A Public-Private Partnership for Data Sharing on the Impact of Food Safety Capacity Building

Clare Narrod* and Andrea Stumpf**

JIFSAN* **Structured Partnerships
Main points

• Given changing regulatory requirements and the joint need to understand impact of past efforts
  – This is the ideal time to have discussions and build a platform to share existing data to measure the impact of food safety capacity building efforts well as a partnership to collect additional agreed upon data not currently being collected.

• Paper
  – Proposes an approach to measure the impact of food safety capacity building efforts
  – Provides a rationale for forming a PPP to share data
  – Presents a skeletal framework for a PPP.

• Though the proposed PPP is focused initially on the impact to U.S. consumers, it has global dimensions from the start and is envisioned to develop a global focus over time.
Rationale for Measuring Impact of Food Safety Capacity Building Efforts

• **Measuring the impact** of training and capacity building efforts on food safety can:
  – **document** and **examine** past efforts;
  – **justify** and **galvanize** future efforts;
  – **identify new focus/improvements** for future efforts

• Such efforts benefit **everyone**: consumers, producers, distributors, and regulators;

• Improvement in food safety can result from collective attention to capacity building efforts by **public and private sectors globally**
Why care?

- Serves as a linchpin for investments to improve public health.
- Helps private sector show corporate responsibility.
- Helps public sector collect trusted, quality-controlled data.
- Takes FSMA to the next level.
- Creates a global public-private good.
Chain of Food Safety Capacity Building Impacts

**Other Capacity Building Activities**
- Market incentives for country agencies
- Funds to train for countries
- Local support of training
- Market and regulatory incentives for farmers
- Financial aids to farmers
- Local training efforts
- Market and regulatory incentives for farmers
- Research on low-cost technology and practices
- Resources to finance food safety investment
- Capacity building activities for other food market actors

**Impacts on Welfare**
- Consumers: nutrition and health
- Producers: income and livelihood

**Training Impact Chain**
- Training: International Train-the-Trainer program

**Activity Monitoring and Impact Measurements**
- Number of training sessions
- Number of participants trained
- Number of countries benefited from the program

**Immediate**
- Number of trainees become qualified local Lead Trainers
- Number of training material adapted and translated to local language
- Number of training delivered
- Number of farmers trained

**Short-run**
- Objective measurements on farmer attitude, knowledge, and skills to implement good practices before and after trainings
- Farmers' self-reported attitude, knowledge, and skill changes after training

**Medium-run**
- Farm gate inspection and audit results and statistics
- Sampling and testing products directly from farm
- Food safety incidents tracing back to farms with good practices
- Third-party inspection reports/audits

**Long-run**
- Living standard statistics on farming households
- Health statistics on food safety incidents and outbreaks
- National statistics on poverty, income, and nutrition

**Data Held by the Training Organization**
- Training organization’s monitoring and evaluation program; reports from Lead Trainers

**Data Held by Other Food Safety Stakeholders**
- Country and international organization partners with JIFSAN; U.S. FDA; third party certification program; research institutes and other non-government organizations.
Trainers can readily link to these chain of food safety capacity building impacts.
Example: International Trainings
Example

Distributions of Knowledge Test Scores before and after Training

Pre Distribution  Post Distribution  Pre Average  Post Average
Need to link to other data linking to chain of food safety capacity building impacts

**Impacts on Welfare**
- Consumers: nutrition and health
- Producers: income and livelihood

**Impacts on Outputs**
- Medium-run:
  - Farm gate inspection and audit results and statistics
  - Sampling and testing products directly from farm
  - Food safety incidents tracing back to farms with good practices
  - 3rd party audit/inspection reports

**Impacts on Attitude, Knowledge, and Skills**
- Short-run:
  - Objective measurements on farmer attitude, knowledge, and skills to implement good practices before and after trainings
  - Farmers’ self-reported attitude, knowledge, and skill changes after training

**Data Held by Other Food Safety Stakeholders**
Country and international organization partners with JIFSAN; U.S. FDA; third party certification program; research institutes and other non-government organizations.
PPP as an innovative solution

• Attempts to measure impact of current food training efforts which appear to be falling short of measuring impact
<table>
<thead>
<tr>
<th>Sector</th>
<th>Category</th>
<th>Possible Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainers</td>
<td>Training</td>
<td>• Number of training sessions, number of participants trained, number of countries benefiting from training programs</td>
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</table>
|            | Impacts of capacity building      | • Number of trainees becoming qualified lead trainers  
|            |                                   | • Number of training material adapted and translate to local languages  
|            |                                   | • Number of trainings delivered  
|            |                                   | • Number of farmers or processors trained  
|            |                                   | • Number of producer producers getting PSA or FSPCA certification                                                                                  |
|            | Impacts on knowledge, attitude skills | • Surveys on producer’s/processors knowledge, attitude and skills to implement good practices before and after trainings                             |
| Regulators | Monitoring for problems/progress of efforts | • Rejection, Inspections, Compliance, Actions, Recalls, Summary, Import data  
|            |                                   | • Food safety incidents traced back to farms/processors  
|            |                                   | • Data on FBDs outbreaks  
|            |                                   | • Data on capacity building progress  
|            |                                   | • Data on food safety informatics program progress                                                                                               |
|            | Monitoring of welfare impacts     | • Living standard statistics  
|            |                                   | • Health statistics of FBDs  
|            |                                   | • National statistics on poverty, income, nutrition                                                                                               |
## Potentially Useful Data Sets by Private Sector

<table>
<thead>
<tr>
<th>Category</th>
<th>Possible Measures</th>
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<tbody>
<tr>
<td><strong>Monitoring measurements of production outcomes,</strong></td>
<td><strong>Farm gate and manufacturer inspections, third party audit reports</strong></td>
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<td><strong>As well as impacts on behavior</strong></td>
<td><strong>Product sampling and testing of products along the value chain, trackbacks</strong></td>
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<td></td>
<td><strong>Number of products going through the “first pass” quality check without having to be</strong></td>
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<td><strong>reworked or diverted to a lesser value stream,</strong></td>
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<td><strong>Number of products on hold,</strong></td>
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<td><strong>Number of marketplace actions taken based on customer complaints or recalls,</strong></td>
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<td></td>
<td><strong>Ability to attract new customers and enter new markets that could be good measures</strong></td>
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<td><strong>of impact of capacity building efforts.</strong></td>
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<td><strong>Internal control measures for a company</strong></td>
<td><strong>Development of facility internal control measures,</strong></td>
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<td></td>
<td><strong>Increased number of analytical test results within acceptable values,</strong></td>
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<td><strong>Improved audit scores through internal or 3rd party audits,</strong></td>
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<td><strong>Improved “risk” score amongst those companies who create risk scores for their plant</strong></td>
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<td><strong>and/or suppliers,</strong></td>
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<td><strong>External certification of the facility/operation,</strong></td>
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<td><strong>Decreases in frequency of required audits,</strong></td>
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<td><strong>Reductions in regulatory violations</strong></td>
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<td><strong>Monitoring measurements of production outcomes,</strong></td>
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Data Sharing Challenges

- Data belongs to different organizations or groups.
  - Need to be justifications to share data

- Secondary data is collected for specific purposes and not directly for measuring the impact of food safety capacity building.
  - Often not in a form that facilitate attributing changes to a specific food safety capacity building effort

- Private sector data likely already being collected, however:
  - Belongs to individual companies and often considered proprietary, sensitive business information.
  - To share data need justification and motivations for these companies
FDA Commissioned Report

Released Jan 15, 2020
<table>
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<th>LEVEL OF ACTION</th>
<th>TOPIC</th>
<th>ACTORS</th>
<th>RECOMMENDATION</th>
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<tbody>
<tr>
<td>Global</td>
<td>Food safety</td>
<td>FAO and WHO</td>
<td>The Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) should convene biennial meetings for food safety regulators.</td>
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<td>Medical products</td>
<td>WHO</td>
<td>The WHO should expand prequalification to include treatments for cancer, diabetes, and other diseases with a high global burden.</td>
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<td>Global health and development</td>
<td>Donor organizations working in health and development</td>
<td>Development partners should encourage countries’ participation in regulatory benchmarking assessments, the development of institutional development plans, and reports on progress. Assistance should be targeted to priorities identified in benchmarking assessments.</td>
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<td></td>
<td>Development partners should support countries and organizations in pursuing greater collaboration for regulating food and medical products through harmonization and mutual recognition of data or standards, equivalence agreements, and regulatory reliance.</td>
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<td></td>
<td>Development finance institutions such as the United States International Development Finance Corporation, the International Finance Corporation (IFC), the UK CDC Group, and the European development finance banks, should create vehicles to finance producers, distributors, and retailers interested in meeting regulatory standards. This would involve advisory services and concessional financing.</td>
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<td>NIH, FDA, and USAID</td>
<td>The National Institutes of Health, in collaboration with the FDA and the U.S. Agency for International Development, should develop a network of Global Centers of Excellence in Regulatory Science for research and capacity building.</td>
</tr>
<tr>
<td>National</td>
<td>Government and financing</td>
<td>National governments, their leaders</td>
<td>National governments should guarantee in legislation that national regulatory agencies be independent and financially viable, with statutes that encourage cooperation with other agencies and require a scientific basis for decision making.</td>
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<tr>
<td>Agency</td>
<td>Risk-based regulation, communication, and information</td>
<td>Food and drug regulatory agencies</td>
<td>National regulatory authorities should take a risk-based approach to the regulation of food and medicines. This includes:</td>
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<td>a. Developing effective data systems to systematically identify areas of greatest risk;</td>
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<td>b. Participating in research, data-sharing, technology adoption, and training activities with international partners;</td>
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<td></td>
<td>Informal markets</td>
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<td>c. Growing capacity to assess the health and economic impacts of regulation, and using this information to inform actions to protect public health;</td>
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<td></td>
<td>Management and collaboration</td>
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<td>d. Communicating about risks, including the uncertainty around them, especially during crisis;</td>
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<td>e. Communicating the ways regulations improves quality, safety, and access.</td>
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<td>National regulatory agencies should use evidence to guide strategies to reduce the risk posed by informal markets. Strategies include accreditation or licensing, consumer education, and increasing competition from regulated products.</td>
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<td>National regulatory authorities should take advantage of global tools to support regulatory actions. Examples include Resources from UN agencies (WHO prequalification and Codex standards) and the third-party standards increasingly used in food and agriculture.</td>
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<td>National regulatory authorities should determine which functions are most effectively and efficiently carried out directly by the agency and which can be delegated to state or local authorities.</td>
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Table 1 Recommended actions to be taken. Some recommendations have been condensed. Full recommendations can be found in the report.
It takes structure and design to get from A to B.

Key words: Fit-for-purpose, sustainable, efficient, impactful. There’s no one answer – it’s all contextual.
It’s about looking for synergies in the sweet spot.

symbiosis and synergies = from the Greek, living / working together

aligned and balanced mutualism, mutually beneficial, mutually reinforcing
Motivations
Specific Interests
- Increase sales
- Manage reputational risk
- Improve brand

Incentives
Shared Interests
- high compliance
- efficient application
- standards
- verification
- training
- prevention
- harmonization

Benefits
Realized Interests
- safe food
- no spill-overs
- strong market

Find the sweet spot as partners.
FSMA is a market-driven regulatory framework – the public-private dialectic is already built in.

- Food safety is not optional; either the market steps up or regs get stepped up.
- Food safety is not about competition; everyone is interested in a preventive approach – fewer lives lost.
- Sharing is essential for training, environmental monitoring, managing false positives, compliance, and best practices.
- Food safety capacity building sharing is a GLOBAL PUBLIC-PRIVATE GOOD.
If mandatory rules correct market failures, can voluntary tools create market advantages?

Enter the PPP for sharing data to measure food safety capacity building impacts:

The Zero Version
Data sharing
Regulatory framework
Industry training
PPP
Data review

THE GREAT FEEDBACK LOOP

Zone of vulnerability
Last mile is always the hardest

Safe zone for sharing
Transparency without exposure

Strategic alignment around standards
Incentives for sustained sharing

FSMA Phase 3 M&E

Safe Food

TURNING RISKS INTO REWARDS

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Next Steps

• Widely circulate white paper “A Public-Private Partnership for Data Sharing on the Impact of Food Safety Capacity Building”

• Publish shorter version for academia and FDA

• Hold listening sessions with interested stakeholders in DC, mid/west-west, and abroad

• Develop plan forward with various subgroups

Incremental Approach: Start with focus on data sharing and database to avoid diluting efforts; keep open to adding related elements over time, including training and capacity building support.
Main messaging

1. There is a need to measure the impact of capacity building efforts

Measuring the impact of training and capacity building efforts on food safety can:

- **document** and **examine** past efforts;
- **Justify** and **galvanize** future efforts;
- **identify new focus/improvements** for future efforts

- Such efforts benefit **everyone**: consumers, producers, distributors, and regulators;

- Improvement in food safety can result from collective attention to capacity building efforts by **public and private sectors globally**
Main messaging

2. Motivation of data sharing

• Allows us to see improvements overtime;

• Associate the improvement with fundings and personal;

• Allows us to understand the weak links on a macro scale by comparing regions need training and regions receives training;

• Allows us to understand the weak links on micro scales such as the quality of training design and delivery; etc
Main messaging

3. A partnership is needed to measure the impact with existing data and to identify additional data needs

- Public sector can work with public sector providers and inspectors, but the pictures is incomplete;

- Public sector can fund additional studies, but that costs tax payer money;

- Private sector already is collecting valuable data and duplicate efforts and funds to collect additional data is costly;

- Don’t need to collect everything; need to work together to identify most important data needs to measure impacts of interest on the short, medium, and long term by different stakeholders;
Main messaging

4. Proposed partnership will begin by

- Holding listening sessions with stakeholders to identify concerns and opportunities;

- Forming subgroups with specialist in public and private sector will be formed to develop solutions to concerns so as to facilitate data sharing;
Main messaging

5. Data sharing principles

• Data sharing will be voluntary;

• Data will be open sourced;

• Data will be used in analysis to inform and refine future capacity building efforts (and possible regulatory training requirements);