Under such system, the network of warehouses or information about warehousing facilities near to market yard so that a buyer, after purchase, stores the commodity in well managed warehouse without any difficulties. The same service could also be rendered by those market yards where adequate storage facilities are available or can be made available. The steps suggested are –

- (a) Allow modern warehouse systems to be set up within a market area with appropriate ICT linkages, preferably in Public Private Partnership (PPP) model. The warehousing development and regulatory authority (WDRA) will regulate such warehouses.
- (b) Introduce a Negotiable Warehouse Receipt (NWR) system where as soon as a farmer brings in his/ her produce, it is graded with a standard testing protocol and given a NWR which guarantees the grade quality of the produce for a certain period of time. Until then the warehouse owner takes the responsibility to ensure that the quality is maintained and any damage to quality will be compensated through an appropriate insurance system.

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- (c) These warehouses can be declared as submarket yards and linked to the mother market, thereby getting a set of ready buyers to bid for the stored produce.
  - (d) With the warehouse receipt the transaction of the lot is simplified. Farmers can get a pledge loan very easily based on the NWR. At any time when they would like to sell the produce they can offer it on the Comprehensive Electronic Platform and sell produce without going to the market. This helps in preventing distress sale by farmers by making the pledge loan facility easily available and reduces uncertainty of quality loss at the storage. Farmers will have the freedom of selling at any time. The process can further be simplified with appropriate linkages to finance.
  - (e) The role of commission agents will also reduce; they can instead become assayers and warehouse facility owners by acquiring proper skills, equipment and processes.
  - (f) Since the warehouses are created with private participation, there is a possibility of infusing next generation technologies like Internet of Things (IoT), that is 'things' like storage bins and weighing machines embedded with electronics, software, sensors, and connectivity, that enables exchange of data. Progressively, bulk storage can be introduced, thereby making storage and handling of the produce efficient<sup>3</sup>.

#### **3.2.4. Transportation and logistics**

Transportation of commodities from villages to markets or warehouses is done by the farmers through owned or rented vehicles. From primary market to secondary market or other destinations is done by transport companies who have close relation with commission agents or traders in the markets. In case of physical market, the local commission agents or trader takes the responsibility of transporting the produce on behalf of the buyers.

The produce that is bought through online trading shall be weighed, quality tested if necessary, and packed in a good manner by making use of the suitable packaging material, and either stored or taken to the secondary or terminal market, or to export market or to processing centres or to retail shops. Further, the produce either in transit or store must be insured against loss due either to natural or manmade. It may not be possible for the distant buyer to do all these jobs by himself. Therefore, in case the commission agents or traders, who were helping him all these years by performing these kinds of services, could continue to provide these services, it must be allowed. Unless and until these types of services are going to be in place online trading may not succeed and complete its agenda fully. Therefore, the APMC shall take up this job of finding and identifying such type of reliable logistic supporters and apprise them about the online trading and make this list available online for the benefit of the distant buyers. Necessary infrastructure like parking space for these logistic service providers shall be arranged by the APMCs.

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<sup>3</sup> From (a) to (f) Transforming Agriculture Marketing in India : Linking Farmers to a National Gateway and E-Markets, ICRISAT, Research Report IDC-5.

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### **3.2.5. Document management and accounting modernization**

The Electronic Platform would handle all post-sale documentation, like recording of weights, generation of sale bill, etc.

While the farmer would get an intimation about the sale through a SMS, a computerized bill would be made available soon after the sale process is completed. Manual billing systems that are currently prevailing to be replaced. There is a need to integrate other documents facilitating post-sale activity, like permit generation, gate exit, material accounting and filing of returns and to the extent feasible these should be auto generated, relieving market participants the need to interact with market authorities.

Progressively, the accounting system in the markets will require to be modernized, adopting a double entry accounting system linked to the Electronic Platform.

### **3.2.6. Farmer database**

The process of registration of farmers with the markets is being undertaken by Market Secretaries of RMC of Odisha. As the process is going on, it is important to create a database of farmers with a unique identity number like Aadhaar and populate with details like mobile phone number, bank account number, landholding and other socio-economic details. Adoption of technologies will be highly useful in this context. The database would have details of farmers with respect to agricultural production and practices. Such an exhaustive database can then be used for transfer of sale proceeds to the farmer directly. This would also be used to reach out to the farmers for capacity building or creating awareness about the schemes.

As the National Agriculture Market Platform progresses the data base will be an effective tool to monitor the progress and impact of electronic market platform on beneficiaries in coming times.

### **3.2.7. Adoption of cutting edge technology**

Enabling a WiFi environment in the market yard, use of handheld devices to capture data based on barcoding and for placing bids. Monitoring the market process, generating value-added reports for agriculture policy planning and managing demand supply imbalances, information dissemination to remove market asymmetries, etc., should be adopted gradually. Building an intelligent system to monitor market behavior and initiating action to maintain the integrity of the market can also be developed in course of time.

### 3.2.8. Legal requirements

Establishing a national market will need uniform legal environment mainly in-terms of three provisions considered vital for the implementation of the scheme. These three provisions are e-trading, single point levy of market fee and unified license system. Odisha though has amended the Act but reforms have not been introduced in any of the three provisions considered important for the implementation of eNAM.

### 3.2.9. Infrastructure Development

Transforming the existing agriculture marketing system to electronic platform will require a big leap in the creation of infrastructure and employment in the field of agricultural marketing. There will be a requirement in creating the necessary infrastructure for greater economic efficiency.

The integration of the existing markets with the national electronic portal, in addition to legal provisions, will require a large amount of physical, electronic and institutional infrastructure. The basic infrastructure required for getting networked with NAM as has been identified by the scheme implementation agencies is presented in Table 3. Though, there is provision for central assistance available for the participating mandies but the responsibility lies with the State Government for making the minimum infrastructure available for networking.

*Table 3.1: Infrastructure suggested for networking of wholesale markets with eNAM*

<b>Point of Intervention</b>	<b>Infrastructure/Support</b>	<b>Number</b>
Entry/Exit	Computer/Laptops and Printers	<b>1+1</b>
Weighment	Electronic Weighbridge	<b>1</b>
Auction Hall	Computer & Internet	<b>6</b>
Generation of sale bills/Anugya/other documents	Computers & Printers	<b>1</b>
Display facilities	Screens/projectors	<b>As per Need</b>
Connectivity with NAM Portal	Broadband Connection	<b>4 mbps</b>
Backup	Alternate source of internet	<b>-</b>
Power conditioning (UPS)	1KV and 5 KV	<b>1 and 2</b>
Assaying Lab	Civil infrastructure and Lab equipments	<b>1</b>
Human Resource	Mandi Analyst (IT Person), onsite resources and lab operator	<b>1</b>

### 3.2.10. Software and hardware requirement

The structure of the system for trading process involving party registration, entry & exit, Weighment & auction and mandi fee calculation under eNAM has been presented below:

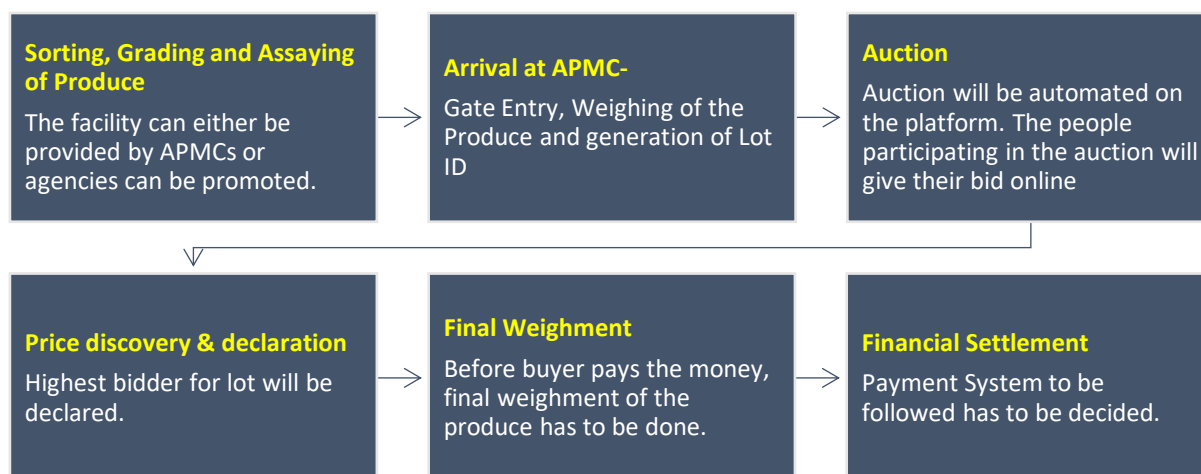


Figure 3.1 Process flow of trading on electronic platform

To facilitate the trading process, certain software and hardware infrastructure must be made available at RMCs. Few important components with their probable cost are listed below;

Table 3.2: Hardware and Software requirements

<b>Components</b>	<b>Quantity Nos.</b>	<b>Total Cost (Rs)</b>
Computer at Entry Gate	1	50,000
Computer at Exit Gate	1	50,000
Computer in E Bidding Hall	1	1,50,000
Kiosk	1	1,00,000
LAN Cable (Cat6/optical fibre) Qty in Meters		50,000
Wi-fi Routers	5	20,000
Network Switches Required	1	25,000
Other Accessories		50,000
Cost of installation		1,00,000
Multipurpose printers (printer, scanner, photocopier) for registration of participants	4	2,00,000
Number of Web Cams required (required for registration at entry gate)	5	1,25,000
UPS	2	1,00,000
Generator	1	3,50,000
Display screen projector for Auction hall	3	5,00,000
Air Conditioner	4	2,00,000
Broad band/ internet connection (leased line)		1,20,000
Assaying Equipment	1	5,00,000
Miscellaneous		1,00,000
<b>Total Cost</b>		<b>27,90,000</b>

\*Cost of physical/civil infrastructure will vary RMC to RMC

### 3.2.11. Dispute Redressal Mechanism

In case of online trading the trader will be purchasing the commodities based on the assaying information and without physically considering the commodity. In such a situation, there is always the likelihood of the disputes arising between the farmer seller and the buyer or other

market stakeholders involved on account of quality, weight, price, payment of sale proceeds, payment of charges of grading, cleaning, assaying, commission, etc. Therefore, there is a need to make necessary legal provision for exclusively deal with the disputes arising out of online trading. Necessary amendments need to be brought in the Rules for this purpose.

For example, in Karnataka the provision has been made in the APM(R&D) Rules which is given below.

“91-Q Settlement of disputes relating to Online markets – Notwithstanding anything contained in these rules, the market committee shall appoint a “Disputes Committee for Online Markets” for settlement of disputes in respect of transactions in the commodities and markets notified under Rule 91-O, consisting of –

1. The Vice Chairman of the committee. The Vice Chairman of the committee shall be the ex-officio chairman of the Disputes Committee for Online Markets. In the absence of the Vice Chairman a person selected by the Disputes Committee for Online Markets from among themselves shall preside over the meetings.
2. Seven representatives of agriculturists other than the Chairman;
3. One representative of traders;
4. One representative of commission agents;
5. One representative of cooperative societies, with preference to taluka level primary cooperative marketing society;
6. One representative of the entity notified under Rule 91P (Electronic Platform Service Provider)'
7. The Secretary of the committee.

### 3.3. DUTIES AND RESPONSIBILITIES OF DIFFERENT STAKEHOLDERS

For efficient functioning of NAM all the stakeholders should perform their duties and discharge their responsibilities effectively. The major stakeholders involved are farmers, traders/buyers, commission agents, assaying agency, service provider, APMC and Marketing Board and Marketing Department.

	<i>Registration</i>
	<i>Providing basic information like address, contact details &amp; account number</i>
	<i>Bring graded produce</i>
<i>Farmers</i>	<i>Understanding the requirement of the electronic market in terms of operations and assaying of produce</i>
	<i>Getting quality testing done</i>
	<i>Being vigilant or market proceedings</i>
	<i>Obtaining appropriate license</i>
<i>Traders/Buyers</i>	<i>Depositing margin money</i>
	<i>Timely payment settlement</i>
	<i>Lifting commodity</i>
	<i>Obtaining appropriate license</i>
<i>Commission Agents</i>	<i>To arrange for cleaning, grading, assaying, weighing and sale</i>
	<i>Ensuring payment to farmers</i>
	<i>Getting account settled appropriately</i>
<i>Assaying Agency</i>	<i>Setting up of quality testing lab along with the qualified personnel and take</i>

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	<i>up quality testing of commodities of the sellers being offered for sale</i> <i>Obtaining representative sample</i> <i>Follow the prescribed protocol</i>
APMC	<i>Linking the market with portal</i> <i>Maintenance of system</i> <i>Understanding the system</i> <i>Registering and educating farmers</i> <i>Provision of infrastructure facilities like buildings, continuous power, water, hardware and software, facilities, uninterrupted internet facility, provision of grading and quality testing laboratories, warehouses for storing the unsold produce, dissemination of market information on line and of line etc. are helping efficient functioning of on line trading system.</i> <i>Capacity building of all the stakeholders</i> <i>Networking with other agencies like banks, warehousing corporations, assaying agent, service provider, logistic provider, etc.</i>
State Government	<i>Necessary provision in the APMR Act</i> <i>Preparation of DPRs</i> <i>Provision of funds</i> <i>Capacity building</i>
SFAC	<i>Depute free of cost one person at each market, for a period of one year to provide day to day hand holding support to stakeholders for its successful implementation.</i> <i>Evaluation of projects</i> <i>Sanction of funds</i>
Strategic Partner	<i>Installation of software</i> <i>Stakeholders training (Technical)</i>
NIAM	<i>Awareness and Capacity Building</i>

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**Conclusion:**

To achieve the vision of integrated national agriculture market in Odisha where all types of markets are integrated through standards systems, information an overhaul in reforms, service orientation, accountability towards the marketing system is required. Even after installing the hardware, software and required infrastructure, the markets may not gear up to achieve the integration expected. The constraints in this path are inadequate manpower and training. It is imperative that as the markets of Odisha are getting ready in terms of infrastructure the system of robust capacity building, training of officers and market led extension to reach out the farmers, traders and entrepreneurs needs to be in place.



## Chapter 4: Readiness of Selected Markets

The study team visited RMCs and Rural Haats at selected locations. The discussions were held with RMC officials, farmers, middleman and traders to understand the existing system as well as to assess the needs of the stakeholders. A total of 486 farmers and 88 traders were surveyed in 10 selected markets. Various aspects which were considered suitable to examine the situation and understand the requirements of the stakeholders are presented in this chapter.

### 4.1. FARMER'S SURVEY

#### 4.1.1. Proximity of RMCs

To serve farmers in an effective way, it is necessary for RMCs to provide market yards at locations which are accessible to farmers with minimum cost and effort. The proximity of RMCs with farmers' field is an important criterion to assess the effectiveness/ potential of RMCs in serving the farmers' need.

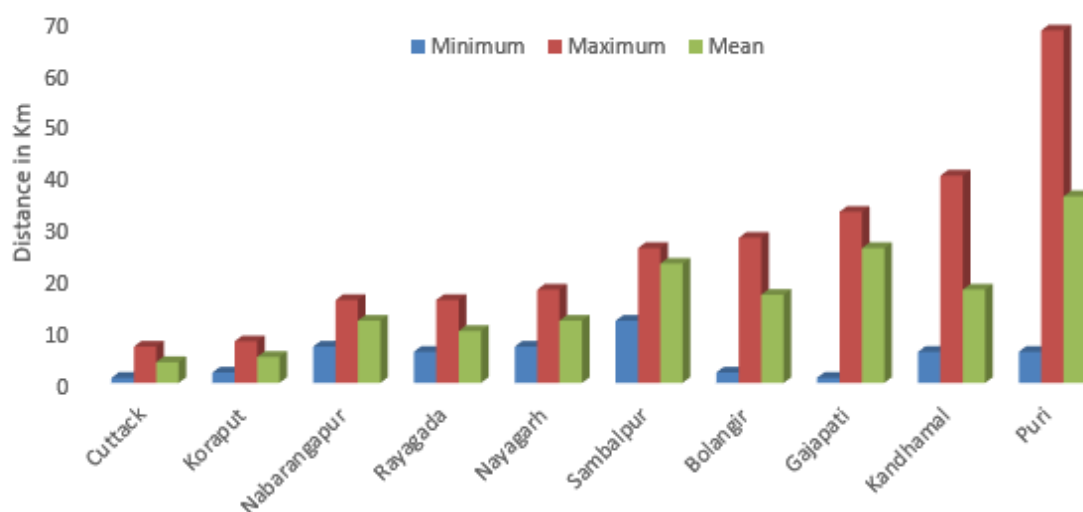


Figure 4.1: RMC wise minimum, maximum and mean distance covered by farmers

The overall mean distance which farmers are covering to reach a RMC in the state is 16km with a minimum of 1 km and a maximum of 68 km. A few RMCs where the prevalent situation is better in terms of farmers' proximity to RMCs are Cuttack, Koraput, Nabrangapur, Nayagarh and Rayagada. At these locations, the farmers have to cover a minimum distance of 1 km, and maximum of 18 km.

At some locations, the RMCs are at a very distant place from farmers' field. These locations are Bolangir (min 2 km, max 28 km), Gajapati (min 1 km, max 33 km), Kandhamal (min 6 km, max 40 km), Puri (min 6 km, max 68 km) and Sambalpur (min 12 km, max 26 km).

### 4.1.2. Size of land holding

Being the largest category, the role of marginal and small farms in any planning activity cannot be left unrecognised. Small holdings play important role in raising agricultural development and poverty reduction. Marginal and Smallholders face challenges on the integration of value chains, market volatility and other risks and vulnerability etc.. The present study also emphasises to examine the challenges faced by different landholding classes. This will enable to frame market-oriented measures, government intervention and other support which are needed for smallholders for integration with markets.

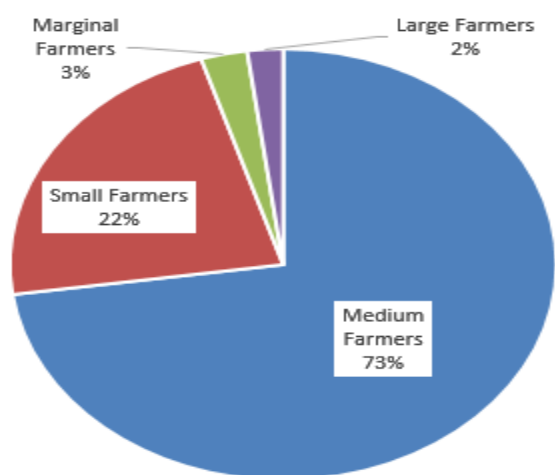


Figure 4.2: Classification of respondents based on land holding size

Out of 474 farmers surveyed, 73 percent farmers belong to medium size land holders which is followed by small holders (22%). Only around 3 percent of the farmers were marginal holder while 2 percent are large holders. Such a mix of farmers with the majority under medium size holder indicates that formalising farmers group would be slightly easier as even with a small number of farmers, a large output can be expected.

Among the 10 selected RMCs, there are at least 5 RMCs where there were no marginal farmers (among the respondents) and in 2 RMCs there were neither marginal nor small holders.

### 4.1.3. Income Classification

To understand the dependency of farmers on agriculture for their livelihood, a comparison was done between the agricultural and non-agricultural income of the respondents.



Figure 4.3: Agri and non-agri income of farmers

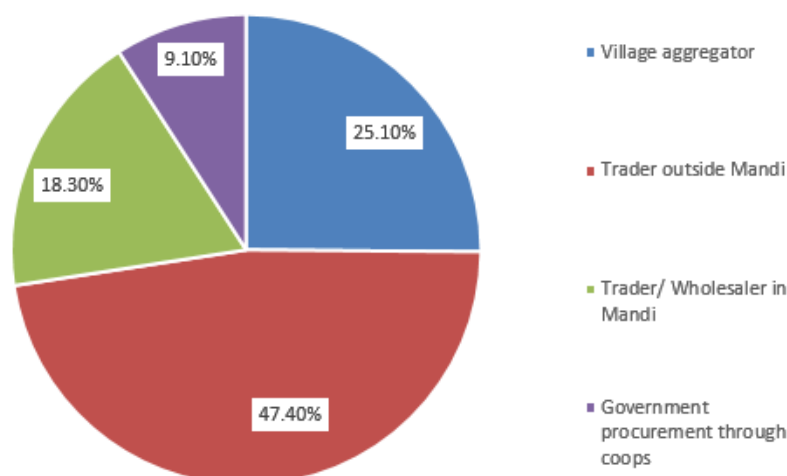
It was observed that except small farmers, other farmers have more non-agri income than the income from agricultural sources. On an average, a small holder earns Rs. 55,704 from agricultural sources while the income from non-agri sources are limited to Rs. 44,773 only. In case of medium farmers, the

average non-agri income of farmer is more than twice the agricultural income. For this class of farmers, the average agricultural income is Rs. 1.16 lakh while non-agri income is Rs. 2.46 lakh. Among all landholdinnng category, the minimum agricultural income is limited to Rs. 6000 earned by a small farmer and maximum of Rs. 15 lakh earned by a medium farmer. The non-agri income of farmers ranges between Rs. 10,000 to Rs. 93.6 lakh.

Availability of higher non-agri income can help farmers in adapting to the dynamic environment as the risk elements associated with dependency on agri income can be mitigated in most of these cases. Farmers with a support from non agri income have better prospects of getting integrated with innovative marketing and participation in high value chains.

#### 4.1.4. Market Channel

To assess the present marketing system, various channels/ intermediaries through which farmers dispose of their produce were analysed. Table X5 depicts RMC wise intermediaries whose services were availed by farmers in disposing of their produce.



Most of the farmers (47.4%) sell their produce to traders outside of RMC yards. The next large category is comprised of farmers who sell their produce to village level aggregators (25.1%). Only 18.3 percent farmers sell their produce to traders/wholesalers sitting inside the RMC yards.

Figure 4.4: Market intermediaries serving to farmers

Among the various districts is being sold through village level aggregators are Puri (97.8%), Sambalpur (72.7%) and Nayagarh (68.8%). Farmers from Puri district are under compulsion to sell through village level aggregators as to approach RMC at a 68 Kms is difficult. On an average, a farmer from Puri covers 36 Km to reach RMC.

There are many districts where most of the sale happens through traders who are outside of RMC yards. These districts are Kandhamal (100%), Rayagada (100%), Nabrangapur (98%) and Koraput (85%).

The districts where RMCs are in a better position to attract farmers and traders in their regulated market yards are Gajapati & Bolangir. In Gajapati, around 96 percent of the farmers reach to RMC to sell their produce while in the case of Bolangir, it is limited to 65 percent only. Apart from these two, there are three other RMCs where farmers are approaching

traders operating inside the RMC. These RMCs are Koraput (10.2%), Sambalpur (4.5%) and Nabaranagapur (2%).

For Cuttack, 100 percent of the trade happens outside the RMC yard. In case of Gajapati, 96 percent of trade occurs within the RMC yard as PACS are procuring Maize from farmers inside the RMC. Further, in order to understand the pattern of service utilisation of marketing intermediaries, different holding categories of farmers were analysed. The results are presented in table 4.1 below;

*Table 4.1: Category wise intermediaries serving to farmers*

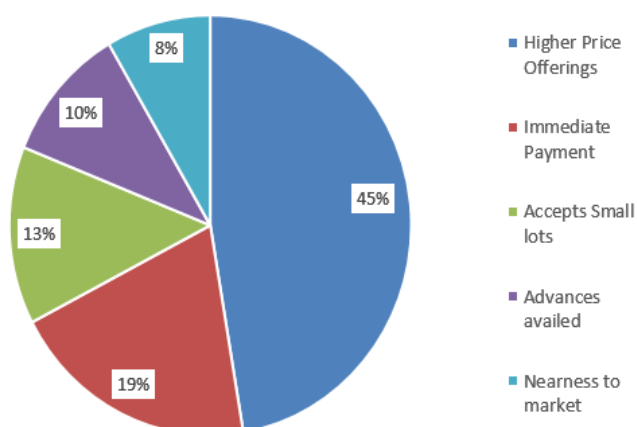
Farmer Categories	Village aggregator	Trader outside Mandi	Trader/ Wholesaler in Mandi	Procurement through coops
Marginal Farmers	55%	27%	18%	0%
Small Farmers	45%	6%	34%	14%
Medium farmers	32%	48%	12%	7%
Large farmers	33%	44%	11%	11%
Total	25%	47%	18%	9%

Marginal and small farmers prefer to sell their produce to village level aggregator. It is evident from the table that 55 percent marginal farmers sell their produce through village level aggregators. Similarly, 45 percent small farmers prefer to sell through this channel partner.

In the case of medium and large farmers, around 32 percent and 33 percent respectively resort to village level aggregators while only 11 percent and 18 percent respectively resort to traders inside the RMC yards. Around 44 percent of medium and 55 percent of large farmers dispose of their produce through traders outside the RMC yards.

#### 4.1.5. Factors responsible for selection of a market intermediary

The margin (profit) to farmers from farming depends on mainly on the cost incurred and the selling price fetched. Further, the selling price depends on many factors among which time, place and intermediary are few of the most important factors.



*Figure 4.5: Reasons that compels farmers to approach intermediary*

It has been observed that the farmers prefer an intermediary mainly due to the constraints they face. During the initial stage, important factors were identified through preliminary discussions. Further, to know the views of the majority, farmers were asked to select the reason which compels them to approach an intermediary to sell their produce.

Farmers chose the intermediary who offered higher price. However, these farmers lack proper market information. Based on their experience, farmers create a perception about various intermediaries and judge them accordingly. Around 45 percent farmers approach an intermediary who pays highest price for their produce.

*Table 4.2: District wise preference of farmers in selection of intermediary*

<b>Districts</b>	<b>Gives Higher Price</b>	<b>Accepts Large lots</b>	<b>Accepts Small lots</b>	<b>Advances availed</b>	<b>Immediate Payment</b>	<b>Proximity</b>
Bolangir	26%	3%	0%	13%	28%	31%
Cuttack	90%	0%	10%	0%	0%	0%
Gajapati	88%	0%	6%	6%	0%	0%
Kandhamal	0%	0%	98%	2%	0%	0%
Koraput	8%	16%	2%	28%	46%	0%
Nabarangapur	0%	8%	0%	38%	54%	0%
Nayagarh	28%	0%	0%	0%	72%	0%
Puri	24%	2%	7%	11%	0%	57%
Rayagada	96%	2%	0%	0%	2%	0%
Sambalpur	84%	9%	4%	0%	2%	0%
<b>Total</b>	<b>45%</b>	<b>4%</b>	<b>13%</b>	<b>10%</b>	<b>19%</b>	<b>8%</b>

The farmers in Gajapati district grow Cashew Nut and Maize as their major crops. Cashewnut is high value cash crop. Hence more than 88% farmers in this district prefer to sell their produce to a market participant who offers them highest price. In Bolangir, the major crop is Onion which is highly perishable as well as faces high price fluctuation. Hence, the farmers of Bolangir prefer to sell to a channel partner who is near to farm gate and offers them higher price.

In Kandhamal, the major crop is Turmeric and most of the farmers growing this crop are tribal with small land holding. These farmers are bringing small lots to the market in multiple rounds. The lot size of these farmers is small and they prefer to sell their produce to a market participant who comfortably deals with farmers arriving to market with small lots.

Farmers in Nayagarh district deals in Pulses mainly. For these farmers, immediate payment is major concern hence majority of farmers are preferring this criteria over any other criteria while selecting a buyer for their crop.

Proximity of buyer is highly important for farmers in Puri district. In this district, a farmer travels a minimum distance of 6 km, maximum 68 km and an average of 36 km to reach market. In the absence of a market near to their farm, farmers of the district prefer proximity as a criterion for selection of market participant to sell their produce.

For farmers in Rayagada district, major crop is cotton for which buyers are easily available. Also, the farmers are covering a distance ranging from 6 km to 16 km for reaching to market. Hence, these farmers prefer to sell their produce to the buyer who offers them best price.

#### 4.1.6. Sources of Credit for farmers

Availability of production and consumption credit to farmers have a large impact on the pattern of disposal of farm produce by farmers. Availability of formal credit on easy terms and cheaper rate make farmers independent in disposing their produce on their own terms through the best suitable marketing avenue. However, availing credit from intermediaries limits their decision making in disposing of the produce.

Table 4.3: Sources of production credit to farmers

Farmer Categories	Production Credit Sources			
	Bank/ FI	Traders	Co-op Society	Total
Marginal Farmers	3	1	0	4
Small Farmers	29	4	2	35
Medium farmers	74	13	10	97
Large farmers	1	1	1	3
Land Less Farmer	4	0	0	4
Total	111	19	13	143

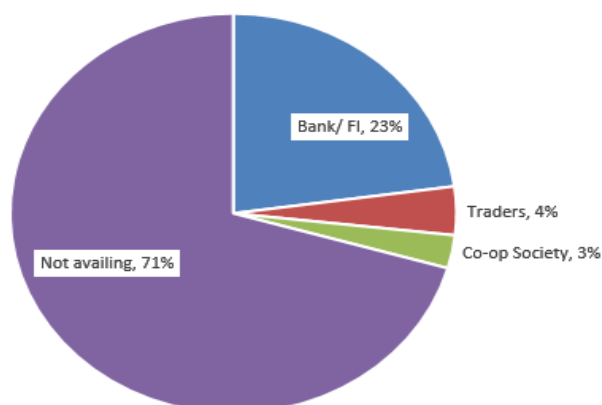


Figure 4.6: Sources of production credit to farmers

The bank density in Odisha is as good as the state has been ranked 10<sup>th</sup> for banking density. On an average, a bank branch serves between 9 thousand to 11 thousand persons in the state.

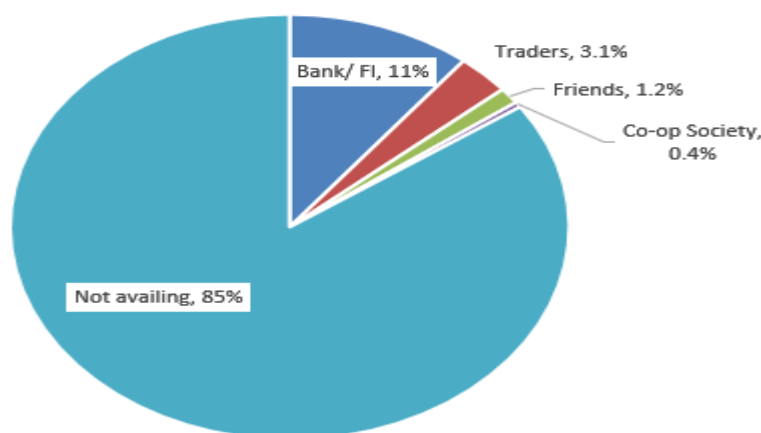
Contrary to this, out of the total sample of 486 farmers, only 143 farmers i.e. 29 percent have availed production credit. Among the farmers who avail production credit, 78 percent farmers avail credit from a bank or formal

financial institutions. This is followed by credit availed from traders which is accessed by 13 percent of the farmers. Around 9 percent farmers avail credit from co-operative societies.

Table 4.4: Sources of consumption credit

Farmer Categories	Consumption Credit Sources				Total
	Bank/ FI	Traders	Friend	Co-op Society	
Marginal Farmers	1	0	0	0	1
Small Farmers	6	0	0	0	6
Medium farmers	45	15	6	2	68
Large farmers	0	0	0	0	0
Land Less Farmer	0	0	0	0	0
Total	52	15	6	2	75

Among the 486 farmers interviewed, only 75 farmers have availed consumption credit. Of these, 69 percent farmers have availed credit from Bank or other formal financial institutions while 20 percent farmers have availed credit from traders. Around 8 percent farmers approached their friends to avail consumption credit and only 3 percent farmers availed consumption credit from co-operative societies.



Since most farmers are not availing production and consumption credit and among those who are availing it, the majority are resorting to formal financial institutions. The role of middle man in extending credit is not very significant.

Figure 4.7: Sources of consumption credit to farmers

#### 4.1.7. Post-harvest practices

On-farm primary processing has the potential to improve acceptability and marketability of farmers' produce which also enables farmers in fetching a better price for their produce. Most of the field level primary processing activities undertaken by farmers can also help in providing opportunities for women to become more involved in agricultural activities in general and commercialization of family farming in particular.

For marginal and small holders, field level primary processing activities can be undertaken manually which will generate employment opportunity for family members. In the areas where medium and large farmers are in majority, development of community/ local level area based infrastructure (facilities for primary processing) will generate employment opportunity in the community. While promoting primary processing at the community level, the training and capacity building must be given due importance.

#### 4.1.8. Cleaning & Sorting

Out of 486 farmers, 74 farmers (15%) do not undertake cleaning & sorting activities while remaining 85 percent farmers opt for cleaning & sorting of produce before selling. The practices are most prevalent among the marginal farmers as manual cleaning and sorting are easy for small lots. Though 100 percent marginal farmers undertake this activity, 69 percent do it at farm level while 31 percent do it in the market.

Among the small farmers, 92 percent farmers opt for cleaning and sorting. Out of this, 82 percent do it at farm level while 10 percent do it in the market. In the case of medium farmers, 81 percent farmers clean the produce and sort it before selling. Out of this, 60 percent do it at the farm level, 14 percent in the market and 7 percent do it at home.

*Table 4.5: Cleaning & Sorting process undertaken by various categories of farmers*

<b>Place of Cleaning &amp; Sorting</b>	<b>Marginal Farmers</b>	<b>Small Farmers</b>	<b>Medium farmers</b>	<b>Large farmers</b>	<b>Land Less Farmer</b>	<b>Total</b>
At Farm Level	69%	82%	60%	50%	92%	66%
In Market	31%	10%	14%	20%	0%	14%
At Home	0%	0%	7%	20%	0%	5%
Not Undertaken	0%	8%	19%	10%	8%	15%

Around 50 percent of the large farmers undertake cleaning and sorting at farm level followed by 20 percent at market and 20 percent at home. Around 10 percent of the large farmers do not undertake any cleaning and sorting activities.

Overall, 66 percent of the respondent undertake cleaning and sorting at farm level followed by 15 percent in the market and 5 percent at home.

#### **4.1.9. Grading & Assaying**

The knowledge and facility of grading and assaying play important role in enhancing the price potential of agricultural produce. Among the marginal farmers, only 62 percent respondents had knowledge of grades while only 23 percent marginal farmers were undertaking grading activities. In the case of small farmers, around 26 percent of the farmers had an idea about grading practices while only 18 percent were following it. Around 28 percent of medium farmers had an idea about grading practice and only 17 percent of them were grading their produce before selling it.

#### **4.1.10. Visit RMC/ Local Haats**

Visit to market has a great role in farmers' business development. By visiting market, a farmer enhances his chance

To network with fellow farmers;

To get market information

To be updated with trending products and their demand

To attend important meetings where he could be trained on farming practices, new inputs and equipped with information on Government schemes

The frequency of farmers visit to market is 1-2 times in a month. The visit to market by farmer is low as most of the produce is sold to village aggregators and its uneconomical to transport a small lot of produce to the market which are at a distance.

#### **4.1.11. Services offered by Buyer**

In a competitive market, the buyers not only purchase produce from farmers but to attract them buyer provide support services as well. In cases of backward areas, some of the services which a buyer can provide to farmers are transport services, credit for production and consumption, market information, technical advice and storage etc.



*Table 4.6: Support services offered to farmers by buyers*

<b>Services</b>	<b>Services Available</b>	<b>Services Not Available</b>
Transport	9%	91%
Agri Credit	39%	61%
Personal Credit	18%	82%
Market Information	9%	91%
Technical Advice	4%	96%
Storage	2%	98%

It emerges that very few farmers are able to avail the support services from buyers (intermediaries). In the case of transport services, around 9 percent farmers are availing it. Around 39 percent farmers have the option to avail production credit services from buyers while 18 percent farmers had the option to avail consumption credit from the buyer.

The immediate buyers of farmers are the first level contact for the farmers in most of the cases. Hence they play an important role in providing market advisory/ market information services to farmers. Out of 486 farmers, 42 farmers (9%) have been getting the market information. Only 4 percent farmers are getting technical inputs from their buyers. While responding to availing storage infrastructure service from the buyer, only 1.8 percent farmers have given a positive response. In most of the cases, neither farmer need storage services from their buyer nor buyer make any such arrangement.

#### **4.1.12. Buyer Selection Criteria**

Farmers have a certain preference in selling their produce. Some farmers may opt to sell their produce to a buyer who pays higher while some may opt for the buyer who has social relationship for regular transactions. Accordingly, some of the parameters and farmers' response against them have been listed below;

*Table 4.7: Preferred parameters to select a buyer*

<b>Parameters</b>	<b>Percentage of farmers preferred</b>
Selling to the one who comes at doorstep	44%
Selling to the one offering best price	25%
Negotiating with traders in market	23%
Accepting the price offered by specific trader	8%

Around 44 percent farmers will give first preference to the buyer who will approach them at their doorstep. Under such circumstances, farmers offer a discount to buyers as farmers need not pay for loading, unloading, transportation and storage costs. Around 25 percent farmers will give first preference to the buyer who will offer the best price to them. There are 23 percent farmers who insisted that they will sell their produce only after negotiating with traders in RMCs/ Rural Haats.

#### 4.1.13. Access to Price Information

In absence of information on prevailing market price, farmers are exposed to market risk. Advance price signals are important for farmers to market their produce effectively. The discussion with farmers indicate that farmers do not have information on prevailing price in their local market or the future prices prevailing at commodity exchanges. However, the spot prices of some of the prominent markets for different crops are available through mass media and AGMARKNET.

*Table 4.8: Availability of advance price signals to farmers*

Sources of price information	Percentage of positive response
Getting prevailing price in local market before visiting	0
Getting information of prices at commodity exchanges	0
Getting information through Print Media	5%
Getting information through Electronic Media	6%
Getting information from other farmers	71%
Traders	23%
Comparing prices at different location before sealing the deal	0

It is evident from the table that around 5 percent farmers are getting price information (for major commodities at major markets) through print media while 6 percent farmers are getting information through electronic media. Most of the farmers (71%) are getting price information through fellow farmers which is not much reliable. No farmers compare prevailing price at two different markets before selecting or approaching a particular market to sell their produce.

#### 4.1.14. Options to farmers in disposing of their produce

The competition in the market depends mostly upon number of buyers available for every farmer. If the farmers will have a limited number of the buyer, the price will be determined mostly based on the like of buyer while if there are multiple buyers for each farmer, prices will be competitive.

*Table 4.9: Options to farmers in selling the produce*

Particulars	Response
Percentage of farmers approached to/by a single buyer	24%
Percentage of farmers approached to/by 2-5 buyer	66%
Percentage of farmers approached to/by more than 5 buyers	8%

It has been observed that around 24 percent farmers have not more than 1 buyer while selling their produce. In the case of 66 percent farmers, it was reported that they were approached by 2-5 buyers. Around 8 percent of the respondents have responded that they were approached by more than 5 buyers.

Around 67 percent farmers are of the view that there should be more buyers in the market so that a competitive environment among buyers can be ensured. Also, the majority of the

farmers (60%) are of the view that there should be a specific place where market committee should be functioning. The market committee must ensure that the traders are participating in the market so that farmers need not return without selling their produce.

#### **Method of price fixation and negotiation power with farmers**

One of the important function of the regulated market is to ensure price discovery for farmers' produce. This will be possible if proper auction takes place with the help of an independent auctioneer. In the case of RMCs and local markets of Odisha, the price is fixed mostly through mutual negotiation between farmers and buyers.

*Table 4.10: Price fixation and negotiation power with farmers*

<b>Methods of Price Fixation</b>	<b>Percentage of farmers</b>
Percentage of farmers getting chance to negotiate the price	52%
Farmers favouring requirement of auctioneer	100%
Farmers satisfied with disposal of produce during last year	66%

As depicted in above table, around 52 percent farmers are getting a chance to negotiate with buyers to arrive at a satisfactory price to dispose of their produce. It has to be noted that farmers are negotiating with buyers without having proper knowledge of prevailing prices in other markets. Around 48 percent farmers are selling their produce at a rate offered by the buyer. All the farmers are of the view that there should be proper auction system to discover the price of their produce and RMCs should arrange for the independent auctioneer. However, around 66 percent farmers are satisfied with the price which they received for the harvest of last season as there are no other options.

#### **4.1.15. Payment mode and settlement**

Most of the farmers are selling their produce to buyers in expectation of immediate cash. However, the case is not same for all farmers. Those farmers who had taken a loan from a buyer, use to settle the loan amount from the sale proceeds and remaining amount is paid either in cash or on a later date.

*Table 4.11: Payment mode and settlement*

<b>Mode of payment settlement</b>	<b>Percentage of farmers</b>
On Spot Cash	59%
Cash + Deferred payment	28%
Loan repayment + Cash/ Deferred payment	13%

Around 59 percent farmers receive their payment immediately while 28 percent farmers receive their payment partly in cash and partly on a later date. The practice of deferred payment is prevalent among the farmers who have prior dealings with the specific buyer and have mutual trust.

#### **4.1.16. Dispute Settlements**

One of the objectives of the regulated market is to provide for the settlement of all disputes between the seller and the buyer arising out on any kind of transaction connected with the marketing of notified agricultural produce.

*Table 4.12: Dispute settlement mechanism*

<b>Dispute settling mode</b>	<b>Farmers resorted to method</b>
Farmers reported dispute	12.8%
Settling dispute through personal negotiation	63%
Settling disputes through intermediaries/ local authorities	37%

As indicated in the above table, there were 62 farmers (12.8%) who reported the instance of disputes with buyers. Out of this, 63 percent farmers settled their dispute through mutual negotiation while remaining 37 percent settled it through the intermediation of a third party or local authority.

#### **4.1.17. Services required and their priority**

To create a conducive marketing environment, the role of the regulated market goes far beyond the establishment of norms and create regulations. The regulated market committees are expected to provide many services to farmers. RMCs are expected to emerge as a service-centric organisation than mere a controlling/ regulation body. A few basic facilities which are expected to be provided by RMCs are listed in the table below. Farmers were asked whether they require such facilities or not. Further farmers were asked to accord priority category to these services. The results are presented in the table below –

*Table 4.13: Services expected from RMCs and their priority*

<b>Services Required</b>	<b>Priority of farmers</b>	
	<b>High Priority</b>	<b>Moderate Priority</b>
Price information before approaching to market	83%	17%
Weighment Arrangement	59%	41%
Sorting & cleaning arrangement	55%	45%
Grading and assaying arrangement	58%	42%
Facility for independent auction	58%	42%
Availability of multiple buyers	59%	41%
Better valuation of produce	76%	24%
Settlement of price immediately	74%	26%
Warehousing facility	32%	68%
Arbitration by neutral arbitrator	48%	52%
E-auction	56%	44%
Diverse buyers category from various place	51%	49%
Information on future price at market	54%	46%
Provision for input	57%	43%
Provision for animal husbandry services	41%	59%
Provision for agri-clinics and agribusiness centre	37%	63%
Provision for post office facilities	36%	64%
Provision for banking services	44%	56%
Provision for hiring agro machinery	41%	59%
Provision for feed and fodder	40%	60%
Provision for agri extension services	44%	56%
Provision for office space for Farmer Group (FPO/FPCs)	54%	46%

Restrooms especially for women farmers	52%	48%
Provisions for common space with facilities for phone charging, internet, rest, etc.	40%	60%

Some of the highly important services for which more than 90 percent farmers have stated the requirement are an independent auction, a adequate numbers of buyers at RMCs for competitive bidding mechanism, better valuation of produce (through auction), immediate price settlement, warehousing facility etc. Maximum percentage of farmers (83%) have stated that the dissemination of price information through multimedia arrangement should be given high priority.

#### 4.1.18. Reasons for not utilising the services at RMCs

In most of the cases, it has been observed that the RMCs of Odisha are not being utilised by farmers and traders for trading purpose. Accordingly, farmers were asked for the reason for not utilising the platform of RMCs. The list of reasons and number of farmers endorsing those reasons are presented in the table below.

*Table 4.14: Reasons for not utilising RMC platforms*

Reasons	Response
Small Surplus	9%
No traders at RMC	20%
RMC is far away	29%
Transportation Problem	19%
Low Price with Uncertainty of Selling	9%
Other	13%

As depicted in the above table, the three major reasons behind not utilising RMC platform are the location of RMC (endorsed by 29% farmers), the absence of traders at RMC (endorsed by 20% farmers) and transportation problems (endorsed by 19% farmers). The other reasons which were cited by the farmers were small surplus with farmers (endorsed by 9% farmers) and uncertainty about getting a deal and price (endorsed by 9% farmers).

#### 4.1.19. Willingness to form FPOs

Since most of the farmers are from the medium and small category, the issue of the small lot can be resolved with the formation of FPOs. The formation of producer organisation / Producer Company not only supports farmers in achieving economy of scale in input management for production but also helps to increase the bargaining power of farmers. The willingness of farmers to form FPO has been presented in table below;

*Table 4.15: Farmers' willingness to form FPOs*

Farmer Categories	Farmers willing to form FPOs
Number of marginal farmers willing to form FPOs	100%
Number of Small farmers willing to form FPOs	85%
Number of medium farmers willing to form FPOs	87%
Number of large farmers willing to form FPOs	80%

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All the marginal farmers have shown their willingness to form FPO. In the case of small and medium farmers 85 percent and 87 percent farmers have given a positive response while in the case of large farmers, 80 percent farmers have shown their willingness to form FPOs.

#### **4.1.20. Facilities expected by farmers in RMC yards**

Some of the facilities which farmers are expecting at APMC are:

- Transparent selling process
- Ensure presence of local and outside traders (buyers)
- Minimum Infrastructure facility as required in an ideal market yard
- Rest shed for women / sitting place
- Market Information
- Facility for pledge loan
- Provision for inputs and extension in an around market yard
- Arrangement for Insurance
- Farmers' co-operative organisation
- Provision for office of FPOs
- Linkage with outside traders for direct marketing
- Immediate payment system
- Provisions for Sorting, Cleaning and Grading
- Dispute settlement through committee
- Weighing arrangements
- Collection centres

#### **4.1.21. Challenges faced by farmers:**

Farmers were also asked about the probable challenges which they may face while resorting to RMCs. The challenges are listed below;

- Transportation problem
- Price Risk
- Manipulations by traders
- Infrastructure of RMC is not suitable
- Weight arrangement
- Control of traders on selling price (due to absence of auction system)
- Lack of awareness about process at RMCs

## 4.2. BUYERS' / TRADERS' SURVEY

Local buyers at RMC yard play an important role in providing an avenue to farmers in selling their produce. In order to operate at RMC platform, buyers also have some expectations from RMCs. A conducive environment, an adequate number of lot, connection with traders from other places, infrastructure to operate smoothly etc. are the key requirement in conducting transactions at RMCs. A few aspects which are important were discussed with buyers. The results are presented in the sections to follow.

### 4.2.1. Major role played by buyers

In the RMCs of Odisha, the buyers to farmers are of various category doing multiple functions.

*Table 4.16: Buyers' Profile*

Major Functions	Number of buyers undertaking	Percentage
Village Aggregation	11	13%
Semi-wholesaler	37	42%
Wholesaler	26	30%
Commission Agent	3	3%
Processor	1	1%
Cotton Miller	10	11%

A total of 88 buyers were surveyed. Out of this, only 50 had a license from RMCs. The largest section of buyers acts as semi-wholesaler. Around 42 percent of the buyers responded that their activity is limited to that of a semi-wholesaler while 30 buyers act as a wholesaler. Next majority was of village aggregators who are limited to 13 percent that is just next to cotton miller which is to the tune of 11 percent. Only 3 percent buyers are functioning as a commission agent. Out of 88 respondents, only 1 was undertaking processing activities.

### 4.2.2. Support Services at RMC Yards

Some of the basic facilities which can enhance the efficiency of markets produce must be available at RMCs. Availability of such facilities will decrease the time and money incurred on transaction. Table below states the basic facilities which are expected to be available at RMCs.

*Table 4.17: Facilities and their requirement*

Facility	Activities undertaken	Available with traders	Traders indicating requirement	Availability at RMCs (indicated by traders)
Cleaning	27%	30%	81%	17%
Storage	40%	48%	85%	32%
Assaying	13%	6%	70%	17%
Sorting & Grading	14%	10%	74%	10%
Packing	16%	31%	75%	5%
Weighing	32%	43%	70%	27%

It is evident from the table that all the mentioned facilities are required by more than 70 percent of the farmers. Assaying, sorting and grading are the activities for which there are least arrangements with traders. Only 6 percent traders have assaying facilities while only 10 percent farmers have sorting and grading facility. Weighing and storage are the two activities for which a good number of traders have their own arrangement. In the case of weighing, around 43 percent traders have their arrangement while in the case of storage, around 48 percent traders have their own arrangement. While responding to the availability of services at RMC yards, 27 percent traders have availed the weighing arrangement and 32 percent have availed storage facility.

In many cases, traders have also responded that there are many facilities which were created at RMCs, however, they are not suitable to use for current dates.

#### 4.2.3. Shifting of traders from local market to RMCs

To ascertain the likeliness of traders in shifting their business from the local market to RMC yards, their willingness and motivation factors were recorded.

*Table 4.18: Likeliness to shift business location*

Parameters	Response
Traders who believe that shifting their business location won't affect their business	36%
Average distance from RMC and operational place of traders	14 km
Traders who are ready to move their business location	89%
Traders willing to shift their business to RMC Yard if they are getting more buyers at RMC	86%
Traders willing to shift their business to RMC Yard in expectation of availing more information	83%
Traders satisfied with current rate of market fee	57%
Traders ready to shift their operational place for the sake of waive off of a part of market fee	77%

In Odisha, traders have already established place from where they are dealing with farmers as well as their clients. The relocation of business from the local market to RMC yards will depend much upon the likely impact due to relocation. Around 36 percent traders have stated that shifting from their current place of operation to RMC yard will not affect their business. On an average, a trader will have to shift 14 km away from their current place of operation.

Despite 36 percent traders believe shifting the place of operation will affect their business, most of them have agreed to relocate. Around 89 percent traders have shown their willingness in relocating their place of operation.

It is expected that with all traders operating from RMC yards, a reliable business environment can be created and more leads can be generated for traders as well. Accordingly, 86 percent traders will be motivated if they are sure that moving to RMC will provide more business



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opportunities. Similarly, 83 percent traders willing to shift their business to RMC Yard in expectation of availing more information.

While trading from RMC yards, leakage in market fee can be avoided to a great extent. The majority of traders (57%) are satisfied with the current rate of market fee, however, waiving off a part of the market fee can be an extra motivational factor for 77 percent traders.

#### **4.2.4. Willingness of traders to migrate on e-platform**

While responding to reflect their willingness towards migration to eNAM, around 89 percent traders have shown their willingness. The likeliness of shifting from platform also depends upon the knowledge level of traders. Around 55 percent traders have stated that they have a basic idea about trading at e-platform. Around 83 percent traders are expecting that with the introduction of e-platform, the market will be wider for them.

#### **Conclusion:**

The chapter bring forth the challenges faced by the farmers in accessing the markets and reasons for evading the RMC markets as a place for selling the produce. The common practice of farmers selling the produce to village aggregators delinks the buyers and sellers from market. The uncompetitive markets have lack of market channels and support services. The interaction with farmers reveal that the intermediaries are the first point of contact and they depend on them for availing services right from sourcing inputs to credit to market information. The complacency that has set in due to dysfunctionality of markets will be difficult to surmount as the challenges in the macro business environment are emerging fast i.e. e-national markets, reforms, contract farming. The chapter highlight the services required by the farmers. Using this list to prioritise this service so that farmers can be geared up to populate the abandoned market needs to be in place. The traders are willing to relocate the business from local markets to RMC yards provided there is a reliable business environment and adequate marketable surplus to trade. The readiness of buyers and sellers to adopt and integrate with eNAM is a positive signal and needs to be strategise to bring the competitiveness and vibrancy in marketing environment of Odisha.

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## **Chapter 5: Integrating markets with eNAM-Issues and challenges**

### **5.1. PROBLEM STATEMENT: MARKETS UNDER REGULATED MARKET COMMITTEES (RMC) HAVE ADEQUATE INFRASTRUCTURE BUT ABSENCE OF TRADING IS CONSPICUOUS IN THESE MARKETS.**

The RMC markets have been in existence in the state for last 50 years and over the time have developed infrastructure for marketing under different schemes and programmes. Most of the markets have entry gates, paved internal roads, godowns, shops, auction platforms, administrative office, farmer rest house and other amenities. Despite the available facilities and infrastructure for wholesale trading, buyers and seller do not visit these markets for transaction and trade.

The interaction with the farmers and traders revealed markets have degenerated overtime, from being functional to dysfunctional. Markets were equipped for trading of jute, cotton, maize. Markets like Raigadh, Narayangarh were special commodity markets for cotton and jute respectively and had infrastructure specific for the trading of these commodities, over the time the shift in production towards rice lead to low arrivals and markets began to become dysfunctional. As the arrivals dipped the market infrastructure developed also began to lose its relevance.

### **5.2. PROBLEM STATEMENT: THE GEOGRAPHICAL PROXIMITY OF RMC ARE AWAY FROM PRODUCING AREAS WHICH CONSTRAINTS THE ACCESS TO THESE MARKETS**

Marginal and small holder farmers prefer a market in close proximity to sell their produce. The overall mean distance to be covered to access these markets is 16km. There is little incentive for farmers to cover this distance to sell the produce which is small. Village periodic markets owned by local bodies are available at 3-4 kilometers and are preferred over RMC. Village periodic markets are unregulated, have poor infrastructure, have over rated market charges yet these markets are visited by farmers as they are the only option available to farmers.

### **5.3. PROBLEM STATEMENT: FUNCTIONALITY OF RMC MARKETS- VOLATILE AND RISKY**

RMC markets are volatile due to the low volumes transacted and their limited integration with other markets. Transactions in these markets is risky as these markets are unable to formulate price and modify demand and supply-side shocks. Volatility can affect the level and riskiness of returns to the producer. When the price falls there is no mechanism for absorbing the risk as these markets are not well integrated. This significantly affects the incentives for the farmer participation in these markets. The risk facing farmers associated

with market integration is high. This is due to difficulties faced in accessing market information, credit and other inputs, and technical assistance which together with inefficient markets, weak infrastructure can create significant uncertainties in the returns that farmers can expect from engaging in agriculture market

#### 5.4. PROBLEM STATEMENT: NON-PARTICIPATION OF BUYER AT RMC MARKETS

The markets under RMC in Odisha are devoid of any transaction as there are no market channels in function. Like sellers, the traders also face uncertainty in trading in RMC markets as there is a risk of inconsistent supply low marketable lot and poor quality of the produce. Buyers are not motivated to trade in market as farmer producers do visit these markets to sell the produce. However, buyers are willing to engage in markets provided sellers have sufficient produce to trade. The situation in the state of Odisha has a crisis situation where the marketing relations between buyers and sellers is weak and unreliable and do not trade in formal markets like RMC.

#### 5.5. PROBLEM STATEMENT: SMALL MARKETABLE SURPLUS IN THE MARKET

Farmers sell immediately after harvesting their crop to repay consumption loan. Farmers often resort to selling small lots in village periodic market or at farm gate. Turmeric, Cashew, Coconut, Chilly etc have high marketable surplus in the hands of farmers. As can be seen from the table the marketable surplus in hands of farmers is more than 80% but the marketed surplus sold at RMC is low. As stated earlier the aggregation of produce is difficult to achieve. It becomes non-remunerative for sellers to take the produce to RMC and for buyers to engage in markets.

*Table 5.1: Production and Surplus of selected crops in study area*

Crop	Average Production Per Farmer (Qt)	Average Marketable Surplus per Farmer (Qt)
Chilly	18.38	15.53
Coconuts (in pieces)	8682	6553
Cotton	17.5	17.48
Ginger	30.68	28.5
Green Gram	1.92	1.46
Maize	89.4	87.76
Onion	56.5	50.2
Turmeric	5.6	5.1
Black Gram	6.2	5.7
Cashewnuts	2.23	2.23

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## 5.6. PROBLEM STATEMENT: MOST OF WAREHOUSES ARE WITH POOR MAINTENANCE AND WAREHOUSE BASED SALE IS YET TO BE ESTABLISHED

Warehousing and transportation forms the backbone of supply chain of all industries. Adequate storage capacity and strategic location of the warehouse enables efficient functioning of supply and distribution network and adds value to the product. Warehouses are operational under different schemes and agencies for maintaining stock of MSP procured food grains. The Status of the warehouses operating under CWC, SWC and private investors is as follows:

*Table 5.2: Warehousing Capacity in Odisha*

Total capacity approved (MT)	Total capacity allotted/ sanctioned (MT)			
	CWC	SWC	Private Investors	Total
<b>375,000</b>	172,500	127,500	20,000	3,20,00

The warehouses exist but are in poor maintenance and many of them are not optimally utilized as only msp procured food grains are stored by Primary Agricultural Co-operative Societies (PACS).

## 5.7. PROBLEM STATEMENT: ABSENCE OF SYSTEMATIC MARKET INFORMATION HAS INHIBITED UNDERSTANDING DEMAND AND SUPPLY FOR TAKING INFORMED MARKETING DECISIONS

A recurrent factor that bears heavily on dysfunctional market is the lack of market information and analysis. In the absence of market information system farmers fail to understand demand signals and market trends. Market information emanates market signals which farmers to take informed decision to sell or to store the produce. In RMC where no trading takes place in market, market information on arrival and price does not get formalized in markets. In markets where trading is there, the Market committees provide information through notice board of RMC at main market yard only and few RMCs are uploading price information that can be accessed through Agmarknet website. MIS being a service and a public good the Markets under RMC should facilitate farmers with market Information.

## 5.8. PROBLEM STATEMENT: MARKETS HAVE BEEN MORE ENGAGED IN REGULATION AND COLLECTION OF MARKET FEE AT CHECK GATES RATHER THAN FACILITATING FARMERS MARKET LINKAGES

The major source of revenue for the Regulated Market Committee is collection of market fee in addition to license fee for granting licenses to different market functionaries in the market. Market fee is being collected at check gate established at the major roads. The regulations were introduced with the objective to ensure as per notification with due approval except for Sakhigopal market, where fee is being collected at market yard also. This has led to increased

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concentration of RMC staff at check gates than management of markets. Positioning of market staff at check gates instead of at market yard has made these markets defunct and devoid of any marketing activity.

#### **5.9. PROBLEM STATEMENT: SOCIAL RELATIONSHIPS BETWEEN FARMER AND MIDDLEMAN IS AGE OLD AND COMPLICATED**

The farmer operates in markets under a specific social milieu with linkages to traders and institution. Small and marginal farmers with limited risk taking ability, lack of understanding of the system and poor access to formal credit may be vulnerable to alienation from the market.

Bringing the farmers out of this oppressive social matrix is going to be a challenge. This will require organizing farmers in producer groups, building relationships with institutions like banks, warehouses, markets, etc to fulfil their needs for credit, transportation and price

#### **5.10. PROBLEM STATEMENT: INADEQUATE TRAINING, INFORMATION AND CAPACITY BUILDING OF FARMERS AND OFFICERS IS GOING TO BE A CHALLENGE IN INTEGRATION**

eNAM will be beneficial to each one of the participants but there is a need to educate them about the benefits and the procedures so as to encourage them to trade on the eNAM platform. The present system is believed to be skewed in favour of traders and commission agents and therefore, they may show reluctance in participation. There is need to educate them on the benefits being offered through the system. APMC has to play proactive role in conducting programmes for farmers and other stakeholders.

#### **Conclusion:**

Farmers are the main stakeholders and need to be taken into confidence before implementing the online trading activities. The farmers follow a traditional method of open agreement or auction system of sale in the markets. Usually they are depending upon the commission agents in the markets to dispose of their produce and get the sale proceeds. Their social and economic relationship with these commission agents is so strong because of the easy availability of credit and confidence in keeping his produce in safe custody and disposing it whenever required without his physical presence and also assured of cash payment of sale proceeds that any deviation from this method he may not cooperate. The farmers are made to be aware of the limitations prevailing in the traditional system of marketing and advantages of online trading in getting him the competitive price and immediate payment of sale proceeds on line without any unauthorized deductions and transparency involved in every activity. They need to be educated on the requirement of the markets in terms of graded quality of produce to the market. Education of farmers is required on necessity of registering their name along with their phone number and bank account numbers and its advantages. Massive training and awareness programmes for the farmers and farmer leaders and hand hold assistance to them in doing the activities when they come to the market with the produce

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for sale purpose, through efficient trainers involving the APMC members and staff will help make the farmers participate in the process of implementation of online trading. Many times, initiatives meant to benefit farmers may lead to their exclusion if not properly educated on the procedure and requirements of such system.

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## **Chapter 6: Pathways to integrate Farmers to market**

Linking sellers and buyers to markets is a key factor that will bring better participation in the evolving markets and ensure better returns to both sellers and buyers. Owing to the fact that the sellers are smallholder producers and have constraints in access to markets the task of integrating smallholder producers to ENAM is going to be a daunting one.

Understanding the inter linkages in resources, production, risk, price and market and how they affect the capability smallholders to participate in new opportunities is critical to draw a path for integration of regulated markets with ENAM.

Incentives and constraints to market integration are realized differently by farmer producers and change as a result of market development. As the increasing opportunities are becoming available to farmers as alternative markets such as ENAM, the process of integration of buyers and sellers need to have a pathway.

### **6.1. PATHWAYS**

The leap in transforming the abandoned regulated markets of Odisha to Electronic National market is not only going to be a feat of technology but also a socio-cultural exercise. For bringing this transformation it needs to be recognized that not all farmers and buyers will respond to this transformation. The ability and willingness to participate in the emerging markets driven by information technology will depend on:

- Well-functioning markets to give them appropriate incentives
- Farmers have access to finance and information
- Efficient infrastructure to store and transport the produce at a reasonable rate

If one component is missing the farmer producers will not be willing to participate to the same extent. Therefore, concentrating on these components to bring a holistic approach to market development is imperative to have better market integration. In Odisha, a staggered approach in developing markets is manifested in location of the markets, development of marketing infrastructure etc. The markets in the State have disconnect with producing areas, the geographical remoteness, inefficient infrastructure for post-harvest management and transportation and poor linkages with finance and information show a pattern of dis connectivity. These factors determine the extent of participation in markets and they vary spatially across location and temporally as production and market evolve. FAO<sup>4</sup>.

#### **6.1.1. Facilitate participation of small holders in local market**

The first step is to facilitate participation of small holders and marginal farmers in local markets. The practice of selling produce at farmgate discourages the farmer to take the

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<sup>4</sup> Small holder integration in changing food market , 2013

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produce to market. As producers become more commercially oriented, facilitating participation in ENAM will require training farmers in understanding the requirements of grading, assaying and online transaction.

### **6.1.2. Enabling market connectivity through market information**

Market information is important for the seller farmers before sowing and before harvesting. Market committees provide information through notice board of RMC at main market yard only and few RMCs are uploading price information that can be accessed through Agmarknet website. In rest of the RMCs there is absence of any dissemination of market information to guide farmers to take marketing decisions. Farmers also primarily depend on their peers for production and marketing information; in addition, agriculture officers and traders are other important source of market information for farmers.

Market information keeps farmers and traders liked to demand and accordingly the decision to supply at what time and quantity can be taken. Market information encompasses reliable price, buyer contact, market channel, grades and standard specification, post-harvest handling advice and storage and transport recommendation.

To achieve this pathway using the Information technology not only to disseminate price but also to reduce transaction cost need to be in place. Investing in the communication infrastructure such mobile phones network, internet linked rural kiosk which aid in strengthening market information, extension and other services to farmers needs to be made.

### **6.1.3. Producer organization to offer vital link to market**

Technical and institutional innovations that reduce transaction cost have proven to be enablers especially the wider use of information technologies- mobile phone, the internet, social networks for vertical coordination arrangements with farmers or producer organization. Producer organization including agricultural co-operatives play an important role in supporting farmers to trade in market place and understand the trends in marketing.

Producer companies in other States like Madhya Pradesh, Bihar are helping smallholder farmers participate in alternative marketing and in regulated markets Farmer Producer organizations are required to aggregate the produce and integrate with market by minimizing transaction and coordination costs, while benefiting from economies of scale. Organization and collective action can help to enhance farmers' competitiveness and increase their advantage in emerging marketing system of ENAM. A collaboration between FPO and Private sector built on their shared interest in achieving scale and market power will be critical in integrating Farmers to market.<sup>5</sup>

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<sup>5</sup> Linking small farmers to the market- Dinal Umali, Development Outreach, World bank Institute



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#### **6.1.4. Market led extension and capacity building**

Market led extension to transmit signals to farmers on new market opportunities will make physical markets relevant to buyers and sellers.

Adequate information is needed from the point of investment to the point of making returns. Extension agents as which are trained as agent of information should get involved in all stages of farmer's decision making to guide them in making right decision at the right time. Farmers need answers to questions like what to produce? When to produce? How much to produce When and where to sell? Where to sell? In what form to sell? What channels to sell his produce?

Extension functionaries have a key role to play in engaging farmers with markets. SWOT analysis of the market, organizing commodity based farmers' interest groups and farm management capacity building, backward and forward linkage, Farmers exposure to market intelligence and guidance for quality decision about market. Empowering farmers with information, services and linkages through Market Led Extension is a long-term solution for brining farmers to market in Odisha and linking them to ENAM.

#### **6.1.5. Need for supportive Institutions**

In the state of Odisha where the markets have become dysfunctional the key challenge is to have institutional arrangements to tackle market failure, particularly those which prevent farmers from linking to markets and alternative market channel.

Building collaboration amongst producer organizations, extension service providers, private sector, NGO etc opens the possibility of change by boosting the confidence of farmers, bringing professionalism in market functionaries, making markets functional by playing it role efficiently.

Regulated market Committees have an important function to support farmers by providing market information, facilitating producers to bring produce market. If it requires to incentivize farmers to bring the produce to the markets which have been lying abandoned then it should be done.

In Ecuador multi stakeholder platform or alliance brings farmers together with a wide range of agricultural support services e.g local NGO, local bodies, government, universities. The Platform is a part of comprehensive programme which involves practical intervention that pays special attention to improving the participation of low income farmers in high value producer chains by promoting their organization and social capital accumulation. Through the Platform the farmers develop a "value chain vision" of production and commercialization that directly links them with the market.

#### **6.1.6. Linking rural periodic markets by upgrading them as PRAM**

Odisha State has abundance of Rural periodic markets managed by local bodies. These markets 1548 in number are multi commodity markets and function under traditionally existing informal procedures and provide small farmers to sell the produce at these market

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points. These markets lack in market facilities to aggregate the produce and are devoid of market channel to link farmers with wholesale markets. Thousands of RPM are also the preferred markets for farmers due to convenient location, social relationships etc. Over the time these markets have proved to be a deterrent in linking the produce to the formal markets like RMC. Although these markets have been supported by RMC in terms of building some infrastructure the trading as such has remained fixated in periodic markets and has created a market failure in the State. As markets evolved functionally, these markets should have been systematically taken over by State marketing board for inculcation of good marketing practices through regulation. However, this did not happen resulting in unorganized marketing set up in the State.

As per the recommendations of Report on Doubling farmers income<sup>6</sup>, the Rural periodic markers need to be upgraded in to a function that enables aggregation and transportation from village level to wholesale market. It has been advised to build on the available infrastructure and experience of the RPMs to establish large number of primary rural agricultural markets (PRAM) to provide the following two services:

1. direct marketing between producers and consumers
2. aggregation platforms for the small lots of farmers

In pursuing the establishment of PRMA, the capability to connect produce in suitable quantities with market of choice will be developed. Further with farmers enabled with a choice of markets, the element of market to market competition will follow. This approach is what will make the markets functional and provide services that add value and better returns

#### **6.1.7. Adopting Model Agriculture Produce Livestock Market Act (2017)**

As per new Model Agricultural Produce and livestock marketing Act 2017, the new definition of market area is now extended to the whole State/UT as one unified market area for regulation of marketing of all or any of the kinds of agricultural produce. This will go in a long way in removing the entry barriers to markets and at the same time arrest the problem of fragmentation of markets within the State.

The New Model Act allows for establishing private markets, farmer consumer markets managed by market committee, private consumer markets yards managed by a person and electronic trading platform.

The implication for Odisha are

1. Large number of informal markets and rural periodic markets need to be consolidated by upgraded to be treated as formal markets with proper linkages.

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2. The system of collection of market fees at check gates need to be abolished. It no longer has relevance as the old concept of market has been done away. This step will be helpful in bringing organized marketing with forward and backward linkages.
  3. Giving license to individuals to players to set up markets and create competition at market
  4. Provisioning for single point levy of market fee across the State and unified single trading licence to realise cost effective transaction.
  5. Promotion of e trading to enhance transparency in trade operations and integration of market across geographies

#### **6.1.8. Warehouses and silos to be declared as market points**

The new legislation also provides for declaring warehouses/silos/cold storages or other place as market sub yards. This will provide better market access to farmers.

In order to declare a warehouse as a sub-market yard, warehouses which are fit to serve the purpose may be notified. Generally, warehouses accredited by WDRA may be selected to be notified as a sub-market yard as the accreditation norms of WDRA requires warehouses to follow scientific storage practices which ultimately results in quality keeping of the produce. The concept has been shaping up in Karnataka through initiatives of Rashtriya e-Market Services Private Limited. A similar initiative has been seen in Punjab where silos have been notified as Mandis.<sup>7</sup> The implications for this provisions and advantage for Odisha are as follows:

1. The first advantage to a farmer will be in the form of cost saving in transportation as farmers need to transport produce only either to the Mandi (if they opt to sell immediately after harvest) or warehouse (if they opt to sell later).
2. The additional advantage which a farmer can have will be in the form of availability of pledge loan. The commodity stored in WDRA accredited warehouses are eligible for getting issue of a Negotiable Warehouse Receipt which could be considered as better collateral in availing loans from financial institutions.
3. The third advantage for farmers as well as traders is in the form of flexibility in timing of sale/purchase of produce i.e. advantage of price movement between harvest and lean season can also be encashed.
4. The other advantage which a state may have with warehouse-based sale may be in establishing a better online marketing platform for agricultural produce. At warehouses, assaying facility may be availed by the warehousing agency and on an integrated online platform, the commodities stored in warehouses can be displayed for auction and sale.

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<sup>7</sup> How warehouse based sale can mitigate farm marketing risk, Enamul Haque, May 21 2015

5. Having a quick data of available/ expected supply in the market for different commodities will be an additional advantage for government in deciding future course of actions in maintaining price stability in the market.

As warehouse based sale increases and become functional, Warehouses can be declared as online e platform.

### 6.1.9. Training stakeholder to access e-NAM

CCS NIAM participation of farmers, traders and market functionaries in national market is important for the success of this initiative. The farmers need to be exposed to the new system, its features, benefits and procedure of participation. The training need of different stakeholders identified by NIAM is as follows:-

CAPACITY BUILDING NEEDS OF DIFFERENT STAKEHOLDERS	
Stakeholders	Areas of training
Farmers	Understanding NAM, preparing produce for NAM, market trends and other opportunities.
Traders/Other Agents	Adoption of grades, dispute settlement, payment facilitation, produce handling, etc.
Mandi Secretaries	Operation and management of market, change management and dispute redressal
Principal Secretaries/Director (Agri Marketing)	Importance of NAM, facilitation through reforms, PPP, etc.

Source: *ccsniam.gov.in*

### 6.1.10. Operating Mandis in Public private partnership mode:

Enabling the private sector to develop and operate the markets will compliment government's effort to improve access by farmers to key market infrastructure and service. markets by private sector is suggested. To be able to do this, Odisha State Agricultural Marketing Board can select five RMC within farmers reach and post dedicated trained manpower or management graduated to manage these markets professionally.

To manage these markets, PPP mode is a viable solution. As done in Tamil Nadu, traders association has taken the responsibility of building and managing a turmeric market. Tikabali (Turmeric), Paralemundi (Cashew & Maize), Koraput (Ginger & Cashew) have potential for being managed professionally in PPP mode by giving the markets for management to Farmer Producers company, traders association, private

In Tamil Nadu, for example, Traders' association of 156 members, recognizing the impediments to trade of not having a wholesale market( lack of transparency in pricing, increased logistic, cost of assembling appropriate volume of produce have taken upon themselves to build and manage a wholesale market. The Spices board is supporting this initiative.

Source: *Dina Umali- Linking farmers to market*

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company, co-operative etc. This will help in bringing operational expertise through participatory management.

This kind of participatory management will also bring greater social equity by centring the management of markets around collaborator community structures<sup>8</sup>. In Odisha state collaborator community structure for participatory management needs to be developed to have -

- (a) Equitable Administrative Responsibilities
- (b) Scalability from production to marketing, logistic and consumer engagement.
- (c) Balancing social benefits with emerging opportunities in contract farming, direct marketing, private markets, electronic market and other new formats.

**Conclusion:**

Besides the above suggestion focus needs to be in generating a zero-carbon foot print and inculcate environment friendly marketing practice. Setting up bio mass energy stations in each RMC to generate power for the use of RMC utilizing the waste generated each day should be done. As market information is an important function the installation bill boards and electronic display boards for disseminations market information and other announcements related to weather and opening up investment, avenues for private equity funds for agri-infrastructure and value chain opportunities needs to be established in markets.

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<sup>8</sup> Transforming Agriculture Marketing in India: Linking Farmers to a National Gateway and E-Markets, ICRISAT, Research Report IDC-5.

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## Chapter 7: Recommendation and Action Plan

The suggested action plan to integrate farmers with market and to make market ready to function as e-national agriculture markets is as under :-

- (i) Adopting APML Act 2017 to transcend the barriers of physical space and introduce alternate marketing framework.
- (ii) Producer organizations for aggregation of produce to link small farmers to markets.
- (iii) Making market competitive through optimized value chain logistics which bring efficiency in each component of marketing.
- (iv) Establishing Agrilogistics comprising of cleaning, grading, packaging, storage and transportation.
- (v) Having service agencies to handle aggregation, storage and certification in some cases.
- (vi) Integrating bringing rural periodic markets and other markets under local bodies under the emerging format of marketing.
- (vii) Marketing extension as a strategy to link farmers to markets.
- (viii) It provides market information in advance to crop planning, as well as enable a choice of market channel so that farmers are confident in responding to market demands.
- (ix) Good governance<sup>9</sup> : Government as a facilitators to have innovative features namely –
  - (a) It envisages high level of private participation in grading, warehousing and scientific movement of commodities.
  - (b) It envisages coordination between various stakeholders for setting standards and monitoring their implementation
  - (c) It ensures transparent and hassle free payment process for the producers.
  - (d) It improves the regulatory process and enhances service orientation.
  - (e) It mandates stipulation and regulation of standards for agriculture commodities in an effective and efficient manner that increases farmer welfare.
  - (f) It upgrades the skill level of personal operating in the agriculture market and create economic opportunity for youth to participate in emerging formats.

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<sup>9</sup> Transforming Agriculture Marketing in India : Linking Farmers to a National Gateway and E-Markets, ICRISAT, Research Report IDC-5.

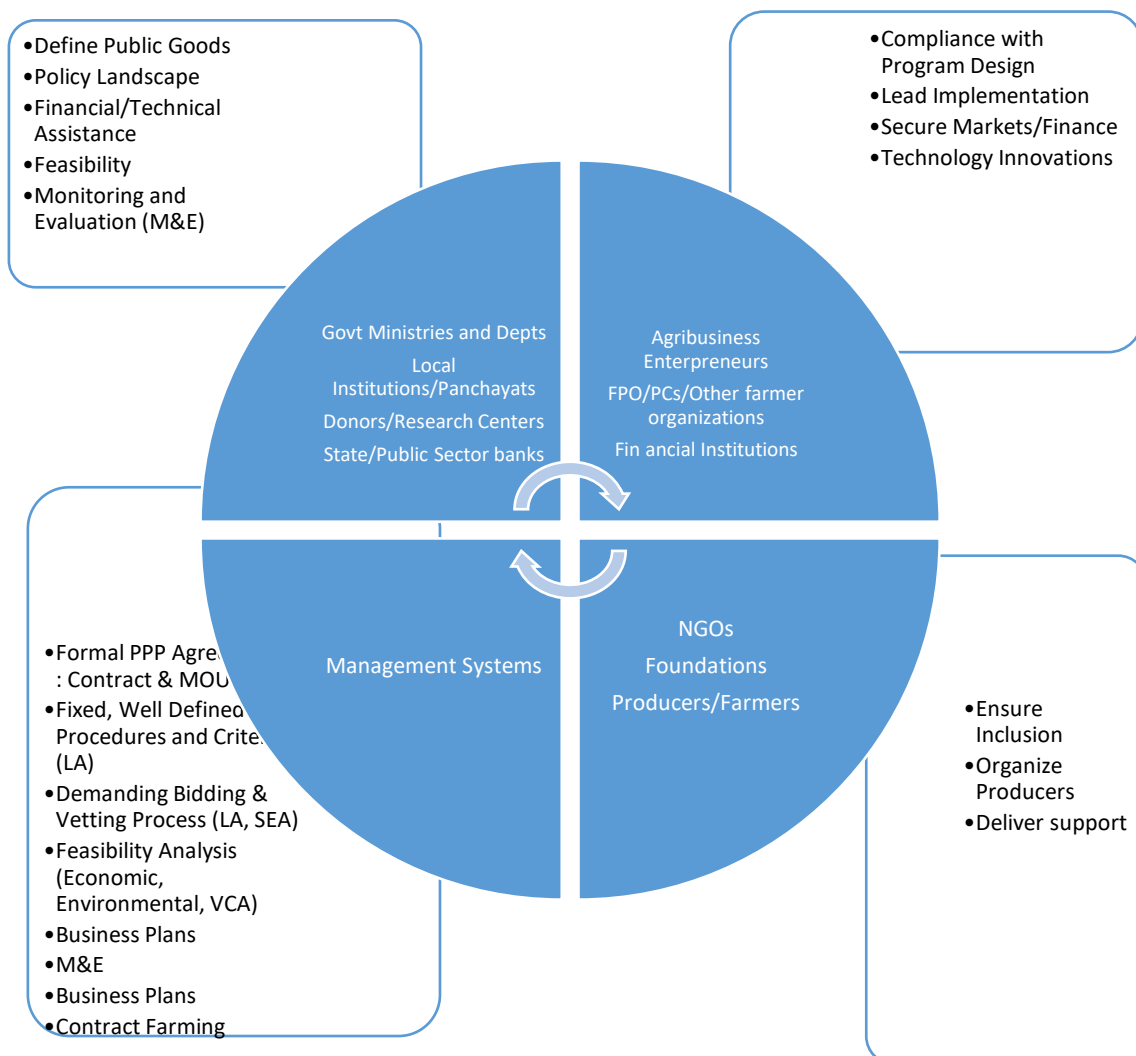


Figure 7.1: Management Systems to integrate learning, design and evolution of a modern national marketing platform for smallholder farmers (Adapted From ICRISAT)

The above diagram exhibits how management system is required to integrate learning and design of marketing so that evaluation of existing markets to modern national marketing platform for small holder farmers can be a win win situation.



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