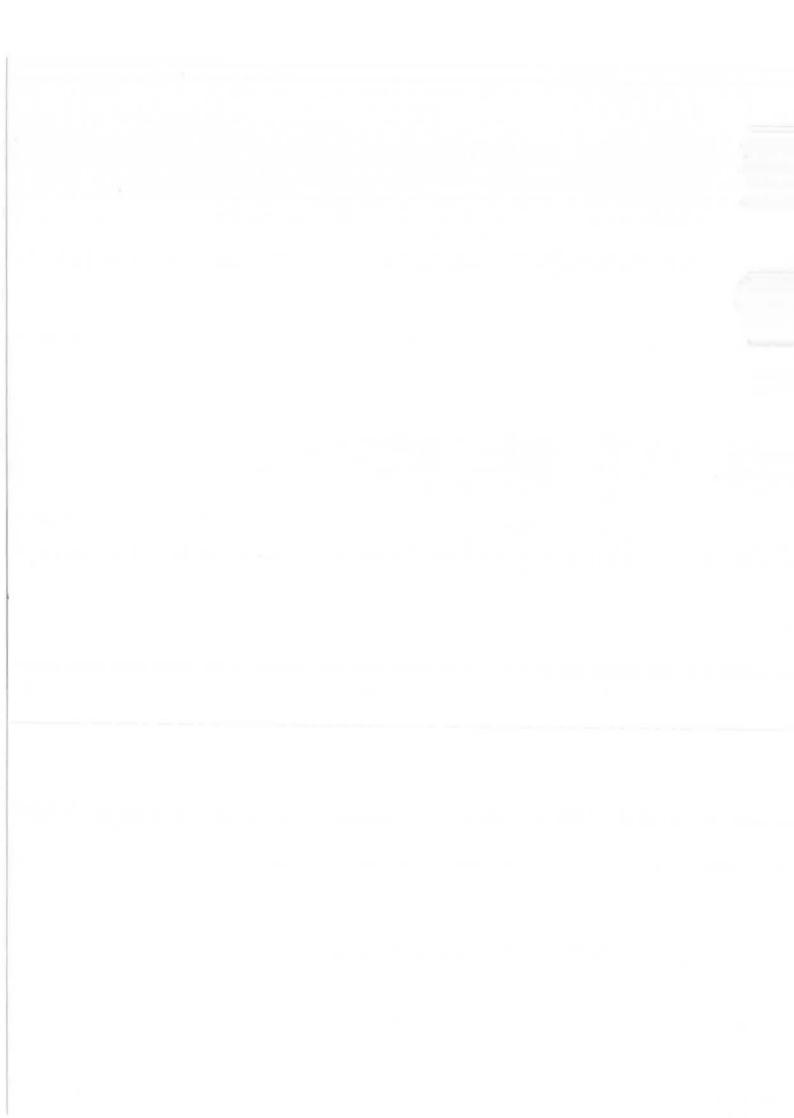


National Centre for Cold-chain Development

Annual Report

2016-17





National Centre for Cold-chain Development

2nd Floor, B-Wing, Janpath Bhawan, New Delhi-110001

Annual Report of the National Centre for Cold-chain Development (NCCD) for FY 2016-17

Table of Contents

A.	Accounts & Audit	:
B.	Establishment - HR status	2
C.	Society Membership Status	2
D.	Technical and other Initiatives	2
E.	Capacity Building & Knowledge Dissemination	3
F.	Applied Research and Studies	5
G.	Outreach and awareness (workshops & seminars)	^ç
H.	Advisory & other support	. 12
I.	NCCD - Aims & Objective	. 13
J.	Executive Committee of NCCD	. 14
K.	Governing Council of NCCD	. 15
L.	Events, conferences and interactions having direct participation of NCCD in 2016-17	. 16
M.	Abbreviations and Definitions used	. 17
N.	Audit Report and Annual Accounts	18

National Centre for Cold-chain Development

2nd Floor, B-Wing, Janpath Bhawan, New Delhi-110001

Annual Report of the National Centre for Cold-chain Development (NCCD) for FY 2016-17

A. Accounts & Audit

NCCD was registered under Societies Registration Act 1860 on 27-1-2011 and structured to operate in Public-Private-Partnership (PPP) mode with stakeholders as members of the society. After approval by Cabinet on 09-2-2012, DAC&FW provided a one-time grant of Rs. 25 crore for establishing a Corpus of same amount, so that interest income accruing therefrom, and other income generated by NCCD from fees and charges for services rendered will be used to meet its administrative, personnel and other costs, as decided by its Governing Council. NCCD is structured such that it is distanced from direct government involvement on a day to day basis, and there is no further cost on account of its operation and maintenance on Government.

Accounts of NCCD for 2016-17 were audited by chartered accountants empanelled for the purpose with the office of the Comptroller and Auditor General of India, M/s APN & Associates.

Summary of Income and Expenditure account for F.Y.2016-17 is as follows:

Item	Rs in lakh
Income from interest and others	306.59
Less: Administrative expenses	107.88
Excess of income over expenditure	198.71
15% of gross income exempt u/s 11	45.99
Balance set apart for 'General Public Utility' purposes over next 5 years	152.72
Total	198.71

NCCD was registered u/s 12AA of Income Tax Act in July 2015 as a 'General Public Utility' which entitles it to exemption from income tax for 15% of its gross income each year. Of remaining 85% of gross income, the unspent amount is liable to tax unless such amount is set apart for future expenses within 5 years u/s 11(2) of the Act. There is no income tax liability for F.Y.2016-17 as of now. NCCD is also exempted from service tax on services provided by way of cold chain knowledge dissemination w.e.f. 1-4-2016.

Detailed accounts for F.Y.2016-17 are attached.

B. Establishment - HR status

Shri P. Shakil Ahammed, JS(MIDH) held additional charge of the position of Director, NCCD w.e.f. 23.10.2015. In this period, the tenure of Shri Pawanexh Kohli, was renewed for three years w.e.f. 1.02.2017 - an expert from cold-chain industry he continues as the CEO of NCCD cum Chief Advisor, commencing in 1.02.2014.

Executive Committee (EC) of NCCD approved initial staff strength of 13 persons, and 9 positions were filled as on 31-3-2017. Executive Committee of NCCD consists of 13 members under chairmanship of Secretary(AC&FW). The Governing Council consists of 15 members under Secretary(AC&FW) as President. List of EC and GC members is attached.

C. Society Membership Status

As of March 2017, NCCD has 42 active members, of which 34 on annual basis and 8 are lifetime members. Category-wise List of Members:

Category- Fees (₹)	Annual	Lifetime	Total
Company- C	10	5	15
(50,000 / 4,00,000)	10	3	13
Associate- A	10	357	10
(10,000)	10	-	10
Educational Institute- R	14		14
(Nil)	14	-	14
Patron- P	195	1	1
(20,00,000)	-	1	1
Grower- G			
(Turnover <5 lakh- Nil; Others-	-	-	
10,000)			
Industry Body- I	40	2	2
(75,000 / 5,00,000)	-	2	2
	34	8	42

The membership fees received in 2016-17 is Rs 17.15 lakh. Members of the society join in activities of NCCD as stakeholder participants and may undertake knowledge dissemination activity as representative of NCCD. Nodal Officers for Cold-chain Development, nominated through MIDH are expected to liaise and coordinated state level activities. However, it is observed that frequent reassignments and changes at state level happen. MIDH was requested to update the status every six months to facilitate.

D. Technical and other Initiatives

Reefer Vehicle Call-in-centre (RVC)

The Reefer Vehicle Call-in-centre: this activity was taken up from 2014 to allow reefer

transporters to telephonically register their in-transit complains (24 x 7), with the idea to spread awareness and project the interest of government to develop this sector. The concept was developed in-house at NCCD and implemented as per allocation by MIDH in action plan as National Level Agency (NLA). Total cost in 2016-17, Rs 7.77 lakh. Till 31-Mar-2017 a total of 381 calls have been received. Of these 21 calls were related to complains of extortion, 5 calls relating to document inspections or forfeiture, 10 calls for delay at toll plazas and 1 call complaining of opening sealed doors. The remaining 342 calls related to general enquires. The allocation for RVC operations is discontinued after 31-March-2017.

IT based MIS for Cold-chain infrastructure

The Integrated Cold-chain Availability Platform (ICAP) proposed by NCCD, was rolled out by NHB in 2016-17, as a web portal providing information on subsidy and cold-chain assets.

Other interactions

NCCD is invited in regular interactions by MNRE with UNEP on HCFC Phase-out Plans. A program by GIZ with DAC&FW to develop a green innovation centre, was provided inputs by NCCD. Though the program not directly concerned with cold-chain, inputs by NCCD were adopted in the program. NCCD has been asked to partner in the program implementation.

NCCD provides annual inputs to DAC&FW in regards budgetary recommendations in reference to cold-chain development. The cost norms for upcoming schemes of MoFPI also required NCCD inputs and participation. NCCD also advised on revisions proposed to cost norms of components under MIDH.

E. Capacity Building & Knowledge Dissemination

Entrepreneur development for ripening chambers

The capacity building includes on-site training at ripening chambers to engage students and prospective entrepreneurs.





This is conducted by NCCD with two of its society members (ICE and Samagra), which is a two day session, at Rs 1.5 lakh/workshop, held across the country. Total cost in 2016-17, Rs 61.50 lakh for 41 workshops for 1435 trainees. This activity is in continuation from previous year, as per-allocation made in the annual action plan as NLA. In the next year, the training would include curriculum for integrated pack-house operations.

Cold-chain Management training

As part of collaboration under the Indo-France JAWG, a special curriculum was devised for training of Indian stakeholders by NCCD with Cemafroid of France. The program is executed at Cemafroid facility in France, and the curriculum provides knowledge related to the needs of Indian cold-chain development in mixed batches or private sector and government officers.

Co-funded by Ministry of Agriculture of France, this program is managed at optimised costs in all its arrangements. Since 2014, 12 delegations were sent for this course on Cold-chain Management to Cemafroid and 85 individuals including officers from States of Karnataka, Punjab, Arunachal Pradesh, Chhattisgarh, Assam, Gujarat, Uttar Pradesh, Jharkhand, Haryana, Maharashtra, Kerala, Odisha, West Bengal, Telangana, Andhra Pradesh, Madhya Pradesh, J&K, Himachal Pradesh, Rajasthan, Uttrakhand and from Horticulture and Food Processing departments have been trained. The average cost since inception has been managed at Rs 1.45 lakh per person for the 5 day residential course. The expenditure in 2016-17, was Rs 63.94 lakh for 6 training sessions of 38 individuals. NCCD meets these expenses from the allocation made under annual action plan of National Level Agency (NLA).

Capacity building in cold-chain technology

This activity was developed in-house with NCCD member (Danfoss) at a custom built learning centre with mini cold rooms and equipment for such training. There is no such establishment available in the country. The course curriculum is developed in-house and implemented for the benefit of government officers and private sector. The 3 day residential course, including independent boarding/lodging, is at inclusive cost of Rs 12,000 per person. 10 individuals were trained at a total cost of Rs 1.05 lakh in 2016-17. This activity is managed from the allocation made to the approved annual action plan as NLA of MIDH.

Outreach & Awareness program on cold-chain

The EC of MIDH expressed that there is need to increase the awareness programs of MIDH. NCCD recommended that an outreach program driven by industry chambers may be met with more relevant interest than those undertaken by state departments alone. An awareness program and this outreach was developed by NCCD for entrepreneur engagement. This task was allocated by MIDH to NCCD at a budgeted cost of Rs. 1.5 lakh per workshop.

A series of awareness workshops was launched, by Secretary (AC&FW) in Guwahati on 20 October



2016. The workshops are implemented by NCCD as a knowledge dissemination activity by way of society members (CII and PHD). Both industry chambers have worked extensively to reach out to smaller cities and towns to spread awareness of government assistance programs

and disseminate knowledge about cold-chain operations.

NCCD secretariat publishes the awareness document and the workshops are held in partnership with states where possible. Service tax exemption to NCCD is availed, as this activity is by the society for knowledge dissemination. The cost is managed on actuals, but capped at 1.5 lakh per workshop. The cost in 2016-17 for 11 workshops was Rs 14.72 lakh. In these workshops, local bankers, state government officers also take part. Though such activity is best done by agencies implementing the schemes, it is felt this initiative will help the implementing agencies to kick-start more comprehensive series of workshops to suit the local needs, preferably at tier 2 and tier 3 townships. The involvement of industry chambers as NCCD members has triggered greater public-private-participation in development efforts.



F. Applied Research and Studies

Pilot project on Kinnow: After the successful pilot run for mangoes from Malda to Delhi in 2014, another pilot was conceptualised by NCCD in 2015 for kinnow fruit and was completed by May 2016. The idea was to demonstrate and document the value gains from cold-chain. Carrier Transicold who are life time members of NCCD, supported the execution of this study as part of their global initiative on reducing Food Losses.

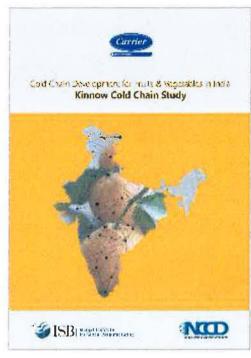
Kinnow originating from Abohar in Punjab (North India) to Bengaluru (South India) was selected as it allowed to analyse the time and distance related aspects of cold-chain. The keen interest of the Horticulture Mission in Punjab was also decisive in undertaking this study.

Kinnow has a small harvest window and low holding life, grown mainly in Punjab region of India. The production (10 lakh tons of kinnow, from about 46,000 hectare) is higher than demand from the local market and there are logistical challenges to meet or to test the demand from markets that are further away than the normal marketable life cycle of kinnow. Under this pilot project, a kinnow aggregator with a pack-house and cold store, agreed to divert capacity to setup a pre-cooler. By adding this unit, the knnow could be properly staged for long travel. Precooling the produce added more than a month to the marketable life of the the fresh fruit, than was possibile by using a cold storage alone. With a supply buffer in the cold store, the transit to market was done using reefer trucks. For comparison, ordinary ambient movement was also carried out, to transport the fruit 2400 kms from Abohar to Bengaluru.

The procedures followed allowed kinnow to be sold beyond its normal selling period (until May 2016). In this pilot, the loss of fruit in transit reduced from 41% (when sent to market in

ambient) to 10% (when using integrated cold-chain) and earnings at farm-gate increased (more volume sold, higher price at distant market).

The average price realised was almost 3 times more than that offered locally in the producing areas, and spoilage losses reduced to a minimal with cold-chain connectivity. Furthermore, despite doubling of logistics costs, net income increased ten-fold. The report was document by Indian School of Business (ISB) Mohali and CASS Business School UK, with Carrier UTC the cost for the study with farmer/aggregator (Balaji Cold Store) bearing cost of operations. NCCD co-authored and edited parts of the report. The results were discussed on 2.12.2016 in Singapore at the World Cold Chain Summit to Reduce Food Loss. This pilot study is expected to lead to a



series of similar cold-chain pilots across India The report is also hosted on the NCCD website. An impact assessment is planned after 24 months but it is informed that 9 new pack-houses were set-up in the region and kinnow trade increased with almost 250 reefer trucks deployed.

Produce post-harvest protocols and losses

A study on 23 selected horticulture crops was initiated in 2014 and completed in October 2016. The study schedule was designed by NCCD and was executed with post-harvest technology centre of Amity (a research category member of NCCD), after approval of MIDH as phase-I of two phase study. This phase of the study was completed at a cost of Rs 13 lakh, from allocation made by MIDH to the annual action plan.

The study was planned as a sampling exercise so as to build a better understanding on the matter among students and to serve as a template for taking up more comprehensive assessments covering larger regions. The draft report has been accepted by NCCD and is under submission to MIDH. The study was conducted in areas of Uttar Pradesh, Uttarakhand and Haryana limited through sampling field visits by Amity team. The study measured / analysed losses at each stage in movement to market of the selected produce, where a change in custody occurs on its post-harvest journey to market -

- a) At farm-gate (point of harvest)
- b) At collection point (aggregation)
- c) On loading onto transport
- d) During transportation

e) On receiving at Wholesale point

However, losses beyond point of wholesale are not assessed in this study. Summary of Post-harvest losses detected at each hand-over procedure or stage in the post-harvest supply chain.

The loss measure evaluated at the following stages:

			8			entage (9	-			
		vest int		arvest Hing		nsport- tion		olesale ooint	Т	otal
							Mi			
Vegetable Crops	Min	Max	Min	Max	Min	Max	n	Max	Min	Max
Peas	4	8	4	8	6	10	5	7	19	33
Okra	2	3	2	3	3	4	5	10	12	20
Cruciferous crops										
Cauliflower	2	4	6	13	2	4	5	7	15	28
Cabbage	1	3	5	8	4	6	8	10	18	27
Solanaceous crops										
Tomato	2	3	9	13	2	4	5	7	18	27
Brinjal	5	7	3	4	2	4	5	8	15	23
Potato	5	8	4	6	1	2	8	10	18	26
Cucurbitaceous cro										
Bottle gourd	5	7	7	12	4	6	8	10	24	35
Bitter gourd	3	7	4	5	4	6	4	5	15	23
Sponge gourd	2	_ 5	3	8	3	4	2	4	10	21
Water melon	1	2	1	2	4	5	1	2	7	11
Musk melon	1	2	2	3	5	7	2	3	10	15
Pumpkin	2	4	3	4	4	6	2	3	11	17
Fruit Crops										
Mango	2	4	8	12	5	10	3	5	18	31
Papaya	2	4	4	6	2	3	2	3	10	16
Litchi	15	20	5	7	3	4	2	3	25	34
Guava	4	8	5	10	5	8	5	6	19	32
Peach	10	25	2	4	1	2	2	3	15	34
Pear	10	15	10	25	1	2	1	2	22	44
Apple	5	7	4	8	1	2	1	2	11	19
Sapota	8	10	10	12	2	4	3	5	23	31
Root crops										
Carrot	2	4	4	10	3	5	2	4	11	23
Radish	3	5	7	10	4	5	4	5	18	25

Horticulture Division may evaluate further, the need to carry out more extensive and intensive studies to assess post-harvest losses in fruits and vegetables pan-India.

Value chain studies for horticulture

MIDH had allocated under annual action plan 4 studies on value chain interventions for specific crops and regions to NCCD. These value chains included cultivation sciences and in-field inputs such as planting material, irrigation, fertilizers, pest management etc. As NCCD was facing manpower shortfall, these were not taken up and assigned to other institutions. However, NCCD recommended that all the reports, especially on crops that required cold-chain handling, can be suitably guided from cold-chain perspective. As such communication is initiated with the nominated agencies.

Bee Cool – apiary migration unit

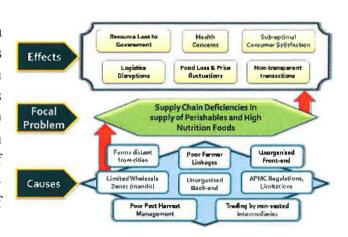
The innovative bee migration (cooled transport trailer) for which development was initiated in 2013, was brought into use in summer of 2016. This unit was developed by NCCD to support NBB and designed to maintain about 300 hives at optimal temps and conditions over long periods of travel. The unit was developed by NCCD with Carrier UTC and Lloyd Insulation.



Normally bees are hampered in their migratory habits due to urbanisation and lack of watering stops. In the Bee-cool carrier, the right conditions are maintained to make the bees dormant and fast track movement of bee hives in groups is executed. A per reports from National Bee Board (NBB) and operators, the unit is used to undertake long distance migration with minimal bee mortality.

Study on NDDB and FPO models

NCCD evaluated two operating models in January 2017, the first being NDDB's vegetable initiative (SAFAL) for urban vegetable supply and the other on the status of Farmer Producer Organisation (FPO) from the perspective of peri-urban vegetable supply chains. The findings of these studies were presented by CEO-NCCD to the Hon'ble Minster of Agriculture.



Various recommendations were put forth in these reports, some of which are being acted upon.

Study on Agri-business trade with Middle East

NCCD provided an initial report on assessing scope and potential development of supply of horticultural products, especially fruits and vegetables, from India to Gulf countries. Thereafter the study was assigned to APEDA and is underway. NCCD was part of committee to select the

consulting agency, and is providing support by way of monitoring and evaluating inception reports, and as requested by APEDA.

G. Outreach and awareness (workshops & seminars)

ICE 2016

The annual ICE conference and awards program, is the longest standing exclusive cold-chain event supported by NCCD. The event is also partnered by NABARD, Global Cold Chain Alliance, USDA, and various companies. This was the 8th edition of ICE and has participation from more than a dozen countries.

A dedicated cold-chain exhibition of technologies, the NCCD conference and the Danfoss ICE Awards are the highlights of this event. The event also features the AGM of the Federation of Cold storage Associations in India (FCSOI).

The event rotates around various cities in the country and interactions are held with students from the State. The State horticulture mission and food processing department also take active part in the conference and awards ceremony.

At this instance, the FCSAOI and many state cold storage associations announced their decision to change their name to 'cold-chain' from 'cold store' associations. A greater focus on integration in the cold-chain and a move towards a value system based supply chain model has been initiated through this regular interface.



Cold-chain Awards with FACE-CII

The 6th CII National Cold Chain Summit was held on 27-Oct-16. In partnership with NCCD, recognition of operational excellence in cold-chain was advanced with the launch of first CII-Cold-chain Awards. Hon'ble Minister of Ministry of Food Processing Industries inaugurated this summit and the awards ceremony. The conference is very comprehensive and focuses on innovation, sustainability and business models. Shri S.K Pattanaik, Secretary (AC&FW) gave a special address and held interactions with other members of NCCD.



This is the first awards program on Cold-chain by CII and the jury was chaired by Shri Nanda Kumar. For the awards, each candidate is benchmarked and the process includes on-site inspections and other assessments. The program is being developed as an annual event for recognising and fostering excellence in cold-chain sector. After the ongoing ICE-Danfoss awards (also supported by NCCD), this is the only other NCCD recognised awards on cold-chain in India.

Other conferences/conclaves

NCCD represented cold-chain considerations at the discussions for amending the Montreal Protocol for Climate Change Benefit, before the singing of the agreement at Kigali.



A national conclave for strengthening the farm to consumer cold-chain was convened by NCCD with member PHDCCI. The conclave was also to assess the status of ongoing capacity building programs being undertaken.

10

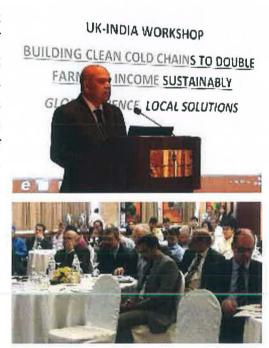
www.nccd.gov.in



Dept of Agriculture, Govt of Kerala held an exclusive one day interaction with CEO-NCCD with the engineers of the department. The interaction was to share concepts on cold-chain is relation to the state. Flipkart University also held an interaction with CEO-NCCD on cold-chain as a supply chain disrupter. In 2016-17, NCCD participated in about 30 events (list is annexed).

International Workshops

Science and Innovation Network of UK's Department for International Trade and the University of Birmingham organised a 4 day study tour for a visiting team from UK. The study tour culminated in with a workshop on 2-3 March, 2017 organised by the British High Commission with support from NCCD. The workshop brought together a cross section of stakeholders including cold-chain operators and endusers; clean cold technology developers and potential manufacturers; and financiers, government officials and NGOs. Secretary (AC&FW) addressed the culminating workshops, as did then Additional Secretary (i/c Policy). A report was published by the University of Birmingham and action towards establishing living labs, or centres of excellence in clean cold-chain technologies, with international collaboration has been commenced.



CEO-NCCD held interactive workshops in Zeist-Netherlands (22-23 Nov-16) and Nordborg-Denmark (28-29 Mar-17) on invitation of the industry chambers in those countries. These interactions were exclusively on cold-chain development and challenges in India. CEO-NCCD made a keynote address and chaired a panel discussion at the World Cold-chain Summit by Carrier UTC on 1.12.2016 in Singapore.

CEO-NCCD is recently invited to a Global Expert Meeting on Agriculture and Agro-industries Development towards Sustainable and Resilient Food Systems, to Zimbabwe, as a precursor to the 2017 special meeting on Innovations for Infrastructure Development and Promoting Sustainable Industrialization, by United Nations Economic and Social Council in April 2017.

H. Advisory & other support

NCCD is providing inputs to various departments and agencies on cold-chain matters. CEO-NCCD is member of steering/executive committees of MIDH. NCCD has also guided and assisted specific requests from MoFPI, State Govts and supported IC interactions as delegation member. NCCD has represented policy interventions on various fora, and in evaluating various proposals/reports received by DAC&FW. State Governments have frequently sought dedicated attention and they have been guided to nominate a dedicated team or establish a NCCD cell to undertake specific tasks. NCCD can guide such a team but otherwise constrained to dedicate resources to individual projects.

Multiple meetings are held on cold-chain matters with stakeholders, domestic & international, to explain policy, schemes, and for greater understanding on cold-chain. As member of JAWGs, this year NCCD was member of official delegation to The Netherlands and Afghanistan. NCCD also takes part in concerned meetings and interactions with local embassies in supporting IC interactions. Various reports are evaluated and inputs provided to DAC&FW on agri-business and cold-chain, as per need. A proposal from GIZ for Green Innovation Centre is under evaluation by NCCD, to align with ongoing priorities of DAC&FW. The World Bank study, initiated in 2014 with initial concept note in partnership with NCCD, was completed and submitted to DAC&FW. This was passed to NCCD for analysis and comments. It was observed that the study had moved from the original concept with the scope of work shifting to other issues. The report did not include the crops identified for the study or fully capture the new and ongoing interventions of the current government. NCCD reviewed the report for the Ministry to formulate its response. A comprehensive evaluation of a FDI proposal (of Euro 5 billion) to DAC&FW in protected cultivation was also done by NCCD for further action.

NCCD's study on cold-chain infrastructure capacity and gaps (AICIC 2015) with Nabcons generated a revised outlook to cold-chain requirements in the country. While some states like Maharashtra and Punjab directly referred to the study in planning future interventions, Kerala has felt the need for a localised study for their purposes. As such, Dept. of Agriculture Development & Farmers Welfare, Kerala has requested NABARD Consultancy (Nabcons) to propose a baseline study, including identifying methods for empowering the state with scientific cold chain system in consultation with NCCD. Nabcons has shared the request that study be conducted under overall guidance of NCCD. Prior to this, a one day workshop interaction with all the engineers of the Deptt of Agriculture of Kerala with CEO-NCCD was held in Thiruvananthapuram. A master plan for cold stores in Kerala prepared by Directorate of Marketing and Inspection in 2007 was discussed.

The membership of India with IIR was up for renewal and NCCD noted that to keep India's cold-chain technology abreast and harmonised with global developments, membership with IIR be renewed. Horticulture Division was envisaged to benefit from matters of R&D, innovation and international collaboration through IIR. However, it was also noted that earlier advice to nominate/update/confirm the representatives of India to IIR has not been acted upon.

For structuring greater collaboration at an international level, suitable allocation needs to be made for more frequent or biennial interaction with IIR commissions and committees.

NCCD held interactions with Agriculture Skill Council for sharing domain inputs on qualification packs in cold-chain and for horticulture in general. NCCD is also involved in briefings and inter-ministerial meetings in regards to cold-chain development and closely involved in developing special package for development of horticulture in J&K in 2016.

NCCD members visit NCCD office on regular basis to get better understanding of schemes and guidelines. NCCD was identified as knowledge partner for the Committee for Doubling Farmers' Income and CEO-NCCD is working extensively with the Committee. NCCD prepared a concept note on request of MoFPI, for initiating a study of the milk supply chain.

As a National Level Agency of NHM, NCCD incurred an expenditure of Rs. 169.35 lakh from the allocation made to annual action plan.

I. NCCD - Aims & Objective

NCCD is registered as a society, to function in an autonomous manner as a think-tank on coldchain, and to operate under public-private-partnership mode at no cost to the government. The initial capital was provided by the government and the objectives of NCCD are to recommend, suggest, assess, undertake & coordinate, facilitate and foster as below:

- To recommend standards and protocols for cold-chain infrastructure/building including post-harvest management so as to harmonize with international standards and best practices and suggest mechanism for benchmarking and certification of infrastructure /building, process and services provided by cold-chain industry.
- O To suggest indicative guidelines for preparation of project reports for potential investors/entrepreneurs.
- To assess and develop appropriate IT-based management information system for coldchain infrastructure.
- o To undertake and coordinate Research and Development (R&D) work required for development of cold-chain industry in consultation with stakeholders.
- o To undertake and coordinate the task of Human Resource Development (HRD) and capacity building. It may also conduct in-house training, short-term/long courses relevant for cold-chain development.
- To launch publicity campaign to educate the stakeholders including awareness building about the benefits of integrated cold-chain.
- o To recommend appropriate policy framework relating to development of cold-chain.
- To facilitate and foster the development of multi- modal transportation facilities for perishable agricultural, horticultural and allied commodities and establishment of a National Green Grid for Perishable Commodities.

National Centre for Cold-chain Development (NCCD)

March, 2017

J. Executive Committee of NCCD (Status)

SN	Name and Address	Designation
1	Secretary	Chairman
	Deptt. of Agriculture, Cooperation & Farmers Welfare	
	Ministry of Agriculture & Farmers Welfare,	
	Krishi Bhawan, New Delhi	
2	Additional Secretary (I/c Horticulture)	Committee Member
	Deptt. of Agriculture, Cooperation & Farmers Welfare	(approved by GC on 7.1.2013)
	Krishi Bhawan, New Delhi	
3	Agricultural marketing Adviser & Joint Secretary	Committee Member
	(Marketing),	
	Deptt. of Agriculture, Cooperation & Farmers Welfare	
	Krishi Bhawan, New Delhi	
4	Joint Secretary(MIDH)	Committee Member
	Deptt. of Agriculture, Cooperation & Farmers Welfare	(approved by GC on 7.1.2013)
	Krishi Bhawan, New Delhi	
5	Managing Director,	Committee Member
	National Horticulture Board, 85, Institutional Area, Sector	
	18, Gurgaon, Haryana	
6	Representative of Railway Board	Committee Member
	(Not below the equivalent rank of Joint Secretary	
	to Government of India)	
	Rail Bhawan, New Delhi	
7	Representative of Secretary, Ministry of Food Processing	Special Invitee
	Industries, New Delhi	(approved by Secy- AC&FW
		on 25.7.14)
8	Representative of Secretary, Deptt of Animal Husbandry,	Special Invitee
	Dairying & Fisheries(DAHDF), Ministry of Agriculture &	(approved by Secy- AC&FW
	Farmers Welfare, New Delhi	on 25.7.14)
9	Managing Director	Committee Member
	Central Warehousing Corporation, 4/1, Siri Fort Institutional	
	Area, Hauz Khas, New Delhi-110016	
10	Mr. P. Ravichandran	Committee Member
	President, Danfoss India & CHairman of CII-Task Force on	
	Cold-chain, Chennai.	
11	Ms. Meetu Kapur	Committee Member
	ED-FACE, Confederation of Indian Chambers of Commerce	
	& Industries (CII), FACE, Core 4A	
	India Habitat Centre, Lodhi Road, New Delhi-110003	
12	Shri M L Arora	Committee Member
	Chief Executive Officer	
	Fresh & Healthy Enterprises Ltd, CONCOR HSIIDC	
	Industrial Estate, Rai, Sonepat-131029(Haryana)	
13	Director, NCCD	Member Secretary

14

(as per by-laws of NCCD unless stated otherwise in brackets)

K. Governing Council of NCCD (Status)

SN	Name	Designation in the Society
1	Secretary Deptt. of Agriculture, Cooperation & Farmers Welfare Ministry of Agriculture & Farmers Welfare, Krishi Bhawan, New Delhi	Ex-Officio President
2	Financial Adviser Deptt. of Agriculture, Cooperation & Farmers Welfare Ministry of Agriculture & Farmers Welfare, Krishi Bhawan, New Delhi	Ex-Officio Member (approved by Secy- AC&FW on 2.3.15)
3	Director General, Bureau of Indian Standards (BIS) Manak Bhawan, 9, Bahadur Shah Zafar Marg New Delhi-110002	Ex-Officio Member
4	Agricultural Marketing Adviser & Joint Secretary (Marketing), Deptt. of Agriculture, Cooperation & Farmers Welfare, Krishi Bhawan, New Delhi	Ex-Officio Member
5	Joint Secretary(MIDH) Deptt. of Agriculture, Cooperation & Farmers Welfare Krishi Bhawan, New Delhi	Ex-Officio Member
6	Representative of Secretary, Ministry of Food Processing Industries, not below the rank of Joint Secretary to Govt. of India, Panchsheel Bhawan, August Kranti Marg, New Delhi	Ex-Officio Member
7	Managing Director, National Horticulture Board, 85, Sector 18, Gurgaon, Haryana	Ex-Officio Member
8	Representative of Railway Board (Not below the equivalent rank of Joint Secretary to Government of India), Rail Bhawan, New Delhi	Ex-Officio Member
9	Chairman - APEDA NCUI Building, 3 Institutional Area, New Delhi	Ex-Officio Member
10	Managing Director Central Warehousing Corporation 4/1, Siri Fort Inst Area Hauz Khas, New Delhi-110016	Ex-Officio Member
11	APC/Pr Secy/Secretary(Agriculture/Horticulture/ Marketing) of two different States to be nominated by DAC	Nominated by Govt. of India
12	APC/Pr Secy/Secretary(Agriculture/Horticulture/ Marketing) of two different States to be nominated by DAC	Nominated by Govt. of India
13	Representative of Confederation of Indian Chamber Of Commerce (CII) - Chairman CII Task Force on Cold-chain- 23, Institutional Arca, Lodhi Road, New Delhi-110003	Member
14	Director NCCD	Member Secretary

(as per by-laws of NCCD unless stated otherwise)

L. Events, conferences and interactions having direct participation of NCCD in 2016-17

Flipkart University University University AC&FW 30 April 16 Delhi National Conference on Kharif Campaign 2016 AC&FW 20 May 16 The Hague Joint Agricultural Working Group India – the Netherlands 31 May 16 Delhi NCCD Conclave "Strengthening Cold Chain Infrastructure in India" NCCD - PHD 16-Jun-16 Pune National Committee on Application of Non-Conventional Energy Sources in Cold-chain 24-Jun-16 Delhi CII CEOs Interactive Session with CEO-NCCD 15-Jul-16 Indore Cold storage scenario in MP - workshop SHM-MP 17-Jul-16 Agra FCAOI AGM FCAOI 29-Jul-16 Delhi CNBC TV-18 Save Energy Conclave CNBC 12-Aug-16 Delhi ET - Round Table Discussion Montreal Protocol 15-Sep-16 Delhi ET - Round Table Discussion Montreal Protocol Economic Times 15-Sep-16 Delhi Rabi Conference AC&FW 27-Oct-16 Delhi PHD Infrastructure Conclave 2016 PHD Chamber 27-Oct-16 Delhi Delhi CII Cold-chain Summit & Awards CII - NCCD 3-Nov-16 Delhi India-UK TECH Summit - Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration SHRAE 22-Nov-16 Delhi Linking Farmers with Markets Assocham 424-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy - Food Policy and Ethics 24-Jan-17 Delhi India UK Workshop-Harnessing clean NCCD to Captains meet School of Philosophy - Food Policy and Ethics 24-Gerea Ace	Date	Location	Topic	Main Organizer
11 April 16 Delhi National Conference on Kharif Campaign 2016 AC&FW 30 April 16 IIC, Delhi Round table on Agriculture ICFA	7 April 16	Bengaluru		
30 April 16 IIC, Delhi Round table on Agriculture ICFA				
The Hague Joint Agricultural Working Group India — the Netherlands NCCD Conclave "Strengthening Cold Chain Infrastructure in India" NCCD - PHD			National Conference on Kharif Campaign 2016	AC&FW
Netherlands NCCD Conclave "Strengthening Cold Chain Infrastructure in India" NCCD - PHD	30 April 16	IIC, Delhi		ICFA
NCCD - PHD NCCD - PHD Infrastructure in India" NCCD - PHD National Committee on Application of Non-Conventional Energy Sources in Cold-chain NCCD - PHD	20 May 16	The Hague		
Infrastructure in India" National Committee on Application of Non-Conventional Energy Sources in Cold-chain			The state of the s	The state of the s
Conventional Energy Sources in Cold-chain		Delhi	Infrastructure in India"	
24-Jun-16 Delhi CII CEOs Interactive Session with CEO-NCCD CII - NCCD 15-Jul-16 Indore Cold storage scenario in MP - workshop SHM-MP 17-Jul-16 Agra FCAOI AGM FCAOI 29-Jul-16 Delhi CNBC TV-18 Save Energy Conclave CNBC 12-Aug-16 Jaipur NIAM Workshop NIAM 6-Sep-16 Delhi ET - Round Table Discussion Montreal Protocol Economic Times 15-Sep-16 Delhi Rabi Conference AC&FW 5-Oct-16 Delhi PHD Infrastructure Conclave 2016 PHD Chamber 27-Oct-16 Delhi PHD Infrastructure Conclave 2016 PHD Chamber 27-Oct-16 Delhi NPC Conference NPC 8-Nov-16 Delhi NPC Conference NPC 8-Nov-16 Delhi India-UK TECH Summit - Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD Netherlands 24-Nov-16 Delhi Food Strategy Summit ET - Rabo Bank 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy - Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry ISHRAE - NCCD Captains meet India UK Workshop-Harnessing clean NCCD to double farmers income SIN 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	16-Jun-16	Pune		NCCD
17-Jul-16	24-Jun-16	Delhi		CII - NCCD
29-Jul-16 Delhi CNBC TV-18 Save Energy Conclave CNBC 12-Aug-16 Jaipur NIAM Workshop NIAM 6-Sep-16 Delhi ET - Round Table Discussion Montreal Protocol Economic Times 15-Sep-16 Delhi Rabi Conference AC&FW 5-Oct-16 Delhi PHD Infrastructure Conclave 2016 PHD Chamber 27-Oct-16 Delhi CII Cold-chain Summit & Awards CII - NCCD 3-Nov-16 Delhi NPC Conference NPC 8-Nov-16 Delhi India-UK TECH Summit — Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD Netherlands 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy — Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 18-Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 18-Mar-17 Delhi Logistics & Supply chain Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	15-Jul-16	Indore	Cold storage scenario in MP - workshop	SHM-MP
12-Aug-16 Jaipur NIAM Workshop NIAM 6-Sep-16 Delhi ET - Round Table Discussion Montreal Protocol Economic Times 15-Sep-16 Delhi Rabi Conference AC&FW 5-Oct-16 Delhi PHD Infrastructure Conclave 2016 PHD Chamber 27-Oct-16 Delhi NPC Conference NPC 8-Nov-16 Delhi India-UK TECH Summit — Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Delhi Food Strategy Summit ET – Rabo Bank 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy — Food Policy and Ethics 24-Roy-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 1-Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 18-Mar-17 Delhi Logistics & Supply chain Summit 19-Delhi Logistics & Supply chain Summit 19-Delhi NoCD - PHD 10-PHD 10-PHD 10-PHD 11-Mar-17 Delhi Logistics & Supply chain Summit 10-PHD 10-PH	17-Jul-16	Agra	FCAOI AGM	FCAOI
Belhi ET - Round Table Discussion Montreal Protocol Economic Times	29-Jul-16	Delhi	CNBC TV-18 Save Energy Conclave	CNBC
15-Sep-16 Delhi Rabi Conference AC&FW 5-Oct-16 Delhi PHD Infrastructure Conclave 2016 PHD Chamber 27-Oct-16 Delhi CII Cold-chain Summit & Awards CII - NCCD 3-Nov-16 Delhi NPC Conference NPC 8-Nov-16 Delhi India-UK TECH Summit - Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD 24-Nov-16 Delhi Food Strategy Summit ET - Rabo Bank 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy - Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	12-Aug-16	Jaipur	NIAM Workshop	NIAM
Philon P	6-Sep-16	Delhi	ET - Round Table Discussion Montreal Protocol	Economic Times
27-Oct-16 Delhi CII Cold-chain Summit & Awards 3-Nov-16 Delhi NPC Conference NPC 8-Nov-16 Delhi India-UK TECH Summit – Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD Netherlands 24-Nov-16 Delhi Food Strategy Summit ET – Rabo Bank 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi Isth Commodity Futures Market Summit and Excellence Awards 2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	15-Sep-16	Delhi	Rabi Conference	AC&FW
3-Nov-16 Delhi NPC Conference 8-Nov-16 Delhi India-UK TECH Summit – Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD Netherlands 24-Nov-16 Delhi Food Strategy Summit ET – Rabo Bank 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	5-Oct-16	Delhi	PHD Infrastructure Conclave 2016	PHD Chamber
8-Nov-16 Delhi India-UK TECH Summit – Agriculture V2 CII 18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD Netherlands 24-Nov-16 Delhi Food Strategy Summit ET – Rabo Bank 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	27-Oct-16	Delhi	CII Cold-chain Summit & Awards	CII - NCCD
18-Nov-16 Delhi Sustainability in Practice in refrigeration ISHRAE 22-Nov-16 Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD Netherlands 24-Nov-16 Delhi Food Strategy Summit ET – Rabo Bank 24-Nov-16 Delhi Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi I5th Commodity Futures Market Summit and Excellence Awards 2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income SIN 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	3-Nov-16	Delhi	NPC Conference	NPC
Zeist Workshop on Opportunities and Challenges in Agri-food chains in India with NCCD Netherlands	8-Nov-16	Delhi	India-UK TECH Summit – Agriculture V2	CII
Agri-food chains in India with NCCD Netherlands 24-Nov-16 Delhi Food Strategy Summit ET – Rabo Bank Linking Farmers with Markets Assocham 1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi I5th Commodity Futures Market Summit and Excellence Awards 2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	18-Nov-16	Delhi	Sustainability in Practice in refrigeration	ISHRAE
24-Nov-16DelhiFood Strategy SummitET – Rabo Bank24-Nov-16DelhiLinking Farmers with MarketsAssocham1-2 Dec-16SingaporeWorld Cold-chain Summit to reduce food lossCarrier7-Dec-16TrivanderamWorkshop for engineers on Cold-chainGovt. of Kerala16-17-DecIndoreICE Expo and Awards 2016NCCD - ICE24-Jan-17DelhiSchool of Philosophy – Food Policy and EthicsGargi College24-Feb-17G.NoidaACREX 2017/Cold-chain workshop/Industry Captains meetISHRAE - NCCD1-Mar-17Delhi15th Commodity Futures Market Summit and Excellence AwardsASSOCHAM2-3 Mar-17DelhiIndia UK Workshop-Harnessing clean NCCD to double farmers incomeNCCD - UoB- SIN6-Mar-17DelhiMOEF Workshop-stakeholder consultation meetingMoEF18-Mar-17GurgaonHaryana Agri Leadership Summit 2017Govt. of Haryana21-Mar-17DelhiLogistics & Supply chain SummitPDH24-Mar-17SikkimNCCD-PHD Awareness Program on Cold-chainNCCD - PHD	22-Nov-16	Zeist		
Linking Farmers with Markets Assocham -2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier -2 Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala -2 Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala -2 Dec-16 Indore ICE Expo and Awards 2016 NCCD - ICE -2 Dec-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College -2 Dec-18 ACREX 2017/Cold-chain workshop/Industry ISHRAE - NCCD -2 Captains meet Captains meet ASSOCHAM -2 Delhi India UK Workshop-Harnessing clean NCCD to -2 Delhi India UK Workshop-Harnessing clean NCCD to -2 Delhi MOEF Workshop-stakeholder consultation -2 Delhi MOEF Workshop-stakeholder consultation -2 Delhi Moef Moef -3 Delhi Logistics & Supply chain Summit -3 Delhi Logistics & Supply chain Summit -3 Delhi NCCD - PHD	24-Nov-16	Delhi		
1-2 Dec-16 Singapore World Cold-chain Summit to reduce food loss Carrier 7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi 15th Commodity Futures Market Summit and Excellence Awards 2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	24-Nov-16	Delhi		Assocham
7-Dec-16 Trivanderam Workshop for engineers on Cold-chain Govt. of Kerala 16-17-Dec Indore ICE Expo and Awards 2016 NCCD - ICE 24-Jan-17 Delhi School of Philosophy – Food Policy and Ethics Gargi College 24-Feb-17 G.Noida ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi 15th Commodity Futures Market Summit and Excellence Awards 2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	1-2 Dec-16	Singapore		
16-17-DecIndoreICE Expo and Awards 2016NCCD - ICE24-Jan-17DelhiSchool of Philosophy – Food Policy and EthicsGargi College24-Feb-17G.NoidaACREX 2017/Cold-chain workshop/Industry Captains meetISHRAE - NCCD1-Mar-17Delhi15th Commodity Futures Market Summit and Excellence AwardsASSOCHAM2-3 Mar-17DelhiIndia UK Workshop-Harnessing clean NCCD to double farmers incomeNCCD - UoB- SIN6-Mar-17DelhiMOEF Workshop-stakeholder consultation meetingMoEF18-Mar-17GurgaonHaryana Agri Leadership Summit 2017Govt. of Haryana21-Mar-17DelhiLogistics & Supply chain SummitPDH24-Mar-17SikkimNCCD-PHD Awareness Program on Cold-chainNCCD - PHD	7-Dec-16	U 1	Workshop for engineers on Cold-chain	Govt. of Kerala
24-Jan-17DelhiSchool of Philosophy – Food Policy and EthicsGargi College24-Feb-17G.NoidaACREX 2017/Cold-chain workshop/Industry Captains meetISHRAE - NCCD1-Mar-17Delhi15th Commodity Futures Market Summit and Excellence AwardsASSOCHAM2-3 Mar-17DelhiIndia UK Workshop-Harnessing clean NCCD to double farmers incomeNCCD - UoB- SIN6-Mar-17DelhiMOEF Workshop-stakeholder consultation meetingMoEF18-Mar-17GurgaonHaryana Agri Leadership Summit 2017Govt. of Haryana21-Mar-17DelhiLogistics & Supply chain SummitPDH24-Mar-17SikkimNCCD-PHD Awareness Program on Cold-chainNCCD - PHD	16-17-Dec	Indore	1	NCCD - ICE
ACREX 2017/Cold-chain workshop/Industry Captains meet 1-Mar-17 Delhi 15th Commodity Futures Market Summit and Excellence Awards 2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	24-Jan-17	Delhi		Gargi College
1-Mar-17 Delhi 15th Commodity Futures Market Summit and Excellence Awards 2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income SIN 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	24-Feb-17	G.Noida	ACREX 2017/Cold-chain workshop/Industry	
2-3 Mar-17 Delhi India UK Workshop-Harnessing clean NCCD to double farmers income 6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	1-Mar-17	Delhi	15th Commodity Futures Market Summit and	ASSOCHAM
6-Mar-17 Delhi MOEF Workshop-stakeholder consultation meeting 18-Mar-17 Gurgaon Haryana Agri Leadership Summit 2017 Govt. of Haryana 21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	2-3 Mar-17	Delhi	India UK Workshop-Harnessing clean NCCD to	
18-Mar-17GurgaonHaryana Agri Leadership Summit 2017Govt. of Haryana21-Mar-17DelhiLogistics & Supply chain SummitPDH24-Mar-17SikkimNCCD-PHD Awareness Program on Cold-chainNCCD - PHD	6-Mar-17	Delhi	MOEF Workshop-stakeholder consultation	
21-Mar-17 Delhi Logistics & Supply chain Summit PDH 24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD	18-Mar-17	Gurgaon		Govt. of Harvana
24-Mar-17 Sikkim NCCD-PHD Awareness Program on Cold-chain NCCD - PHD				
	28-Mar-17			

M. Abbreviations and Definitions used

APEDA Agricultural and Processed Food Products Export Development Authority, under Ministry of Commerce with mandate to develop exports and also supports cold-chain infrastructure development.

CII Confederation of Industries of India: CII through its Food & Agriculture Centre of Excellence (FACE) works closely with NCCD Secretariat, and as part of NCCD is directly involved in meeting objectives of NCCD.

DAC&FW Department of Agriculture, Cooperation & Farmers' Welfare, Ministry of Agriculture & Farmers Welfare.

EC Executive Committee: the committee that decides executive actions of an organisation.

FAO Food and Agriculture Organisation of the United Nations

FCSAOI Federation of Cold Storage Associations of India: the all India coalition of state level associations of cold storages.

FPO Farmer Producer Organisation: where a group of farmers create an institutional structure for their enterprise level operations.

GC Governing Council: The council that oversees the executive and takes policy level decisions.

HCFC HydroChloroFluoroCarbon: a class of inert compounds used in refrigerants that are less destructive to the ozone layer than CFC. However, they have global warming potential.

ICAP Integrated Cold-chain Availability Platform

MIDH Mission for Integrated Development of Horticulture: launched in 2014, this mission subsumes all previous schemes on horticulture so as to integrate and projectise the activities for holistic outcomes.

MoFPI Ministry of Food Processing Industries: also implements cold-chain subsidy programs.

NCCD National Centre for Cold-chain Development: a society of public and private stakeholders, provided initial capital by Ministry of Agriculture and managed at no cost to government, to function in an autonomous manner as an advisory body to the government.

NeGP National e-Governance Program

NHB National Horticulture Board: central sector sub-scheme of MIDH, implementing agency at national level.

NHM National Horticulture Mission: sub-scheme of MIDH.

NLA National Level Agency: organisations identified by MIDH with suitable expertise to provide technical and knowledge support. NLAs do not implement the scheme but are allocated resources for specific support tasks after acceptance of an action plan.

PHD Chamber of Commerce and Industry: PHD works closely with NCCD Secretariat, and as part of NCCD is directly involved in meeting objectives of NCCD.

PPP Public Private Partnership. Usually seen in infrastructure projects where a concessionaire utilises government support in form of land and funds, and the project reverts back to government at the end of the concession period. In case of NCCD, this additionally means that public and private sector jointly manage the operations and functions through a joint leadership structure, where the administration is under government and the executive decisions is by industry leadership.

SHM State Horticulture Mission: state level implementing agency of centrally sponsored activities of MIDH.

UNEP United Nations Environment Program



4232/1, Ansari Road, Darya Ganj, New Delhi – 110002 Ph: 23261100; 23263598; Fax: 43518988 Email: apn_associates@yahoo.in, jn50@rediffmail.com

FORM NO.10B [See Rule 17B] Audit report under section 12A(b) of the Income Tax Act, 1961, in the case of General Public Utility.

We have examined the balance sheet of National Centre for Cold-Chain Development as at 31st March, 2017 and the Income & Expenditure Account for the year ended on that date which are in agreement with the books of account maintained by the said society. The maintenance and correctness of financial statements is the responsibility of the management of society. Our responsibility is to express an opinion on these financial statements based on our audit

We have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of the audit.

In our opinion, proper books of accounts have been kept at the head office & branches NIL of the above named society visited by us so far as appears from our examination of the books, and proper returns adequate for the purposes of audit have been received from branches not visited by us, subject to the comments given below:

In our opinion and to the best of our information, and according to the information given to us, the said accounts, give a true and fair view:-

- (a) in the case of the balance sheet, of the state of affairs of the above named society as at
- (b) in the case of the income & expenditure account, surplus of the assessee for the year ended

Place: Delhi

Date: 11-10-2017

For APN & SSOCIATES Chartered Accountants

FRN: 001876N

(CA Jitender Nath)

Partner

M.No: 015549

NATIONAL CENTRE FOR COLD-CHAIN DEVELOPMENT BALANCE SHEET AS ON 31st MARCH, 2017

(Rupees)

Particulars	Schedules	As on 31st March, 2017	As on 31st March, 2016
CAPITAL FUND AND LIABILITIES:			
Capital Fund	1	25,00,00,000	25,00,00,000
General Fund (Reserve and surplus)	2	5,51,41,317	5,05,42,481
Set Aside u/s 11(2) Of LT Act 1961	3	3,35,82,698	1,83,10,095
Current Labilities	4	36,06,356	72,20,892
Fixed Assets - Contra, Corpus		21,915	33,063
Fixed Assets - Contra, NLA		6,62,548	8,39,231
Total		34,30,14,834	32,69,45,762
ASSETS:			
Fixed Assets - Contra, Corpus	5	21,915	33,063
Fixed Assets - Contra, NLA	5	6,62,548	8,39,231
Investments - Fixed Deposits	6	32,62,24,940	30,85,58,860
Current assets, loans and advances	7	1,61,05,431	1,75,14,608
Total		34,30,14,834	32,69,45,762

Significant accounting policies and notes on accounts

11

AS PER OUR REPORT OF EVEN DATE ATTACHED

For APN & Associates **Chartered Accountants**

FRN: 001876N

For National Centre For Cold-chain Development

(CA.Jitender Nath)

Partner

Membership No. 015549

(K.K Dhingra) Advisor Finance

(Pawanexh Kohli) Chief Executive Officer

Director

Place: New Delhi Date: 11.10.2017

NATIONAL CENTRE FOR COLD-CHAIN DEVELOPMENT INCOME AND EXPENDITURE ACCOUNT FOR YEAR ENDED 31st MARCH 2017

(Rupees)

Particulars	Schedules	For year ended 31 March, 2017	For year ended 31 March, 2016
INCOME:			
Members Subscriptions		17,15,000	16,97,046
Interest Earned	8	2,85,42,608	2,75,03,172
Other Income	9	4,01,300	22,92,680
Total (A)		3,06,58,908	3,14,92,898
REVENUE EXPENDITURE:			
Establishment (Salary & wages)		85,46,188	72,89,365
Administrative Expenses	10	22,41,281	11,69,503
Total (B)		1,07,87,469	84,58,868
Excess of Income over Expenditure (A-B)		1,98,71,439	2,30,34,030
Less : Transfer to General Reserve		45,98,836	47,23,935
Set Aside u/s 11(2) of lT Act		1,52,72,603	1,83,10,095

Significant Accounting Policies and notes to accounts

11

AS PER OUR REPORT OF EVEN DATE ATTACHED

For APN & Associates Chartered Accountants FRN: 001876N

For National Centre For Cold-chain Development

(CA.Jitender Nath)

Partner

Membership No. 015549

(K.K Dhingra) Advisor Finance (Pawanexh Kohli)

Chief Executive Officer

Dinesh Kuma Director

Place: New Delhi Date: 11.10.2017

NATIONAL CENTRE FOR COLD-CHAIN DEVELOPMENT SCHEDULE FORMING PART OF FINANCIAL STATEMENTS AS ON 31st MARCH, 2017

SCHEDULE 1: CAPITAL FUND

(Rupees)

Particulars	As on 31st March, 2017	As on 31st March, 2016
Government of india		
Ministry of Agriculture & Farmers Welfare	25,00,00,000	25,00,00,000
TOTAL	25,00,00,000	25,00,00,000

SCHEDULE 2 : GENERAL FUND (RESERVE & SURPLUS)

Particulars	As on 31st March, 2017	As on 31st March, 2016
Opening Balance as per last Balance Sheet	5,05,42,481	3,44,25,163
Add: Set Aside u/s 11(2) of IT Act (Wrote back of 2014-15)		1,79,43,350
Add: Excess of Income over Expenditure	45,98,836	47,23,935
Less :Income tax/TDS adjustment relating to previous year		65,49,967
TOTAL	5,51,41,317	5,05,42,481

SCHEDULE 3: SET ASIDE U/S 11(2) OF IT Act 1961

Particulars	As on 31st March, 2017	As on 31st March, 2016
Opening Balance as per last Balance Sheet	1,83,10,095	
Add : Set Aside u/s 11(2) of IT Act -F.Y 2016-17	1,52,72,603	1,83,10,095
TOTAL	3,35,82,698	1,83,10,095

SCHEDULE 4: DETAILS OF CURRENT LIABILITIES

Particulars	As on 31st March, 2017	As on 31st March, 2016	
Sundry Creditors		2,65,714	
Expenses Payable	24,71,239	37,49,905	
NLA Fund Payable	11,35,117	32,05,273	
TOTAL	36,06,356	72,20,892	



NATIONAL CENTRE FOR COLD-CHAIN DEVELOPMENT NOTE FORMING PART OF FINANCIAL STATEMENTS AS ON 31st MARCH. 2017

SCHEDULE 5 Fixed Assets-Corpus

- 3	200					ď.
1	\mathbf{p}	77	0	a	0	١

Particulars Block	Block	WDV	Additions	Total	Depreciation	WDV
		As at 1.4.2016	F.Y 2016-17	As at 31.3.2017	For current year	As at 31.3.2017
WATER DISPENSOR	15%	5,397		5,397	810	4,587
MICROWAVE	15%	6,771	-	6,771	1,016	5,755
MOBILE	15%	7,143	•	7,143	1,071	6,072
Sub-total		19,311	-	19,311	2,897	16,414
COMPUTERS	60%	8,263	-	8,263	4,958	3,305
LAPTOP	60%	2,865	•	2,865	1,719	1,146
SOFTWARE(Tally)	60%	2,624		2,624	1,574	1,050
Sub-total		13,752		13,752	8,251	5,501
TOTAL		33,063		33,063	11,148	21,915

SCHEDULE 5 Fixed Assets-NLA

12.00	manci	
RII	pees)	

Particulars	Block	WDV	Additions	Total	Depreciation	WDV
		As at 1.4.2016	After 30.9.16	As at 31.3.2017	For current year	As at 31.3.2017
FURNITURE	10%	1,85,843	-	1,85,843	18,584	1,67,259
Sub-total		1,85,843		1,85,843	18,584	1,67,259
CORDLESS PHONE	15%	62,338		62,338	9,351	52,987
LCD SCREEN	15%	42,808		42,808	6,421	36,387
SCANNER/PHOTOCOPIER	15%	32,874		32,874	4,931	27,943
TABLETS	15%	35,764	55,980	91,744	9,564	82,180
MOBILE	15%	69,452	-	69,452	10,418	59,034
REFRIGERATOR	15%	11,560	-	11,560	1,734	9,826
AIR CONDITIONER	15%	1,44,441		1,44,441	21,666	1,22,775
LAMINATION MACHINE	15%	5,550		5,550	833	4,717
Sub-total		4,04,787	55,980	4,60,767	64,918	3,95,849
PRINTER	60%	12,152		12,152	7,291	4,861
LAPTOP	60%	2,28,651		2,28,651	1,37,191	91,460
SOFTWARE(Prezi)	60%	7,798	-100	7,798	4,679	3,119
Sub-total		2,48,601		2,48,601	1,49,161	99,440
TOTAL		8,39,231	55,980	8,95,211	2,32,663	6,62,548



NATIONAL CENTRE FOR COLD-CHAIN DEVELOPMENT SCHEDULE FORMING PART OF FINANCIAL STATEMENTS AS ON 31st MARCH, 2017

SCHEDULE 6: INVESTMENTS - FIXED DEPOSITS

Particulars	As on 31st March, 2017	As on 31st March, 2016	
Fixed Deposits with State Bank of Bikaner & Jaipur		70-70-70-70-70-70-70-70-70-70-70-70-70-7	
and ICICI Bank (including accrued interest)	32,62,24,940	30,85,58,860	
TOTAL	32,62,24,940	30,85,58,860	

SCHEDULE 7- CURRENT ASSETS, LOANS AND ADVANCES.

Particulars	As on 31st March, 2017	As on 31st March, 2016
A. CURRENT ASSETS:		
Balance in State Bank of Bikaner & Jaipur A/c	1,06,25,763	1,48,07,425
B. LOANS & ADVANCES		
TDS F.Y. 2015-16	26,78,895	26,78,895
TDS F.Y. 2016-17	27,79,561	<u> </u>
Outstanding for training (Danfoss)		27,000
Office Imprest	19,212	1,288
Security Deposit (ISD)	2,000	
TOTAL	1,61,05,431	1,75,14,608

SCHEDULE 8- INTEREST EARNED

Particulars	For Y.E. 31 March, 2017	For Y.E. 31 March, 2016
Interest on fixed deposits with State Bank of Bikaner & Jaipur and ICICI Bank	2,77,96,925	2,67,89,350
Interest on balance in State Bank of Bikaner & Jaipur A/c	7,45,683	7,13,822
TOTAL	2,85,42,608	2,75,03,172



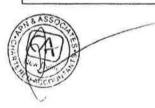
NATIONAL CENTRE FOR COLD-CHAIN DEVELOPMENT SCHEDULE FORMING PART OF FINANCIAL STATEMENTS AS ON 31st MARCH, 2017

SCHEDULE 9- OTHER INCOME

Particulars	For Y.E. 31 March, 2017	For Y.E. 31 March, 2016
Project Appraisal	4,00,000	22,80,000
Miscellaneous Income	1,300	12,680
TOTAL	4,01,300	22,92,680

SCHEDULE 10-ADMINISTRATIVE EXPENSES

Doubledon	For Y.E. 31	For Y.E. 31 March, 2016	
Particulars	March, 2017		
Meeting & Seminar Expenses	7,00,000	5,064	
Office Expenses	(A.	25,091	
Printing & Stationary	35,037	22,093	
Tours & Travels	-	-	
Cartridge	43,100	40,759	
Telephone & Internet	93,514	84,583	
Medical Insurance	28,750	27,798	
Professional Charges	8,09,538	7,59,645	
Misc Expenses	45,279	82,388	
News papers & Magazines	5,591	5,682	
Transport Charges -	3,23,081	14,923	
Repair & Maintenance	4,830		
Bank Charges	980	812	
Guest/Staff Welfare	43,971	43,665	
Stipend to interns	•	31,000	
Income Tax Demand (A.Y.2012-13 & 2013-14)		26,000	
Interest to I.T. Department/Demand (A.Y.2015-16)	1,07,610	•	
TOTAL	22,41,281	11,69,503	



NATIONAL CENTRE FOR COLD-CHAIN DEVELOPMENT

ACCOUNTING POLICIES AND NOTES ON ACCOUNTS FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2017

NOTE 11

ACCOUNTING POLICIES

- The accounts are prepared on historical cost basis as a going concern following mercantile system of accounting and recognizing income and expenditure on accrual basis. Accounting policies not specifically referred to otherwise are consistent with generally accepted accounting principles.
- Fixed assets acquired during the year are charged to Income and Expenditure account in the year of purchase and simultaneously transferred to Balance Sheet under Fixed Assets account to exercise physical and financial control.
- 3) Investments are valued at cost.
- 4) NLA funds received under MIDH schemes have been accounted separately and utilized to reimburse the expenditures for the approved activities.

NOTES ON ACCOUNTS

- 1) The society is registered u/s 12AA of Income Tax Act and hence no provision for income tax has been created for F.Y.2016-17, as income of the society is exempt under section 11 of IT Act. Besides, it has accumulated Rs.1,83,10,095 in FY 2015-16 and Rs 1,52,72,603 in FY 2016-17, total amounting to Rs 3,35,82,698 under section 11(2) of I.T. Act to be utilized in next five years.
- 2) The Society received NLA funds of Rs. 1,50,00,000/- in FY 2016-17 from Ministry of Agriculture & Farmers Welfare with Rs. 32,05,273/- unspent balance as on 01.04.2016, out of which Rs. 1,70,70,156/- was spent on the approved activities and balance of Rs. 11,35,117/- remains unutilized as on 31,03,2017.
- 3) Other income has reduced from Rs 22.92 lakhs in FY 2015-16 to Rs 4.01 lakhs in FY 2016-17, as last year NCCD had assisted in appraisal of 114 projects of MIDH @ Rs 20,000 each, as against 20 projects this year.
- 4) Administrative expenses have increased from Rs 11.69 lakhs in FY 2015-16 to Rs 22.41 lakhs in FY 2016-17, mainly due to events & seminar expenses of Rs 7 lakhs booked in NCCD A/c in

FY 2016-17, whereas such expenses were booked in NLA A/c in previous year and interest of Rs 1.07 lakh to IT deptt (for FY 2014-15) paid in FY 2016-17, besides minor increase in other heads.

5) Last year figures have been re-grouped where necessary.

(K.K Dhingra)
Advisor Finance

AS PER OUR REPORT OF EVEN DATE ATTACHED

For APN & Associates

Chartered Accountants

FRN: 001876N

(CA. Jitender Nath)

Partner

Membership No. 015549

Place: New Delhi Date: 11.10.2017 For National Centre For Cold-chain Development

(Pawanexh Kohli)

Chief Executive Officer

(Dinesh Kumar)

Director

