



Cash & Carry Vietnam Ltd.

**METRO CASH & CARRY VIETNAM
G.T.Z.
MINISTRY OF TRADE**

**PROJECT
SUPPORT TO DEVELOP
SUPPLY CHAIN IN VIETNAM**



PREFACES

Metro Cash & Carry Vietnam Ltd is a foreign-invested company of METRO A.G. For over 3-year operation acting as wholesaler to work very close through out the supply chain in Agriculture product in Vietnam, Metro has invested to

develop suppliers in meat, fish, fruit & vegetable in local private sectors. Metro has cooperated with Agriculture Development Departments of Vietnam to provide training for more than 10,000 Vietnam's farmers, food suppliers in farming technique, hygiene standards, to bring the most efficiency project concerning to farmer development in Vietnam.

Through the expertise of supply chain of fresh food in Vietnam, it is good time to bring forward in next step to develop the main focus of supply chain in the system. It consists of harvesting, packaging, and storage to transportation and distribution. Over the time, the fruit & vegetable supply chain in Vietnam is very scattering, spontaneous and un-organized. Normally, the quality of product degraded up to 40% percent in the chain. Thus, the shelf life was shortening as well. In other hand, the association in supply chain is not organized hence fruit and vegetable production and consumption of farmer are difficult meanwhile intermediate traders have difficulty in the consumption market.

By this expertise, in the next coming years, Metro aims to focus more on agricultural produce supply chains development and business and post-harvesting technology application to improve member association and quality of product through out the supply chain. The action should activate into all members of the chain including farmers, farmer association, service -commerce cooperatives, collectors, wholesalers, market companies, and retailer. Especially, It will maximize the business relation and the efficiency between members to achieve and maintain high benefit for whole chain due to expansion of local market and export of fruit and vegetable into EU market.

Moreover, Ministry of Trade are and will be making effort to support distributor in developing modern supply chains, including agricultural produce supply chain, to prepare integration with world economy for Vietnamese businesses. Through this project, Ministry of Trade wants to carry out one step of Vietnamese government's mission of local market development.

Project objective:

- 1. Providing the advanced knowledge of modern supply chain management to governmental authorities in agriculture products.**
- 2. Developing fruit and vegetable supply chain to consume in local market and export to EU, including:**
 - To support investment and technology transfer**
 - To develop knowledge in business and supply chain management (product management, customer management, information management,...)**
 - To develop knowledge in product standards, packaging, labeling, preserve, storage, and hygiene**

for the members in the supply chain such as farmers, farmer association, service -commerce cooperatives, collectors, wholesalers, market companies, import – expert companies, and retailer.

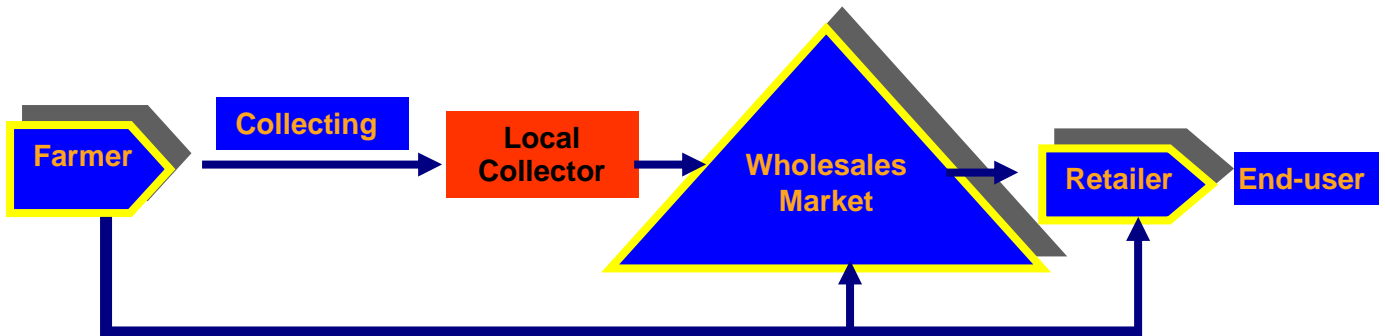
For 3 main farming areas to focus:

- Red River Delta**
- Mekong River Delta**
- Centre of Vietnam (Dalat)**

PART I. CURRENT SITUATION OF FRUITS & VEGETABLE SUPPLY CHAIN IN VIETNAM

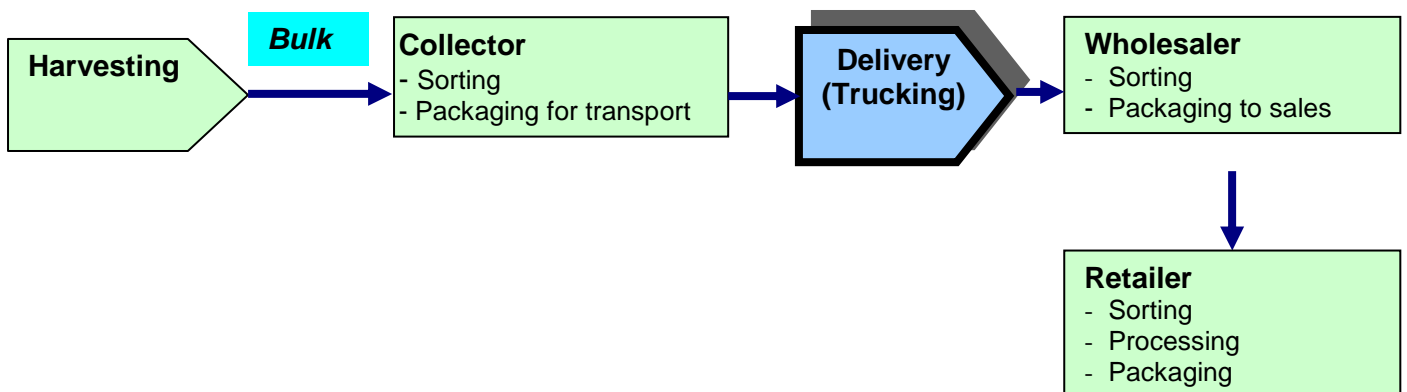
1. OVERVIEW OF CURRENT FRUIT & VEGETABLE SUPPLY CHAIN

From the scale of farming, individual farmer still un-prompted grows product. The national traders lack knowledge and skill to establish and manage supply chain therefore the fruit and vegetable distribution is also in unstructured condition. Generally, the supply chain still very complicated with many members participated. Which can be seen as the chain as follows:



Many participants involved in the chain caused complicated quality management and increased circulation expenses. A farmer can work with local collector or also sell directly to wholesaler or they can act as a retailer to sell in wet market. Therefore, members' associative relationship is not organized and regulated on common object. Each participant make themselves decision on the quality level according to their customer needs.

Through the supply chain on the product cycle, the quality should be monitored and checked at each point of distribution. That was not well done yet in each stage as united standards. We can define the factors influenced to the quality degraded.



Due to many reasons from HOT chain delivery, incorrect loading in hot truck, and no packaging standard from beginning, many participants have to involve in sorting and packaging again and again in each stage: collector, wholesaler and then finally, retailer in order to get the quality needed. Finally, the product is de-valued at the end point. This leads to high cost compared to initial value. In

addition, business relation of members in the chain is not tight and has no long-term cooperation and no reasonable benefit share.

Factors influenced to the chain:

- **Knowledge in business**
- **Common knowledge in supply chain**
- **Harvesting method**
- **Quality classification/sorting and storage**
- **Packaging**
- **Truck loading method for transportation**
- **Storage to ensure quality and shelf life extension**

2. KNOWLEDGE IN BUSINESS

Almost members that participate distributing fruit and vegetable lack knowledge in modern business, therefore they do not set up efficient and strong business mode for themselves

3. COMMON KNOWLEDGE IN SUPPLY CHAIN

The member in the chain also lack knowledge and skill in chain management. Hence, the fruit and vegetable supply chain now develop in spontaneous and systemless way. It makes limit of fruit and vegetable exportability. In present condition, it is necessary to provide knowledge and skill in supply chain management to the members in the chain in order to enhance competitive ability of the whole chain. Now, Vietnamese government is encouraging agricultural products export through distribution system of foreign investors in Vietnam. Therefore, we can focus to train the members involved to Metro's fruit and vegetable supply chain.

4. HARVESTING

Normally, the time of harvesting should be monitored and planned according to requirement of farming period and in shelf life of using. It required the relation closely between a wholesaler and a farmer. This link is not well organized yet currently.

Moreover, the harvesting method to maintain quality of product was not focused yet. Mostly, the farmer makes it in bulk and then supplies to the chain. The wholesaler and collector would be in charge in sorting, quality classification and packaging themselves to the chain according to the requirement of the customers. Meaning, the quality assurance in this step is not highly recommended.



Farmer: Harvesting and sorting out

Collector: Collecting & sorting

5. QUALITY CLASSIFICATIONS

Due to the un-organized chain, each stage has to make quality classifications by sorting themselves. Farmer, collector, wholesaler, retail all need to do this job.



Wholesales market: Sorting again and packaging

6. PACKAGING FOR SALES AND TRANSPORTATION

Packaging in fresh is an important part of QUALITY CONTROL PROCESS. Fresh food required special packaging in transportation, merchandising and customer's use, in which, packaging for transportation is very important stage in the chain. It makes sure good quality at destination.

Packaging is not united through the chain. In each stage of collector/wholesaler/retailer, this job is repeated again and again to make high loss and devalue in transportation. It is no standard between product to product and product themselves come from different area.

The diversity of using in packaging material applied for fruit & vegetables in transportation. They are not united through the chain. The packaging may be changed in each stage.

Packaging for sales at retailer and wholesaler are not the same and convenient.



Wholesales Market: Different kinds of packaging

7. TRANSPORTATION

Mainly, transportation for fruit & vegetable is in hot condition. The means can be truck, motorcycle, and three- wheel motor.... The loading seriously damaged the product during the transportation. That is why it is much different between the quality at farmer compared to at wholesaler and retailer. Thus, wholesaler, retailer need to sort out again to get quality product according to the customer's requirement. Estimated loss varied from 10% to 50% at destination.

A truck can be loaded different items from different point of loading on the routine. This caused higher damaged on the way. They are not ensuring product in good quality at destination.



Wholesales Market: Packaging/loading in transportation



Farmer in Red River Delta: Brine products to wholesale market to sell

8. STORAGE

It is not cold chain in the system to distribute the fresh fruit & vegetable. Product in the chain is in short shelf life and hot condition. The process and storage center normally performed by collector to keep in one day then bring to the wholesale market.



It is not organized in processing and sorting for collectors. All facilities seem to work in temporary and simple condition.

PART II.

PROJECT ACTION PLAN

1. OBJECTIVE

By the rapid development of market evolution in recent years, members involved to the supply chain were not provided sufficiently the knowledge in network management. **The first task** is to support functional departments to build up a sufficient regulation to adapt to the increasing requirements in next period. This means to upgrade the management level of authorities to control the supply chain. This task requires a lot of network management experience exchange by providing training, modeling and expertise. With a global organization, GTZ and Metro can provide experts and tools.

The second plan is to focus on fruits & vegetable sector particularly with the aims of the project to improve the efficient association and the quality in the supply chain; the switching point is to the participants of the chain. They are farmers, farmer associations, service – commerce cooperatives, collectors, wholesalers, market companies, and retailer. Each member plays very important role in efficiency of the chain and maintenance of quality in each step. They really need knowledge, instruction and particular actions to the expertise. Moreover, modeling by setting up distribution centers and EurepGAP certificate will activate actively to the chain. The project will maximize the relation between Buyers and Sellers to bring the efficiency of the change. These will result in **improving the relation between traders and farmers.**

Project objective:

1. **Providing the advanced knowledge of modern supply chain management to governmental authorities in agriculture products.**
2. **Developing fruit and vegetable supply chain to consume in local market and export to EU, including:**
 - **To support investment and technology transfer**
 - **To develop knowledge in business and supply chain management (product management, customer management, information management,...)**
 - **To develop knowledge in product standards, packaging, labeling, preserve, storage, and hygiene**

for the members in the supply chain such as farmers, farmer association, service -commerce cooperatives, collectors, wholesalers, market companies, import – expert companies, and retailer.

2. STRUCTURE OF PROJECT INVESTMENT

2.1. Organization

- Metro Cash & Carry Vietnam (MCCVN)
- GTZ
- Ministry of Trade

The MCCVN and GTZ contribution covers all of the project arrangement including organization, use their own staff and facilities.

Vietnam Ministry of Trade is beneficial from the knowledge of modern supply chain management and also provides assistant for the project.

2.2. Fund

Fund for 3 year project:

- Metro contributes 200,000 Euros
- GTZ contributes 200,000 Euros

Total project fund: 400,000 Euros

2.3. Project schedule

In 3 years, from 2005 – 2007 with the plan:

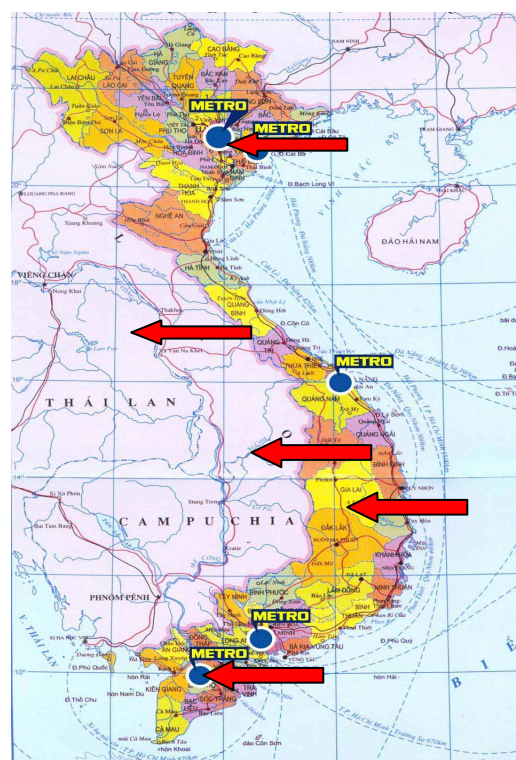
- 2005: 160,000 Euros
- 2006: 100,000 Euros
- 2007: 140,000 Euros

2.4. Project focus

The project focuses to three main areas:

- Red River Delta
- Mekong River Delta
- Centre of Vietnam (Dalat, Binh Thuan)

These are the main farming areas in Vietnam.



3. PROJECT CONTENT

3.1. For governmental management level

3.1.1. Participants

Including:

- Ministry of Trade
- Provincial Department of Trade

3.1.2. Main focuses

- Exchange experience in expertise and legislation frame work from developed and developing countries in modern supply chain management
- Providing training program for officers of provincial Department of Trade in distribution management with governmental level of involvement, management and developing.

3.1.3. Training program coordinators

By worldwide organization, GTZ and Metro will search for coordination from inside and outside the body to provide the training program for governmental management experts to achieve the target of the project in supply chain management. Mainly, in developing country as Asia and developed countries as Europe.

3.2. For members of supply chain

3.2.1. Participants

Including farmers, farmer association, service -commerce cooperatives, collectors, wholesalers, market companies, import – export companies and retailer.

3.2.2. Main focuses

- a. Base line study of fruit and vegetable supply chain in three areas including Red River Delta, Lam Dong – Da Lat and Mekong River Delta
- b. Training, advising members in the chain about:
 - Business knowledge
 - Knowledge and skill to organize and manage fruit and vegetable supply chain , including product, customer, and information management
 - Harvesting methods
 - Packaging and labeling for sales and transportation
 - Storage & transportation method to maintain the quality and hygiene of products
- c. Supporting investment for collector in processing/sorting station
- d. Sponsor by providing technology process for farmers to achieve the EUREPGAP to export to Europe

3.2.3. Program Coordinators

GTZ and Metro will cooperate with Ministry of Trade, Provincial Department of Trade who act as a coordinating organizer. Metro together with Department of Trade will issue the requirement of training and search for experts to provide training contents, materials, and equipment supported. Generally, coordinators are involving the supply chain in the content requirements.

PART III: PROJECT CONTENT DETAILS

1. TRAINING FOR GOVERNMENTAL MANAGEMENT LEVEL

1.1. Program supporting for Ministry of Trade to build up a legislation framework on distribution network

Action Plan:

- Sponsor for an overseas business trip for 09 senior officers and experts of Ministry of Trade to study/research and exchange experience on developing distribution network and building up a legislation framework on distribution network management in Europe as Germany, France and Spain.
- Advise and provide materials, documents supporting the process of setting up the management regulations of distribution network.
- Consultation workshops for new legislation and regulations.

Total cost: 80,000 Euros

1.2. Training program for Officers of Ministry of Trade and Local Department of Trade

1.2.1. Content

- Basic knowledge of distribution network
- Knowledge on government' management to distribution network
 - Build up strategy and scheme of development
 - Methodology and tool to manage
- World experience on governmental management to distribution network

1.2.2. Course plan

- Number of Trainee: 250
- Courses : 6
- Course length: 5 days/ course
- Trainer: International Experts
- Estimated cost per course: 6,700 Euros

Total cost: 40,000 Euros

1.3. Training Organization

- GTZ, Metro and Ministry of Trade agree on the training program, content and plan and co-organize the courses as project plan.
- GTZ with the size of global operation, mainly search for the oversea visit, experts and related materials. Metro provides support in training organization, inside experts.
- Ministry of Trade to provide the list of trainees, co-organization and issue the management certificates.

2. SUPPORTING FOR MEMBERS OF SUPPLY CHAIN

2.1. Baseline study of fruit and vegetable supply chain

2.1.1. Content

Survey present situation of supply chains, including:

- Watermelon supply chain in Long An
- Mango supply chain in Tien Giang and Dong Thap
- King orange supply chain in Ben Tre
- Pamelo supply chain in Vinh Long
- Fruit and vegetable in Can Tho
- Dragon fruit supply chain in Binh Thuan
- Grape supply chain in Ninh Thuan
- Vegetable and root vegetable supply chain in Da Lat
- Longan supply chain in Hung Yen
- Lychee supply chain in Luc Ngan – Bac Giang and Thanh Ha – Hai Duong
- Safe vegetable supply chain in Ha Noi and HCMC
- Vegetable and root vegetable supply chain in Hai Phong, Ha Tay, Thai Binh, and Vinh Phuc

Based on survey result, training and investment content for supply chain is established.

Total cost: 15,000 Euros

2.1.2. Implemetary organization

Metro, GTZ and Ministry of Trade will cooperate with consultative organizations to survey present situation of above fruit and vegetable supply chains and recommend training and investment content for surveyed supply chains.

2.2. Training program for members of supply chain

2.2.1. Content

- Business knowledge
- Knowledge and skill to organize and manage fruit and vegetable supply chain, including product, customer, and information management
- Harvesting methods
- Packaging and labeling for sales and transportation
- Storage & transportation method to maintain the quality and hygiene of products

2.2.2. Course plan

- Courses: 44
- Number of Trainee:
 - Farmers, farmer associations, cooperatives, collectors: 2.400.
 - Wholesaler: 600
 - Retailer: 600
- Total cost: 85.000 Euros

2.2.3. Implementary organization

2.2.3.1. Overview

Metro and GTZ agree with Ministry of Trade on:

- Target participants
- Contents provided
- Training schedule and plan

2.2.3.2. METRO Cash & Carry Vietnam

- To work with coordinators to provide the content in detail with practical applications.
- Contract with coordinators to provide training content and training courses, supervise coordinators in the process of content preparation.
- Provide experts to train for the content of “ Fruit & Vegetable Supply Chain in Metro System”.
- To work with Provincial Department of Trade to organize the courses
- Follow up the courses and evaluation.

2.2.3.3. Ministry of Trade and Provincial Department of Trade

- Together with Metro Cash & Carry to organize the courses on schedule and organization.
- Provide the list of participants in each area, prepare training location.
- Provide presenters on government issues to participants for the content: government orientation and policy in supply chain in general and in fruit and vegetable supply chain in particular; knowledge of supply chain management
- Issue certificates as a record for management objectives
- Follow up practice performance after training, record and evaluation.

2.2.3.4. GTZ

- Provide the supporting and supervising on project schedule.
- Provide assistant all matters arising on projects.
- Provide outside experts with practical experience

2.2.3.5. Training Coordinator

a. Requirement

- Specialized in training objects
- Master the objectives of the project.
- Contract with Metro Cash & Carry on the required contents
- Establish the content of the project as required
- Provide the trainers to delivery the content to target participants.
- Carry on training courses as schedule

b. Institute for Trade – Ministry of Trade

To provide training for:

- Business knowledge
- Transaction method
- Knowledge and skill to manage the supply chain

c. Vietnam Fruit Association

To provide training for packaging and transportation solutions by cooperate with:

- Local fruit & packaging company
- ASEAN Fruit Association

d. Institute of Agricultural Engineering and Post – Harvest Technology

To provide training and technology transfer for specific fruits and vegetable in:

- Harvesting methods
- Packaging and labeling for sales and transportation
- Packaging and transportation to maintain the quality
- Storage, maintenance and transportation method to maintain the quality and hygiene of products

e. Department of Plant Protection

To provide training in pesticide application principles on fruit and vegetable

f. Agricultural System Department – Vietnam Agricultural Science and Technology Institute

To provide training in experience for development of fruit and vegetable supply chain

g. METRO Cash & Carry Vietnam

Provide experts to train for the content of “ Fruit & Vegetable Supply Chain in Metro System”

2.2.4. Training program details

2.2.4.1. For farmers and collectors

- a. Participant: farmers, farmer associations, service -commerce cooperatives, collectors
- b. Course contents (02 days/ course)
 1. General business knowledge
 2. Knowledge of supply chain, benefit and responsibility when participating in the chain
 3. Harvesting methods
 4. Specific packaging, labeling for sales and transportation
 5. Storage & transportation method to maintain the quality and hygiene of products
 6. Quality standardization
- c. Course number

Area	Provinces	Focus on	No. Courses	Participants
Red River Delta	Hung Yen	Litchi, longan	2	150
	Bac Giang	Litchi, longan	2	150
	Thai Binh	Vegetable & root vegetable	2	150
	Vinh Phuc	Vegetable & root vegetable	2	150
	Hanoi	Safe vegetable	2	150
	Ha Tay	Vegetable & root vegetable	2	150
	Hai Phong	Vegetable & root vegetable	2	150
	Cost per course: 2,000 Euros			

	Cost Sub–Total: 28,000 Euros		14	1,050
Mekong Delta	Long An	Watermelon	2	150
	Tien Giang	King orange, mango	2	150
	Ben Tre	King orange, mango	2	150
	Vinh Long	Pamelo, longan	2	150
	Dong Thap	Mango	2	150
	Can Tho	Fruits and vegetables	2	150
	Cost per course: 2,000 Euros			
	Cost Sub–Total: 24,000 Euros		12	900
Centre Provinces of Vietnam	Dalat (Lam Dong)	Vegetable & root vegetables	2	150
	Binh Thuan	Dragon fruit	2	150
	Ninh Thuan	Grape	2	150
	Cost per course: 2,000 Euros			
	Cost Sub–Total: 12,000 Euros		6	450
Total	64,000 Euros		32	2,400

2.2.4.2. For wholesalers

- a. Participant: wholesalers, market companies (market management team)
- b. Course contents (02 days/ course)
 1. Business knowledge, customer and information management
 2. Knowledge of supply chain
 3. Specific packaging, labeling for sales and transportation
 4. Storage & transportation method to maintain the quality and hygiene of products
 5. Quality standardization
- c. Course number

Wholesale center	No. Courses	Participants
Tam Binh – Thu Duc - HCMC	2	200
Hoc Mon – HCMC	2	200
Long Bien and 3 wholesales markets	2	200
Cost per course: 1,800 Euros		
Cost Sub–Total: 10,800 Euros		600

2.2.4.3. For retailer

- a. Participant: retailer, market companies (market management team)
- b. Course contents (02 days/ course)
 1. Business knowledge and information management
 2. Knowledge of supply chain
 3. Specific packaging, labeling for sales and transportation
 4. Storage & transportation method to maintain the quality and hygiene of products

5. Quality standardization
- c. Course number

Area	No. Courses	Participants
Ha Noi	2	200
Ho Chi Minh City	2	200
Can Tho	1	100
Hai Phong	1	100
Cost per course: 1,700 Euros		
Cost Sub-Total: 10,200 Euros	6	600

Total cost: 85,000 Euros

2.3. Support for exportation procedure

2.3.1. Program content

The project sponsors by providing technology process for farmers in the supply chain to achieve the EUREPGAP to export fruit and vegetable to Europe. The project will cooperate with Swiss Import Promotion Program (SIPPO) and IMO Company to provide and supervise to issue EUREPGAP certificates. It certifies the products farmed in standard procedure to ensure hygiene and quality requirement for export. This action aims to create a model for hygiene and quality control in the process of farming in Vietnam.

The project selects main fruits potential for exporting or exported but they are in stuck condition due to EUREPGAP requirements:

- Mango
- Dragon fruit
- Pamelo
- Litchi

2.3.2. Supporting plan

- Supported objectives: farmers, cooperatives or export companies
- Total no. of supported units: 20 in 3 years
- Support 2,500 Euros/ Certificate (equivalent with 50% cost)

Total cost: 20 * 2,500 Euros = 50,000 Euros

2.4. Supporting investment for collector in processing/sorting station

2.4.1. Supported objectives: Collectives, wholesalers and service -commerce cooperatives

2.4.2. Supporting plan

- Content: to invest the infrastructure and equipment for washing, processing, sorting, packaging and labeling products

- Number of supported stations

Location	No. of processing point	Cost for point
Dalat, Centre of Vietnam	5	2.500 Euros
Mekong Delta	8	2.500 Euros
Red Rivers Delta	6	2.500 Euros
Ho Chi Minh City	1	2.500 Euros
Total	20	50.000 Euros

3. PROJECT MANAGEMENT TEAM

3.1. Project Managers

- Mr. James Scott – General Director of METRO Cash & Carry Vietnam
- Mr. Thomas Finkel – Director of HTKT Program – GTZ – Vietnam
- Prof. Dr. Hoang Tho Xuan – General Director of Domestic Market Policy Department – Ministry of Trade

3.2. Project officers

- Metro: 2 officers
- GTZ: 1 officer
- Ministry of Trade: 1 officer

Including 1 full-time officer and 3 part-time officers

3.3. Project office

- North project office: at Vietnam Institute for Trade – Ministry of Trade – 17, Yet Kieu Street, Hoan Kiem District, Ha Noi City
- South project office: at METRO Cash & Carry Vietnam Ltd., An Khanh Ward, District 2, Hochiminh City

3.4. Human resource expenses

The estimated cost for human resource: 10.000 Euros/ year

Total human resource cost in 3 years: 30,000 Euros

3.5. Additional variable cost for administration, transportation, organizing...

Estimated variable cost for administration, transportation, organizing...: 10,000 Euros/ year

Total variable cost in 3 years: 30,000 Euros

3.6. Spared fund allocation

Estimated 20,000 Euros to be allocated in the area (according to the detail contents) with the highest success rates

Spared to allocate to highest success rates area: 20,000 Euros

PART IV.

CONCLUSION

From the project performed in 3 year, we hope to bring anew ideas to push forwards a step of development in management of the supply chain.

Total cost estimated:

1. **Support Ministry of Trade to build up a legislation framework on distribution network**
Total cost: 80,000 Euros
2. **Train Officers of Ministry of Trade and Local Department of Trade**
 - Course: 6
 - Total of trainee: 250**Total cost: 40,000 Euros**
3. **Baseline study of fruit and vegetable supply chain**
Total cost: 15,000 Euros
4. **Training members of supply chain**
 - Courses: 44
 - Number of Trainee:
 - Farmers, farmer associations, cooperatives, collectors: 2.400.
 - Wholesaler: 600
 - Retailer: 600**Total cost: 85,000 Euros**
5. **Support for exportation procedure (EurepGAP certificate)**
 - Supported unit: 20**Total cost: 50,000 Euros**
6. **Cost Invested to build processing, sorting station**
 - Supported station: 20**Total cost: 50,000 Euros**
7. **Human resource expenses**
Total cost: 30,000 Euros
8. **Additional variable cost for administration, transportation, organizing...**
Total cost: 30,000 Euros
9. **Spared fund allocation**
Spared fund allocation: 20.000 Euros

Total Cost estimated for 3 years: 400.000 Euros