

China Food Safety Capacity Development Needs Assessment Report

Methodology and Lessons Learned

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The Food Safety Capacity Development Needs Assessment: Methodology and Lessons Learned

Background and Objectives

1.1. The main objective of the Food Safety Capacity Development Needs Assessment Report is to describe and analyze the findings of the food safety capacity development needs assessment in China, and provide actionable recommendations that would help improve the capacity both for the regulatory sector and for the value-chain participants. The report is based on two main sources of analytical information - the authors' interviews from field visits and meetings and survey data collected in five Provinces.

1.2. Given that the Report is the outcome of the process called "food safety capacity development needs assessment", another objective of the report is to describe the methodology used and the experiences from this process, in light of the findings of the needs assessment, identify the lessons learned and recommendations that could help develop a more streamlined needs assessment in the future.

1.3. The Report is a result of collaboration between the World Bank, GFSP and CFDA teams over a period of two years. The collaboration was initiated in March 2014 at the sidelines of the International Symposium on Food Safety Standards and Risk Management in Beijing, where the GFSP jointly with international partners (FAO and WHO) held a session on capacity development needs for CFDA. That session endorsed concrete next steps for collaboration between the World Bank, GFSP and CFDA, which among others included food safety capacity development surveys in selected provinces. In addition, in December 2014, the World Bank office in Beijing and the CFDA signed a Memorandum of Understanding, which outlined the cooperation between the Bank and the CFDA in the area of food safety capacity building.

1.4. The funding for the needs assessment came from several sources. The first is the Institutional Development Fund Grant for CFDA Capacity Building provided by the World Bank to CFDA. This grant funded the participation of the Chinese experts in the needs assessment, data collection costs as well as organization of training workshops for provincial and county level officials and regulators. The second is the funding from the Global Food Safety Partnership, which funded the participation of the international experts. Third is the funding from the World Bank, which funded the participation of the World Bank staff in the needs assessment process.

1.5. This paper illustrates the process of the food safety capacity development needs assessment, by describing the methodology and identifying the lessons learned. This paper does not present any data analyses, rather it outlines how the needs assessment process had been carried out. The main audience for this paper is the World Bank staff and management working on food safety issues. The audience may also include interested GFSP stakeholders. The paper helps identify implementation challenges for such needs assessment and provide methodological guidance to the audience on how to deal with similar issues in the future.

1.6. The purpose of this paper is to describe the methodology of the food safety capacity development needs assessment, its implementation experiences and to outline lessons learned. This is important, because this is the first time the World Bank, GFSP and CFDA experts developed and implemented a methodology that was based on a survey of both regulators and food business operators in selected value-chains. This section focuses on the description of this methodology, its implementation experiences and on the challenges and limitations.

Choice of the needs assessment approach

1.7. The discussion focuses on the reasons why the food safety capacity development needs were analyzed from the point of view attitudes, practices and knowledge of regulators and food business operators, and very little attention was placed in the needs assessment process on analyzing the regulatory

and institutional system for food safety in China. The discussion below argues that despite the widely accepted framework for analyzing regulatory and institutional systems for food safety, the needs assessment team did not find it timely to focus on the system, but decided to focus on practices and attitudes of the key players in the food system. The subsequent discussion presents the reasons for this decision.

1.8. The food safety capacity development needs assessment (hereafter needs assessment) for China was designed based on the important notion that food safety capacity building requires interventions in two areas: the regulatory sector and food businesses operators. As such, the needs assessment in China took the existing legal and institutional structure as given, and assumed that the main capacity development needs were in the area of implementation of existing laws and regulations and in the area of adoption of generally acceptable food safety practices in food industry. Such approach placed emphasis on analyzing the regulators' and food business operators' attitudes, knowledge and practices, and it was different from a widely used approach of focusing the analysis of the food safety control system on the institutional structure and legislation.

1.9. Typically, in analyzing the food safety systems and policies, the experience in the literature has been to primarily focus on the country's food safety institutional and regulatory capacity¹ – as the main determinant of how the system influences the food safety practices of food business operators and relevant actions by regulators. In addition, a vast majority of previous studies at a country level have focused on the SPS capacity, as it was believed that improving the SPS capacity would help improve the countries' exports, contributing to economic development.² Trade has been and remains a major driver for food safety capacity building especially in the developing world. There are many examples, where the improved food safety capacity contributed to better trade, expanding export performance and creating jobs and incomes in developing countries³.

1.10. However, in recent years there has been a shift in food safety policies from trade related capacity building to addressing domestic issues. The key driver for this shift has been the set of food safety scares, especially the "melamine scandal" in China⁴. Such scares shifted the governments' attention to improving the domestic regulatory and enforcement environments for food safety. Such emphasis has been very strong in China, where food safety is now viewed as the key determinant of food security⁵. Therefore, new approaches are required in analyzing food safety capacity, with specific focus on determinants of attitudes and practices of consumers, producers and regulators.

1.11. In doing so, it is still important to consider how the regulatory systems and legislation influence the food safety practices, but there are no examples globally of effectively functioning food safety regulatory systems that could be wholly replicated in other countries. Most countries build their food safety regulatory systems based on the specific distinguishing factors of the country – namely the size and type of its food industry, consumer preferences and habits, demographic, etc. For export-oriented commodities, the developing countries normally structure the regulatory systems to be equivalent to that of their major markets⁶. In general, in many developing countries the food safety regulatory systems are convoluted, with unclear responsibilities and duplicative functions distributed between various government agencies. In the absence of strong traditions of inter-governmental coordination, it is difficult to ensure

¹ See for example: World Bank. (2009). Vietnam: Food Safety and Agricultural Health Action Plan. Washington, DC.

² See for example: World Bank. (2005). Food Safety and Agricultural Health Standards: Challenges and Opportunities for Developing Country Exports. Washington, DC.

³ Unnevehr, L., and L. Ronchi. Food Safety Standards: Economic and Market Impacts in Developing Countries. No. 341. Viewpoint Note, 2014.

⁴ Lam, Hon-Ming, Justin Remais, Ming-Chiu Fung, Liqing Xu, and Samuel Sai-Ming Sun. "Food supply and food safety issues in China." *The Lancet* 381, no. 9882 (2013): 2044-2053.

⁵ Social Sciences Research Council. (2014). *Food Safety in China: A Mapping of Problems, Governance and Research*. Available at <http://www.ssrc.org/publications/view/food-safety-in-china-a-mapping-of-problems-governance-and-research/>

⁶ See for example: Henson, Spencer, and Winnie Mitullah. "Kenyan exports of Nile perch: impact of food safety standards on an export-oriented supply chain." World Bank Policy Research Working Paper 3349 (2004).

coherent approaches to food safety control, as it requires strong coordination and collaboration between all agencies involved (see Box 1).

Box 1. Comparison of food safety challenges faced by developing and developed countries

Different food systems, different food safety challenges

Developing Countries	Developed Countries
<ul style="list-style-type: none"> • Food Production Practices <ul style="list-style-type: none"> • Small-holder dominated agricultural production systems • Food processing industry is dominated by small and medium enterprises, with specialization in certain food products • Food processing is still local or regional • Unregulated/uncontrolled use of antibiotics and growth enhancers • Livestock predominantly depends on pasture grown feed • Lack of cold storage facilities • Dietary preferences <ul style="list-style-type: none"> • Prevalence of traditional foods and cooking methods • Prevalence of fresh produce and meats as the basis for cooking, very small share of processed food • Prevalence of seasonal produce • Growing demand for convenience foods • Growing demand for meat and dairy products • Public concern over GMOs • Demographics <ul style="list-style-type: none"> • High speed urbanization • Larger share of young adults 	<ul style="list-style-type: none"> • Food Production Practices <ul style="list-style-type: none"> • Concentration and consolidation of production • Transportation across long distances • Centralized processing of food from many sources • Use of low-dose antibiotics to promote animal growth • Use of low-fiber animal feed that promote growth of harmful bacteria • Employment of low-income workforce without health and sick-leave benefits • Centralized production of prepared foods • Dietary preferences <ul style="list-style-type: none"> • Emphasis on raw, partially cooked foods • Use of prepared convenience foods • Use of takeout foods, restaurant leftovers • Demand for imported, year-round produce • Demographics <ul style="list-style-type: none"> • Increased population of older and chronically ill people more vulnerable to infection • Increased use of medications that suppress immune function

Source: Author

Source: Nestle, Marion. *Safe food: The politics of food safety*. Univ of California Press, 2010.

1.12. The food safety control system in China is different. First, its institutional and regulatory structure reflects both the available international best practice and its domestic experiences. Second it has been adjusted and reformed over the time to address the key pressing issues that came out of the series of food scares in recent years. China just recently completed its institutional and legal reorganization of the food safety system. The new food safety law was adopted in 2015, and the new food safety control system, including the brand-new food safety authority – China Food and Drug Administration – was established in 2013. China is currently transitioning to a risk-based food safety regulatory system, and is revising its regulations and implementation modalities. One such example of this transition is the ongoing revisions of nearly 5,000 standards (mostly output based) and their consolidation of risk-based technical regulations.

1.13. Given the recent institutional and regulatory changes, the team concluded that it would not be timely to review the food safety control system from the institutional and legal point of view, until there is considerable experience in the operation of this system. In addition, the team’s contention was that with the unique regulatory structure of China as well as China’s large size and complexity, such needs assessment should concentrate on analyzing the existing attitudes, practices and knowledge of regulators and food business operators, as such emphasis would specifically help design capacity building programs for the sector.

Description of the survey methodology

1.14. The discussion below focuses on the methodology, design and administration of the needs assessment survey. The sub-section describes the key design features of the survey and the changes that were introduced during the implementation. The section identifies the main implementation challenges that could have influenced the outcome of the surveys.

1.15. As noted earlier, the needs assessment survey was the primary data-source for the food safety capacity development needs assessment. The main objective of conducting such survey was to be able to measure the knowledge, attitudes and practices of key players in the food system, namely the regulators and food business operators. For designing a capacity development plan for the sector, it was essential to ensure that the needs assessment is focused on those stakeholders who would be targeted by the capacity development plan.

1.16. Therefore, to maintain the emphasis of the survey on regulators and food business operators, and to be able to focus on the big picture at the same time, the following key design features were introduced. The main design feature for the survey was that it would not be possible to conduct a representative survey. For many reasons, but predominantly including cost and time constraints, the representative survey would have been difficult to organize. Therefore, a decision was made to select a non-representative sample. Given CFDA's interest in capacity building for selected value chains that present high public interest, it was decided to concentrate the survey efforts in provinces with a dominant focus on dairy, pork and aquaculture production. Such a distinction would help ensure that the value-chain analysis focuses on the priority value-chains, and helps identify the food safety issues in industries that receive the highest public attention.

1.17. Based on the selection of the value chains, the CFDA proposed to conduct surveys in three provinces – Heilongjiang, Jilin and Shandong. These provinces were selected because their provincial FDAs were interested in the needs assessment, and because their dominant food industries were respectively dairy, pork and aquaculture. The selected provinces also demonstrated varied experiences and capacities of the provincial FDAs in food safety supervision. The CFDA believed that these provinces are at different stages of adopting the central government reforms, and it was interested in seeing how each province would perform in the needs assessment.

1.18. Going forward and given the interest in other provinces, the CFDA decided to add two more provinces to the survey – Sichuan and Fujian. These two additional provinces were selected based on two factors. First of all, they distinguished themselves by the more advanced provincial and county FDAs. Both at the province and at the county level, the FDAs demonstrated more advanced practices and experiences in dealing with food safety issues than in other provinces. Second, these provinces had diverse and more developed food systems and overall were more economically developed than the other three provinces. In addition, the CFDA believed that both Sichuan and Fujian have introduced some exemplary programs for food safety control, which could be replicated in other provinces. As such the CFDA was interested in the analysis of case studies and lessons learned from these provinces.

1.19. When designing the surveys, it was envisaged that two separate surveys would be conducted. For the regulatory survey, it was envisaged that regulators from various levels (province, county, and township) would be surveyed using one sample questionnaire. The regulatory questionnaire covered many aspects of the enforcement system, including the management and planning of inspections and carrying out inspections. Some of the questions were trying to understand the perception that regulatory staff have of businesses and these perceptions were relevant at any level of operation. It was envisaged that the interviewees would be selected jointly by the expert team in consultation with the CFDA and provincial FDAs. However, during the implementation some procedural changes were made. It was decided that the interviewees would be selected by the provincial FDAs. It was also decided that the interviewees would be invited to a meeting room, where the domestic experts would explain the survey objectives, and where subsequently the interviewees would complete the questionnaires. Ideally, in such surveys the interviewers would allow interviewees some individual time or would create an environment where the confidentiality of answers could be ensured. However, this was not done in the case of the

regulatory survey. In addition to the completion of the questionnaires, the international experts also had face to face discussions with representatives from the different regulatory bodies in each Province.

1.20. For the value chain survey, the sample was divided in three categories: farming, distribution and manufacturing. The farming enterprises are predominantly those who are engaged in the primary production. The distribution enterprises are those that are predominantly engaged in retail, wholesale, and transport of food. And finally, the manufacturing enterprises predominantly engage in the food processing or manufacturing. As in the case of the regulators, the sample composition was not envisaged to be representative. However, it was preferable to have a sample with good representation of the various sizes of three types of enterprises. In reality, the sample predominantly consisted of large enterprises and, in most cases, large agro-holdings which combined two or even all three categories of enterprises. In terms of the administration of the questionnaire, as in the case of the regulatory survey, the questionnaire was administered in a meeting room with invited representatives of the companies. Normally, such surveys require one-on-one discussion between the interviewer and the interviewee. Such discussions are normally held in the enterprises, where the interviewee has access to the required information, such as employment, sales, revenues etc. During the face-to-face discussion, the interviewer also guides the interviewee when there is insufficient clarity in the questions. Unfortunately, all questionnaires were self-completed by the interviewees, and in most cases they were administered similar to the regulatory survey, i.e. in a meeting room with other interviewees present.

1.21. The above discussion described the survey design and administration and outlined specific challenges and limitations of the needs assessment surveys. The revisions in the survey administration process that occurred during the implementation may have influenced the outcome of the surveys. The key issues with the surveys were that they constituted a non-representative sample and that most of the administration was done by the interviewees themselves in an open meeting room. The next section describes the outcomes of the survey.

Description of the survey outputs

1.22. The aim of the Regulatory survey was to assess the capacity of the current food safety enforcement system in China to adapt to a risk-based and business-focused system of enforcement. The total sample size was 237, spread across five Provinces and across the range of enforcement staff. From each Province, there was a spread across Provincial FDA, Municipalities, Counties, Districts and Towns. Most are FDAs but there are also some respondents from Livestock, Agriculture or Aquaculture Bureaus.

1.23. The total sample size for the value chain survey was 195, spread across five Provinces. From each Province, there was a spread across Farming, Distribution and Manufacturing. The value chains focused in this survey were Meat (Jilin and Sichuan), Dairy (Heilongjiang), Aquaculture (Shandong) and Tea (Fujian). Although the survey intended to evenly cover businesses in different sizes, the actual responses collected were primarily composed of medium to large enterprises. Small and micro enterprises are included, but their representation is negligible. Thus broad conclusions and generalizations may not be feasible.

Description of the questionnaire design

1.24. Two questionnaires were developed, respectively for the value-chain and regulatory surveys. The questionnaire for the value chain survey consisted of two parts. The first part included general questions about the company, including its size, revenues, how it works with suppliers etc. The second part of the value-chain questionnaire included questions assessing the company's food safety practices. It was originally envisaged that the questionnaire would be administered by a food safety expert, who would interview the company representative for the first part of the questionnaire, and then would tour one of the facilities of the company to make the assessments for the second part of the questionnaire. However, given that the questionnaires were self-administered, the second part of the questionnaire became more of a self-assessment.

1.25. The regulatory questionnaire was developed in a way that allowed the administration of the survey both through face-to-face interviews and through self-administration. Since the aim of the regulatory survey was to measure individual respondents' attitudes and practices pertaining the food safety control system, such approach for the questionnaire was reasonable. In addition, it was easier to get access to regulators than to food business operators.

Timeline for the survey

1.26. The first mission to China was in March 2014, during which the methodology of the survey was discussed with CFDA. Contact with CFDA was through their International Division, rather than directly with parts of CFDA dealing directly with inspections or with food safety. CFDA also appointed a team of local experts, led by Professor Chen Junshi of the China Food Safety Assessment Center. Mr Rong Ji of CFSA covered the Regulatory aspects and Ms Ding Shaohui of the China National Food Industry Association covered the Value Chain aspects. On that first mission, there was a brief field trip to Jilin Province.

1.27. The next mission was in September 2014 when the survey was carried out in Jilin and Heilongjiang Provinces. At this stage, it was unclear whether there would be a third Province. This was added and a third mission took place in February, 2015, during which the survey was carried out in Shandong Province. At this stage, the results of the survey in the first two Provinces were retained by CFDA and there was no analysis done either by the international or the local experts. A fourth mission took place in June 2015, originally intended as the final mission, which would conduct the analysis and agree both results and the way forward. However, CFDA had decided to add another two Provinces so this mission included field visits to Sichuan and Fujian, where the survey was again carried out.

1.28. A fifth mission took place in November 2015, during which the data was released by CFDA and the GFSP team had a few days to translate and analyse the results. CFDA was initially reluctant to release the raw data but it was finally made available, but under condition that it was shared only within the Mission team and the local experts. An initial discussion was held with the local experts and there was then a short workshop on the results, hosted jointly by the international and local experts, to which CFDA and two Chinese academics were invited. The leader of the CFDA team did not attend but sent a message that the results were not to be disclosed beyond that workshop. There was no direct discussion with the CFDA team, other than the contact person, during that final mission.

1.29. Attempts to set up another mission in early 2016 failed but discussions at a higher level with a Vice Minister in CFDA removed the ban on disclosure to allow the results to be presented to the GFSP Governing Council on 23rd May 2016. The Report on the regulatory survey will be sent to CFDA by the end of July 2016, with the intention of holding a workshop in Beijing, probably in November 2016, to disseminate the results and agree any further action. The parallel capacity-building exercise within CFDA which involved Study Tours of Australia / New Zealand, the EU and then USA / Canada is also intended to close with a strategy workshop, which would be the same workshop. It should be noted that the members of the Study Tours were not involved in the Needs Assessment Survey, other than members of the International Division.

Conclusions and lessons learned

1.30. Despite the deviations in the survey implementation, there was significant data collected which provide valuable information about food safety practices and the readiness of enforcement staff to adapt to the new risk-based approach to enforcement. The discussion below focuses on the main lessons learned and implementation challenges for the needs assessment:

- The food safety capacity development needs assessment focused on the attitudes, practices and knowledge of key players in the food system. Apart from narrowly focused research projects, there have been no such food safety capacity assessments at the policy level with emphasis on these attributes. Therefore, the needs assessment in China was unique in the way it treated the capacity development process – it considered the regulatory and institutional system as given,

and focused on identifying capacity development needs for the enforcement staff and food business operators.

- The needs assessment was based on a survey of key players. It was different from other similar studies at the policy level, in that it used three sources of data. The authors conducted numerous interviews with regulators, food business operators and industry experts – similar to other previous studies. The authors also used widely available and published secondary information – analytical reports, scientific publications, news articles etc. However, the main contribution of the needs assessment was that the main information came from the primary sources, i.e. from stakeholder surveys.
- Although implementation of the survey deviated from good practice recommendations, overall data quality was sufficient to make practical conclusions. As was described above, the data collection methodology was adjusted during the survey administration process. However, the data collected provided good enough information to make practical conclusions and recommendations for moving forward.
- Survey administration could be improved in future similar studies. One lesson learned from this exercise is that the survey administration and preliminary data analysis should be separate from the technical team. The most optimal way to approach to survey administration is to outsource it to a specialized third-party, which would be able to follow the methodology and guidelines and ensure quality data collection.

1.31. In addition, working relations with counterparts is always a key issue and this project had issues in that regard. There were definite advantages in working with a body as powerful as CFDA since they could open doors and mobilise activity quickly. However, there were problems in the level of engagement. The normal engagement was through the International Division and not directly with those inside CFDA with responsibility for delivering the outcomes for which capacity was being assessed. This was probably the main reason for the much delayed timeline and changes of plan, with more Provinces being added. But the GFSP team was not only dealing at one remove from the key players in CFDA. It is possible that the really key players are at Provincial or even Municipal / County level. Responsibility for implementing the new Food Safety Law lies at County level government and above. CFDA carries ultimate political responsibility for the success or failure of the new Law but it is not clear how that responsibility is being managed within CFDA. There were two meetings with CFDA officials, in addition to the International Division, plus meetings with CFDA officials on the Study Tours, but it was never clear how these people's work was linked to implementing the Law.

1.32. Working effectively in China has its challenges and this project engaged four levels of government, from national down to township level. There was also in the background the possibility of a large loan project as a way of delivering any capacity-building identified in the needs assessment. This certainly attracted the interest of the Provincial and County / Municipal governments and the level of engagement with them during field trips was enthusiastic. The drawn-out nature of the timeline was determined by decisions over which Provinces were to be part of the survey and the issues which that presented to CFDA were well beyond the remit of the GFSP team

1.33. It should be noted that the parallel capacity-building under the IDF grant involving the Study Tours was similarly drawn-out, with the final Study Tour occurring in June 2016 and a Strategy Workshop still being planned.

1.34. The difficulties in the level of engagement came to a head in November 2015 when the raw data was finally released but CFDA displayed no interest at all in the analysis and results, beyond allowing the local experts to engage in the analysis and also allowing two academics to comment. It has been an express condition of the project that CFDA would retain control of the data and so they were entitled to restrict access. However, the position as expressed by the International Division was simply to bury the results. Again, what lay behind that decision within CFDA is unknown but it shows an apparent lack of interest within CFDA in the results of the survey. It is possible that CFDA has been using the data within its organization and is keeping it confidential but there is no evidence to that effect.

1.35. One further factor may simply be the stage of development that CFDA is at as a government ministry. It was established only in 2013 and may still be finding its feet. Discussions on developing an application for a loan project arising out of the needs assessment survey demonstrated significant inexperience on CFDA's part, which may have indicated a wider problem within the organization.

1.36. In terms of lessons learned, it is perhaps simplistic to say that there must always be clarity of purpose and motivation within the government counterpart. But there is no doubt that the level of engagement with the counterpart was occasionally frustrating, yet also occasionally productive, and the final level of dis-engagement was a regrettable response to the survey analysis.