

Short Note for Brainstorming Discussion

GFSP's Business of Food Safety Index – 'Food Safety Index.' (title TBD)

1. EXECUTIVE SUMMARY

The Benchmarking the Business of Food Safety Index project will provide data driven, holistic, and actionable information tools for policy makers and the private sector around the world to better identify legal and regulatory gaps and value chain deficiencies which are impeding food safety and health and human development. The indicators will also help governments implement reforms that facilitate regulatory transformation by providing comparative models of good practice and reliable ways to measure progress over time. Ultimately, this index seeks to assess food safety capacity on a country level, catalogue food safety capacity changes over time, and catalogue corresponding changes in food safety outcomes.

2. BACKGROUND

The Global Food Safety Partnership ("GFSP") was launched in 2012 as an innovative public-private initiative dedicated to supporting global cooperation for food safety capacity building for improved food safety systems, agri-food value chains, economic development, and public health. The GFSP is facilitated by the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), and builds on earlier Bank cooperation with the Asia-Pacific Economic Cooperation Food Safety Cooperation Forum (APEC). It promotes food safety systems based on prevention underpinned by science to improve the effectiveness of food safety capacity building investments and convenes key players to assess the food safety landscape, prioritize and take actions that are scalable and sustainable, share lessons and leverage resources from varied sources.

The Doing Business Index and Enabling the Business of Agriculture

Since its initial publication in 2003, the World Bank's signature Doing Business index has effectively used indicators and case studies to encourage regulatory change in the areas of business registration, operation, and protection of property rights. The index identifies where business regulations are reasonably efficient in design, as well as where they are transparent and accessible to those for whom they are intended. This benchmarking provides policymakers with new incentives to improve the business regulation for their economies and to showcase models for reform. More than 2,000 regulatory reforms globally have subsequently been recorded. While the food safety index is not expected to rank countries, it is similarly hoped that the data will help to promote policy change and targeted investments that will improve food safety at the country level.

The Doing Business (DB) analytical approach offers a proven tool to support decision-making by policy makers in the field of food safety through its established methodology for measuring laws and regulations, its informant network and participant convening power, and its effective dissemination strategies and product branding. The approach has already been effectively applied to other sectors, and it will serve as a crucial tool for food safety development as well. The DB methodology leverages its impact by providing actionable indicators, an effective dissemination strategy, and strong product branding. Increasingly, as client countries become more sophisticated, they are only prepared to make changes in regulations and their implementation when they have evidence of their impact on outcomes.

Furthermore, the Doing Business framework has shown its versatility and utility in the numerous iterations it has since been in. In every instance, the Doing Business framework has proven to be an indispensable tool that is data driven, holistic, and actionable, for governments, the private sector, and key decision makers. The current number iterations are as follows:

- Doing Business provides objective measures of business regulations for local firms in 183 economies and selected cities at the sub national level (www.doingbusiness.org)
- Enterprise Surveys provide the world's most comprehensive company-level data in emerging markets and developing economies. Business data are available on 130,000 firms in 135 countries (www.enterprisesurveys.org)
- Women, Business and the Law measures legal gender parity for entrepreneurs and workers in 141 economies across six topics. (wbl.worldbank.org)
- Investing Across Borders provides selected indicators of foreign direct investment regulation in 87 economies. (iab.worldbank.org)
- Sub national Doing Business reports capture differences in business regulations and their enforcement across locations in a single country. They provide data on the ease of doing business, rank each location, and recommend reforms to improve performance in each of the indicator areas.
- **Enabling the Business of Agriculture** examines and monitors regulations that impact how markets function in the agriculture and agribusiness sectors. Its aim is to promote smart regulations that ensure safety and quality control as well as efficient regulatory processes that support thriving agribusinesses.

Following the success of the Enabling the Business of Agriculture index, the idea of a 'Food Safety Index' stems from a desire to develop an acceptable suite of indicators that describe the food safety condition of a country. This information is not intended to allow countries to compare themselves against other countries, but to allow a country to evaluate its own food safety performance over time. It would also serve as a platform for strategic discussions on what actions should be taken and by whom – the public and private sectors, to achieve positive food safety impacts.



Figure 1: Evolution of Doing Business Index

The Fundamental Imperative for Food Safety

Foodborne diseases (FBD) are illnesses caused by contaminated, or naturally harmful, food or drink. FBD is the result of ingestion of food safety hazards. A food safety hazard is anything in food that can harm consumers' health. Hazards are often classified as biological (for example bacteria or parasites), chemical (for example heavy metals or pesticides) and physical (for example fragments of metal or glass).

Many FBDs are zoonotic (that is diseases transmissible between animals and people). Some are also new and emerging diseases (that is, novel diseases or diseases changing in their hosts, geography or impacts (such as bovine spongiform encephalopathy (BSE) or new variants of highly pathogenic avian influenza)). Emerging diseases have the potential to cause pandemics, or widespread diseases affecting large numbers of people. Other issues associated with food consumption and production and closely linked to food safety, include antimicrobial drug resistance, food allergies and intolerances, food adulteration, food fraud and food waste. [Food Safety and the Sustainable Development Goals]. FBD has a health burden comparable to malaria, HIV/AIDS or tuberculosis (Havelaar et al., 2015).

A Neglected Development Priority

Food safety is considered an essential part of food security. However, the burden of FBD has not received the appropriate level of prominence within the development community. This may be partly due to the lack of evidence on the burdens of FBD (health and other) and the costs and benefits of addressing FBD. Indeed, systematic and comprehensive evidence on the health burden of FBD in developing countries started to become available only recently. The landmark recent assessment of the global burden of FBD, conducted by the WHO considering 31 hazards for which there was enough information to allow global burden estimates, was published in 2015 (Havelaar et al. 2015).

In Vietnam, a nationally representative study found that food safety was the issue of highest concern to citizens, more important than governance, health care or education (USAID, 2015).

Although multiple organizations and institutions have worked on food safety from different approaches, to date, there is no product that functions as a repository of food safety indicator data which can serve as a benchmarking tool, is holistic and data driven, and can provide actionable information to decision makers. Below is a sample of the efforts of other organizations in Food Safety and a cursory analysis of their gaps:

- **EIU** – The Economist’s [*Global Food Security Index*](#) is an important product that is both holistic and global in scope. Nevertheless, a good portion of its indicators focuses on broader topic areas of food security such as: nutritional intake of the population, affordability, access to financing for farmers, and quality of physical infrastructure. The portion of the index which does hone in on food safety lacks sufficient focus on the value chain and neglects key indicators such as for example: percentage of firms with ISO certification and HACCP programs, availability of food science in university curriculums, and availability of laboratories for sample testing. While EIU's index is a commendable first step, we believe it is insufficiently focused on the key food safety indicators which would allow the index to be an actionable tool for stakeholders. Nevertheless, it is believed that some indicators of EIU's Global Food Security Index could be incorporated into GFSP's proposed Food Safety Index.
- **FAO** – Focuses on further developing the Codex Alimentarius, a science-based code adopted through global consensus. FAO also has created diagnostic tools, such as [*“Strengthening national food control systems - Guidelines to assess capacity building needs,”*](#) (2006). In 2012, FAO facilitated a consultative workshop *Guidelines for Development of Food Safety Policies for Countries in Asia*, where potential indicators for Food Safety capacity were explored, but no conclusive recommendations were made. Additionally, FAO along with WHO is also currently piloting a food control assessment tool which is structured around four dimensions, and will have a total of 185 assessment points. To conclude, although FAO has explored the area of food safety, particularly promoting best practices in a localized context, and is in the process of piloting new tools, FAO currently does not have a holistic index of Food Safety indicators data across multiple countries.

- **OIE** – Has worked closely with FAO to ensure that the Codex Alimentarius incorporates their scientific expertise in standards for livestock. The OIE has produced studies and prescriptive solutions, (Terrestrial Animal Health Code, the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, the Aquatic Animal Health Code and the Manual of Diagnostic Tests for Aquatic Animals) but, similarly, does not possess a holistic survey of food safety indicators data across multiple countries, nor beyond the scope of livestock.
- **UNIDO** – has [focused](#) on waste reduction, process optimization, and factory rehabilitation projects to improve product quality help food companies increase their income, food safety systems, and generate new employment opportunities. To promote food safety, UNIDO assisted in implementing a regional conformity assessment on food safety systems in the Arab World ([SAFE](#) - Arab food safety for trade facilitation). Nevertheless, similar to the aforementioned organizations, UNIDO lacks an assessment or index in food safety that is global in scope and comprehensive in food safety indicators.
- **STDF** – The Standards and Trade Development Facility has provided public officials and private companies with consolidated and institutionalized public–private cooperation [strategies](#). STDF has also created publications on [PPPs](#), [climate change](#), and [capacity evaluation tools](#), all in the context of food safety systems. Nevertheless, similar to the aforementioned organizations, STDF lacks an assessment or index in food safety that is global in scope and comprehensive in food safety indicators.

Conclusion: to date, despite the efforts of multiple organizations, there is no product that functions as a repository for food safety indicator data which can serve as a benchmarking tool, is holistic and data driven, yet is simple and can provide actionable information to decision makers. This suggests that creating such a platform is at a minimum difficult. However, the GFSP would like to explore the creation of such a product as it can add significant value to an action oriented agenda for addressing food safety globally.

3. POTENTIAL INDICATORS

The Food Safety Index

The potential Food Safety Index could focus on food safety from “farm to fork” in countries around the world. To capture the complexity of the food value chain, three areas of analysis or “pillars” are suggested:

- I. Laws, Regulations, Institutions
- II. Food Industry Value Chain and Trade
- III. Health Outcomes and Development Impact

The first two pillars would attempt to measure the food safety capacity of the public and private sectors, while the third pillar attempts to measure food safety outcomes. Furthermore, Pillar III acts as a measure of efficacy for the food safety index through its indicators - improvements in food safety capacity (Pillar I and Pillar II) would correlate with improvements in food safety

outcomes. This feature of including a measure of outcomes over time allows for a continual improvement and refinement of indicators to ensure they are correlated with changes in outcomes over time. Ultimately, this index seeks to assess food safety capacity at the country level, catalogue changes in food safety capacity over time (Pillar I, Pillar II), and highlight corresponding changes in food safety outcomes (Pillar III).

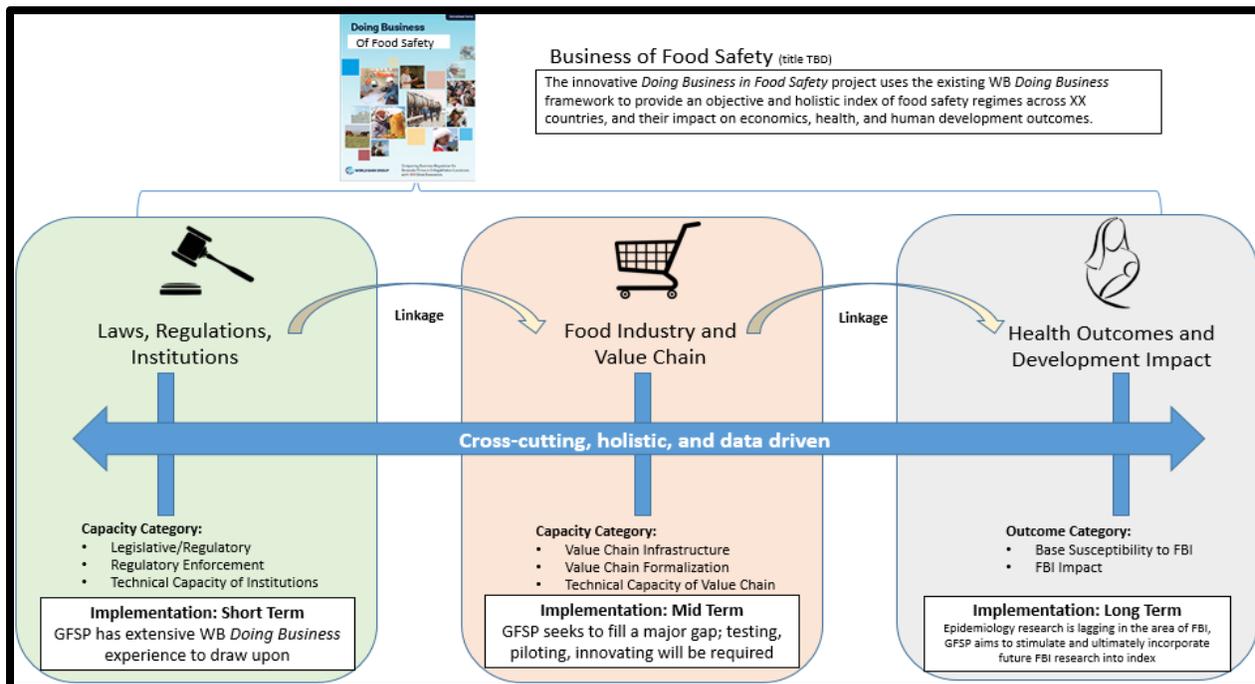


Figure 2: The Business of Food Safety Index Overview

Potential Indicators

Below, is a list of potential indicators for illustrative purposes only. As mentioned earlier, a process of evaluation, investigation, and piloting will be conducted for each indicator, to reach a balance between comprehensiveness, scalability, and availability of data.

Pillar I: Laws, Regulations, and Institutions

Capacity Category	Possible Indicators
1. Legislative/Regulatory/Institutional Capacity	<ul style="list-style-type: none"> • Agency to ensure the safety and health of food (source: EIU) • Sufficient limits to food additives, pesticides, veterinary drugs, heavy metals, processing aids, mycotoxins, antibiotics

	<ul style="list-style-type: none"> ● Definition of procedures to which risk analysis, risk assessment, risk communication, and risk management shall be undertaken ● Transparency of information on rejections/ non-compliances
2. Regulatory Enforcement Capacity	<ul style="list-style-type: none"> ● # of samples drawn for analysis ● # of inspections done (either per capita or per food industry \$ value) ● Quality of residue/ contaminant/pathogen monitoring programs implemented in country (for domestic/ export purposes)
3. Technical Capacity of Institutions	<ul style="list-style-type: none"> ● # of Universities with Food Science curriculum/total universities or a per capita estimate ● Existence of accreditation and certification bodies for food safety ● Public Expenditure on ag R&D (source: ASTI) ● Testing laboratories per capita ● Reference laboratories per capita
4. FBI Surveillance Capacity	<ul style="list-style-type: none"> ● # of FBD epidemiological studies conducted in country in last 3 years ● Communication of importance of FBI self-reporting to population ● Quality of FBI documentation by health care professionals

Pillar II: Food Industry Value Chain and Trade

Capacity Category	Possible Indicators
1. Value Chain Infrastructure	<ul style="list-style-type: none"> ● % of rural electrification ● % electrification of wet markets ● % of producers with access to potable water (WB) ● Cold supply chain scale
2. Value Chain Formalization	<ul style="list-style-type: none"> ● % of producers with GMP/GMHP/HAACP certification ● % of food value chain (producers, distributors, points of consumption) formally registered ● Presence of formal grocery sector (source: EIU)
3. Value Chain Technical Capacity	<ul style="list-style-type: none"> ● # of accredited food scientists per capita ● % of domestic laboratories with accreditation ● Recall efficiency
4. Trade Capacity of Value Chain	<ul style="list-style-type: none"> ● % of food exports rejected due to health hazards ● % of food value chain devoted to exports ● % Firms with ISO/GAP/GMP certification ● # of countries accepting exports from country

Pillar III: Health Outcomes

Outcome Category	Possible Indicators
<ul style="list-style-type: none"> • Base Susceptibility to FBI 	<ul style="list-style-type: none"> • Percentage of population with access to potable water (source: WB) • Prevalence of undernourishment (source: FAO) • Percentage of children underweight (source: WHO)
<ul style="list-style-type: none"> • FBI Impact 	<ul style="list-style-type: none"> • Number of cases of FBI • Number of cases of intestinal infection in high-risk populations (children, pregnant women) • Economic cost FBI • Mortality related to FBI

Discussion:

The team is asked to consider the indicators suggested and discuss the following:

- Should the pillars be thought of differently?
- Within each pillar, are there additional indicators that should be considered?
- Within each pillar, which indicators should be removed?
- Additional considerations?