

## **Study on food hygiene – safety awareness of community regarding fresh food trading in spontaneous markets in Go Vap district, HCMC – Vietnam**

**\*Dr. Nguyen Vinh Quy**

*Vice Dean of Faculty of Environment and Natural Resources, Nong Lam University (NLU) – Vietnam  
Corresponding Author: Dr. Nguyen Vinh Quy*

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**ABSTRACT:** *Fresh food is one of the essential ingredients serving basic needs for people, the food provides nutrients for body's growth and ensures human health. However, using bad quality food or food contaminated, will affect the health of not only the users but also the community. Since Go Vap district – HCMC has a lot of spontaneous markets and fresh food have been traded in all of these markets so a study on fresh food hygiene-safety awareness of community in the region has been needed and it is a main reason for implementing the research. Results gained from the research implementation show that: The forming of spontaneous markets and trading fresh food in the markets meet people's need in the region. However, people's awareness of fresh food hygiene – safety is not so high and there is difference of the awareness between classes and ages of fresh food users; Sources and forms of information provided have a strong influence on the knowledge of both buyers and sellers of fresh food in the markets; The forms of propaganda which are simple, visual and repeated, have been more effective; Attitudes about fresh food safety in the two groups (buyers and sellers) varies and depends on the goals of each group, hence there is a difference in behavior between the buyers and sellers; and Go Vap district authority's management and communication activities regarding food hygiene – safety awareness for community is not high because of shortcomings in procedures, mechanisms and monitoring implementation.*

**Keywords:** *Spontaneous, Awareness, food hygiene – safety, Go Vap District*

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### **I. Introduction**

With cultural traditions as well as by specific development, Ho Chi Minh city in general and Go Vap District in particular have quantities of spontaneous markets. According to statistics from the Department of Industry and Trade of HCMC in year of 2014, Go Vap District is one of the local which has the most concentration of spontaneous markets in Ho Chi Minh city, and the selling - purchasing power of goods, especially the selling - purchasing power of fresh food at the markets are very high. However, attention of both buyers and sellers to environmental issues and food safety of fresh food in the markets of the district have been not paid enough. In order to provide a 'factual picture' of environment and food hygiene – safety awareness of buyers, sellers as well as community regarding fresh food trading in the Go Vap spontaneous markets and basic data for managers, there should be a scientific and systematic study on environment as well as awareness of food hygiene and safety of consumers and suppliers in the market in Go Vap district - Ho Chi Minh City conducted. And, this is also the reason for the topic “*Study on food hygiene – safety awareness of community regarding fresh food trading in spontaneous markets in Go Vap district, HCMC – Vietnam*” has been implemented.

### **II. Literature Review**

#### **2.1. Concept and characteristics of the spontaneous market.**

According to Decree 02/2003/ND-CP dated 14 Jan. 2003, based on market size (the number of points of business) as well as strong level of construction, markets is divided into 03 categories: Market Type 1; Market category 2; and type 3. In the decree, there has not been the Market Type of “Spontaneous markets”.

The term "spontaneous market" in this study is understood as the type of market established by local people, usually on the vacant places, or even on the crossroads in densely populated areas.

The spontaneous markets have been characterized by: where all kinds of goods have been for immediate delivery, in which sellers and buyers negotiate and bargain directly, buyers direct access to the goods; the goods have immediately been delivered after agreement between buyers and sellers; there have been not used technology or any modern equipment; the trading volume is generally small and the only method of payment is paid in cash; and spontaneous markets are often small, narrow, temporary nature and are not invested

in infrastructure to ensure environmental hygiene.

## **2.2. Overview of food and food hygiene - safety**

### **2.2.1. Concept of food and fresh food**

Fresh foods are defined as foods of plant origin or animals that have not been processed or have been minimal processed, fresh food is used as feedstock for the production or processing of food served for the needs of people eating, drinking or for food animals. However, fresh food concept in this research theme has narrower scope, it covers only foods of animal origin, or plants that have not been processed or semi-processed only be used to exchanging, trading in the market as raw materials for processing food or drink for human use.

### **2.2.2. Food hygiene and safety.**

Food hygiene and safety is the concept which has indicated food or the conditions and measures necessary to ensure that food is not harmful to the health or life of the consumer when prepared and used true purpose expected. According to the concept, food safety are the factors or conditions involved in the making of food insecurity that does not include other aspects such as lack of malnutrition affecting human health.

## **2.3. OVERVIEW OF AWARENESS AND LEVEL OF AWARENESS**

### **2.3.1. Concept of awareness**

Concept "Awareness" is common in Vietnamese language (written and spoken), it is naturally and directly formed from the daily activities of the people and widely used in all fields and all classes in the society as well. However, the concept of awareness in this study can be understood as the ability to perceive, identify and sense hygiene and safety of the foods which are being bought and sold in the spontaneous markets in the Go Vap district - Vietnam

### **2.3.2. Level of awareness**

The concept of level of awareness in general, or level of awareness about food hygiene - safety in particular, is quite abstract. Understanding and feeling about a certain issue depends on many factors of the subjects such as age, gender, activity fields, positions,... However, the objective of this research is to be outlined overall picture of the knowledge of the buyers and sellers of fresh food in the spontaneous markets of Go Vap district, since then proposing measures to improve the understanding of the people in protection of health, prevention of the food consumption which is not hygiene and safety. Therefore, the concept of the level of awareness in this study include the ability to comprehend, understand the elements, food contaminants, harmful effects of the use of dirty food as well as precautions.

## **III. Resarch Contents and Methods**

### **3.1. RESEARCH CONTENT**

In order to achieve the objectives of the research, such contents as: general study of the natural conditions of economic and socio - Go Vap District; evaluating the current status of the business in the markets of Go Vap District; identifying and assessing the supply of fresh food traded; surveying and assessing awareness of food safety of buyers, sellers and communities of the area; and developing solutions to raise the awareness of buyers, sellers and communities in the area, have been conducted

### **3.2. MATERIALS AND METHODS**

In the research implementation, there have been used a number of equipments such as Garmin GPS (used to determine co-ordinates), car, motorbikes and recorders. The methods, which have been applied in conducting the research, are: data collection by field surveys; collected data analyses and assessment; sociological surveys and community participated in appraisals; and Delphi method. The numbers of sociological survey samples have been determined by following formula:  $n = N \cdot (1 + Ne^2)^{-1}$ , where: n – the sample size; N – the population size; e – the acceptable sampling errors.

## **IV. Results and Discussion**

### **4.1. CURRENT STATUS OF THE SPONTANEOUS MARKETS IN GO VAP DISTRICT.**

#### **4.1.1. Quantity and distribution of the spontaneous markets in the research region.**

According to the research data, currently in the Go Vap district has 11 spontaneous markets which have been actively operated. All of the markets in the region have had activities regarding purchasing and selling fresh food. The number of the markets is not equally distributed in different wards of the district and the distribution characteristics of the market are as follows:

- In the wards 7, there is the most of the markets, it region was former army base with the population density is high and most have lived in this region for a long time .
- Ward number 14 have been newly formed, about 5 years ago, which was splitted off the former 12

wards, the ward's population is relatively sparse, boundaries of the ward is adjacent to the market located in ward 13, ward 9.

- The majority of the spontaneous markets locate on the boundary between the 02 wards. Among the operating markets there has been 01 market located on the boundary of two district: Tan Binh and Go Vap, and 01 market has been newly formed just after Hong Duc hospital's operation, this market is located in the street boundary between wards 11 and 12 of go Vap district

#### **4.1.2. Characteristics and operation time of the markets**

The characteristics and operation time of the markets in the study region are as follows: business of all of the markets is only in the morning and afternoon; quantity of fresh food are traded fairly large; there is change in the number of fresh food counters in week but level of change is not large; and the amount of fresh food vegetables counters is a little more than the stalls selling meat, fish, ...

#### **4.1.3. The inspection and monitoring of food safety implementation**

The management of food safety and hygiene in the district Go Vap are made on the basis of: Decree 38/2012 / ND-CP of April 25, 2012 of the Government providing details of some articles of Food Safety Regulation; Joint Circular No. 13/2014 / TTLT BYT-BNNPTNT-BCT dated 09/4/2014 of the Ministry of Health, Ministry of Agriculture and Rural Development, Ministry of Industry and Trade guiding the assignment and coordination of governance state control of food safety; Circular 47/2014 / TT-BYT of December 11, 2014 of the Ministry of Health on guidelines for food safety management for business establishments catering services; Official Dispatch No. 66 / UBND - VX 2015 01 days 09 months of the People's Committee of Ho Chi Minh City to continue to promote the work of ensuring food safety and prevention of food poisoning; Plan No. 14 / KH-BCDLNVSATTP on 05 May 2015 02 interdisciplinary steering committee on food safety city to ensure safety of food in 2015; and decisions as well as the Go Vap District plans related to food safety.

Contents and process of inspecting and supervising the implementation regarding food safety - hygiene in the markets in Go Vap district, HCM has been made, including:

- Unexpected or quarterly checking the performance of food safety- hygiene in the markets, the check has been implemented by inter-branch inspection team (Department of Economic, Department of Natural Resources and Environment, Veterinary Department, Health Department, Taxation Department and Police Force of the ward). The frequency of checks have been periodically performed 02 times/year. The first time is at first 06 months of the year and the second time is at near Lunar New year period.

- To propagate and disseminate the contents of the food safety and hygiene, the propagation and dissemination is usually performed by professional staff and it has been conducted directly in the markets through loudspeaker system and another communication tools such as stickers, banners, slogans. Loudspeaker system for the dissemination of content on food safety and hygiene is broadcast daily, with intense focus in the morning and afternoon due to this time is trading period of the markets. There have been banners with about 11 slogans hung or stuck at the beginning and end of the market area, across the road or alley where many people most likely to notice. Sometimes, market management board invites the market stallkeepers gathering in the market hall to hear officers propagating information regarding food hygiene – safety,...

## **4.2. AWARENESS OF PEOPLE ON SAFETY-HYGIENE OF FOOD TRADED IN THE MARKETS**

### **4.2.1. The results of surveying awareness of people on food safety and hygiene**

Research results gained from survey by direct interviews and questionnaire delivery to 92 people who are presented for 03 groups: 81 people are group of buyers, sellers in 11 markets; 05 people represented officers of the ward committees; and 06 people are the community residents living surroundingly the markets. Particularly, the collection of information from all levels of managers and professionals related to the field of research is carried through direct interviews.

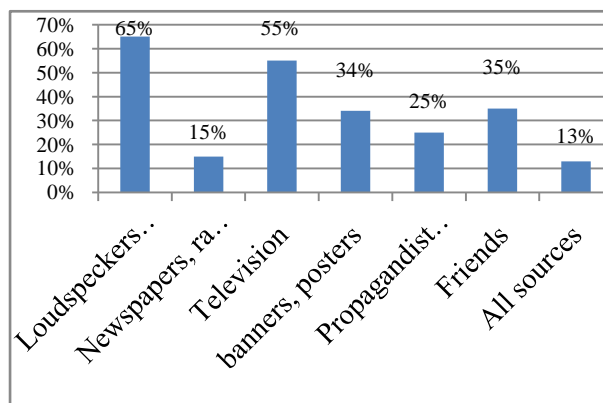
The results gained from the research showed that:

- 100% of the interviewees are the answers to the questions related to food safety and hygiene although there is a differences in the level of some of the problems.

- The level of understanding of the concept of food safety is not high, only 20% of interviewees answered quite accurate and relatively complete concept of food safety and hygiene.

- The study results also showed that information and knowledge about food safety, which people have got, came from all types of media. However, the ratio of the information is not homogeneous: loudspeakers on the market is the most type of media, in which people are most interested, with 65% of interviewees get information from this source; the next source of media type is television, with the ratio at about 55%; types of banners, posters and exchange with friends are also kind to provide information and knowledge about food hygiene and safety are quite effective, at a rate of about 34% to 35%; newspaper seem to be the fewest type of source that people

get information from, with about 15%; and the percentage of subjects interviewed had knowledge of food safety from all sources is only about 13%. The rate of knowledge and information on food safety received from the sources of the objects on the study area is shown in Figure 4.1 below:



Figures 4.1. Sources of information and knowledge on food hygiene and safety of communities

#### 4.2.2. Assessing people's awareness on food safety – hygiene traded in the markets

Analysis and evaluation of awareness on fresh food safety - hygiene in the markets have based on a model KAP (knowledge - Attitude - Practice), it means according to the levels, in turn, from understanding - attitude - behavior . Research results show that attitudes about food safety in the groups of buyers and sellers can vary and depends of factors such as the form of supply of information, the nature of the information (level of complexity or simplicity) and understanding the subject purchasing fresh food in the markets.

Of the 10 types of information related to attitude group, there 02 types of informations about surrounding environment and sources of the fresh food traded in the markets has been equally interested by buyers and sellers, with 65% answered with interest; the forms of propaganda, 86% of interviewee like information easy to remember, while only 55% of the interviewees like understandable factors; 85% of the fresh food sellers think that food traded in the markets is safety and hygiene, meanwhile only 65% of buyers agree with that; and 55% of sellers feel uncomfortable and very uncomfortable when their trade area have been polluted by others and 45% of the sellers feel it is normal.

Point of view on food safety – hygiene of sellers and buyers in the spontaneous market in the Goa Vap district are shown in the figure 4.2 below.

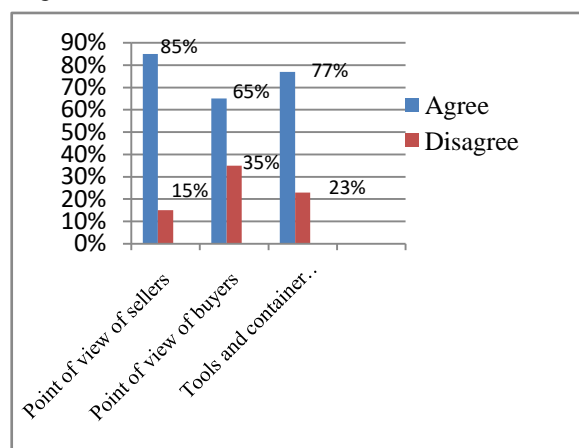
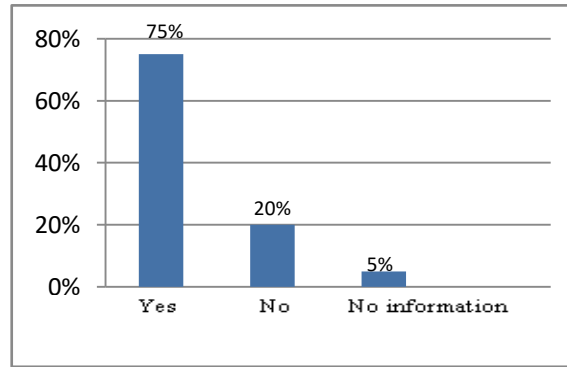


Figure 4.2: Point of view on food safety – hygiene

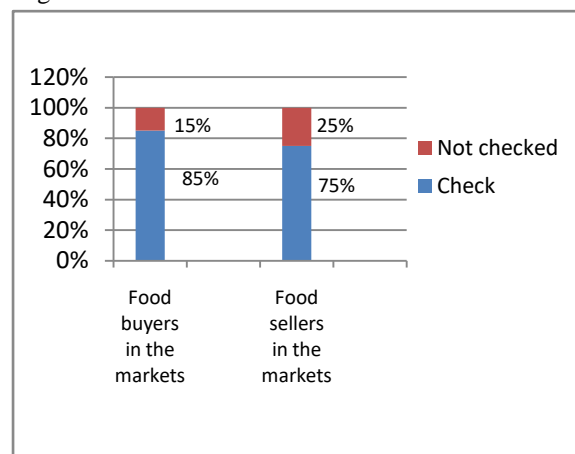
#### 4.2.3. Behavior of the people to food safety-hygiene in the research region

Analysis and evaluation of people's awareness on fresh food safety – hygiene in the markets have based, in turn, on levels: knowledge - Attitude – Behavior. The results obtained during the study show that: all buyers, sellers of fresh food in the market have behavior to food hygiene, with 100% have answers. Among the interviewees there about 75% expressed worrying attitude to food safety – hygiene, meanwhile only 20% of them “said no”, and about 5% people did not give information regarding the worrying attitude to food safety – hygiene. The research results regarding to people's worrying attitude to food safety – hygiene are shown in the figure 4.3.



**Figure 4.3:** Worrying attitude about FSH

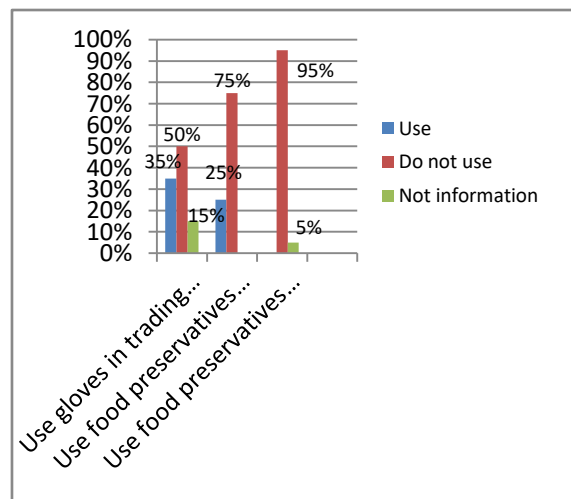
The research has also shown that there are differences in behavior between 2 groups of buyers and sellers and ratio of the actions, which will bring long-term results in the future, are not immediately seen or requires much thought, have not been high in both of the two groups. Some of behavior - kinds of people to fresh food are shown in Figure 4.4 and 4.5 below.



**Figure 4.4:** Checking food before trading

The data shown in Figure 4.4 have revealed: food inspection behavior in trading activities in the markets achieved a high rate, 85% of buyers have food inspection routines (via visualization) before purchase decision of purchase, meanwhile only 75% of the sellers have that behavior; the difference of the behavior of food inspection of the two group is due to different goals (for sellers, food inspection has been taken in order to keep revenues and benefits; for buyers, to ensure health of users).

Using gloves behavior of purchase and sale of fresh foods shown in Figure 4.5 have also shown that 50% of interviewees did not use gloves, 35% use and 15% did not give information in this regard.



**Figure 4.5:** Using gloves and preservatives in trading

The main reasons leading to the behavior is due to inconvenience, besides the groups interviewed have also said that the influence of not use gloves is negligible as the time exposed to the food is not long.

For actions of using food preservative substances of the buyers and sellers, which have been illustrated in figure 4.5, showed: fresh food buyers at the markets do not use chemicals to protect food, with the ratio of 95%, and the remaining 5% do not express an opinion, it means that no buyers of fresh food in the markets use chemicals to protect the food purchased by them. The research results gained have also revealed the ratio of fresh food sellers who do not use preservatives is quite high, with about 75%, but there have still had 25% fresh food sellers using preservatives in the form or another.

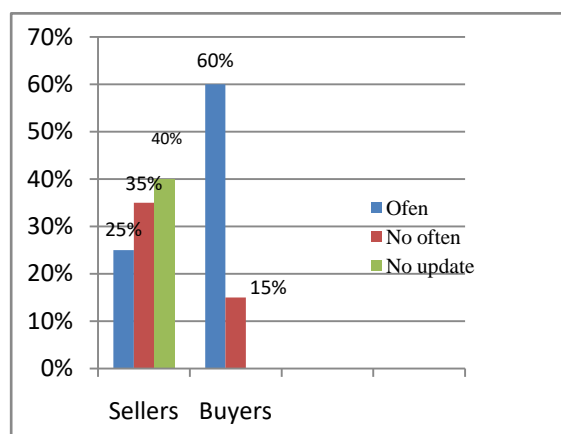


Figure 4.6 illustrated below have showed reseach results regarding actions of learning and updating information in order to raise awareness on food safety - hygiene of the buyers and sellers.

Figure 4.6: Fresh food buyers and sellers updating informtions regarding food safety - hygiene

From the results illustrated in the figure 4.6 above, it has been seen that both the buyers and sellers have action of updating the informations although the level is not the same of the two groups, the buyers have regularly updated information, with the rate of 60% and about 15% of the buyers no often do the thing; there are about 40% of sellers do not update information regarding food safety – hygiene and only about 25% of the sellers often update the information.

#### **4.3. General assessment of causes affecting people's awareness on food safety-hygiene**

Based on the data gained from reseach implementation, it is assessed that knowledge about food safety – hygiene of buyers and sellers is quite similar, but the attitude regarding the food safety – hygiene of the people is not the same. In general, in accordance with the levels: knowledge - attitude - behavior, awareness of the buyers on food safety-hygiene is higher than that of the sellers.

Although both buyers and sellers have had knowledge related to food safety- hygiene, but the attitude and actions to prevent food contaminated and defend health of food users are not high due to several reasons: The inspection and supervision of food safety - hygiene of the implementing agencies have got shortcomings (too few and far between, warning before checking, and so on); The advocacy and education to raise awareness of people about food safety – hygiene has done quite yet, but it has low effectiveness due to the event is usually done in the afternoon, the participants of the event are just the sellers of the markets, some of hanging location of banners and posters is inappropriate, some slogans and banners shown in the long term, confusing and general; Provisions on procedures and penalties for violators are complex and unfeasible for the actual situation (detection of signs, procedure "temprory custody - determintion -treatment", and so on); Lack and asynchronism of equipment is also one of the causes of low awareness on food safety – hygiene of the people; And factors such as income people, the ease of some officers on duty, penalty is not dissuasive, and so on.

#### **4.4. Program contents and measures proposed in raising awareness on food safety – hygiene of people**

Based on the data obtained and the reality of the region, there are following proposals recommended in ordert to raise awareness of people on food safety – hygiene:

- For the wards, where the spontaneous markets are, there need to be one person represented in the Food Hygiene - Safety Steering Board.
- Each member of the Steering Board should be assigned specific responsibilities and paid from the budget of the District
- Assigning specific tasks to units in People's Committee of the ward in charge of monitoring the activities regarding food safety – hygiene..
- Increase the number of training and retraining courses regarding food safety - hygiene, it is at least 02 times



per year.

- Strengthening the direction, supervision and inspection of food safety assurance in the study area.
- Changing the processes, test methods and sanction in supervision of food safety – hygiene.
- The District People’s Committee should consider adding additional rights to the Steering Board in some cases related to process of checking as well as penalty of violators in the field of food safety – hygiene..
- Equipping the Steering Board with inspection machines, sample detective/analytical tools and expertise training for members of the Board at the municipal level and the central level.
- Strengthening coordination and links between the Steering Board with research centers as well as the science and technology centers in Go Vap district in identifying and analysing food samples.
- Stepping up the media to raise awareness, the responsibility of the food producers and suppliers in the markets of the Go Vap district.
- Integrating the training regarding food safety – hygiene into the meetings of the local residents in order to raise awareness on food safety - hygiene.
- Integrating propagating programs on food safety - hygiene into the early week satuting meetings of the primary and junior high schools. For the high schools it should be some specialized activities on food safety – hygiene organised.
- Perform regular and drastic sidewalks clear activities, the works should be carried out every day and at a time of bustling trading activities.
- Publicising no safe food and food stall owners, which violate regulations related to food safety – hygiene by means of loudspeakers, notices pasted in and around the markets, and increase penalties for violations.
- Follow the motto "a show worth a thousand words", it should add forms of propaganda such as using large television screens show specific images and vivid illustrations related consequences of using no qualified foods, modifying some of the 11 existed slogans so that it is easy to remember and understand.
- Check regularly, at least 04 times/year, and strictly handling violations of food safety – hygiene.

## V. Conclusion

Based on the results obtained in the research implementation, it could be concluded that:

- Knowledge of fresh food safety - hygiene of the buyers, sellers and communities in/or around the spontaneous markets is quite high, fairly uniform in all classes and ages.
- Supplies informations and forms of providing the informations greatly influence knowledge both buyers and sellers of fresh food and communities as well; the simplest, repeated and visual forms of propaganda are more effective than other forms which are laden academic, complex and forced.
- Attitudes about food safety - hygiene in groups of buyers and sellers vary and depend on the goals of each group.
- There is the difference in behavior between the buyers and sellers of fresh food in the markets, behavior of people depends on their purpose; the actions, that bring the results in long-term, right seen or can only be formed in the future, requires much thought, express low levels in both of the buyers and sellers.
- Effectiveness of management and communication on food safety – hygiene in the spontaneous markets by the authorities is not high due to: process and mechanisms for monitoring implementation of food safety - hygiene in the markets are inadequate (the rule " temporary custody - determination -treatment" is im-practical as well as making it difficult for enforcement agencies); responsibility is decentralised, the active supervision of the food safety - hygiene in the markets is not assigned specifically; fines for violations of food safety and hygiene is low and no deterrent; and the number of inspectional time and test forms are few and just form. Therefore, it is a need to develop and improve the existing educational – raising awareness programme in both of contents and organisation.

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