

Addressing the economic burden of foodborne diseases

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With acknowledgements to: Steve Jaffee, World Bank; Lystra Antoine GFSP, Zusana Kristkova WUR

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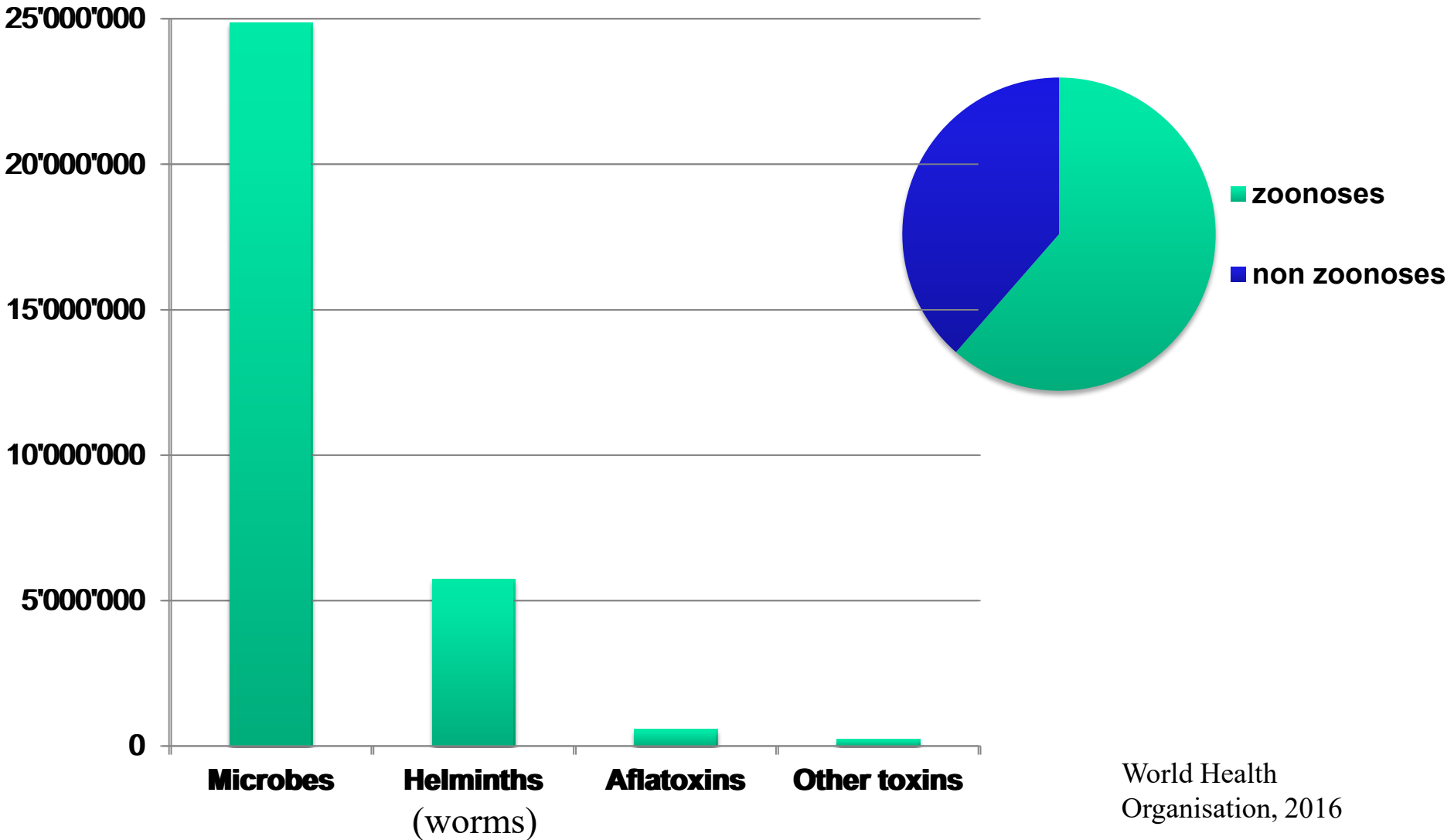


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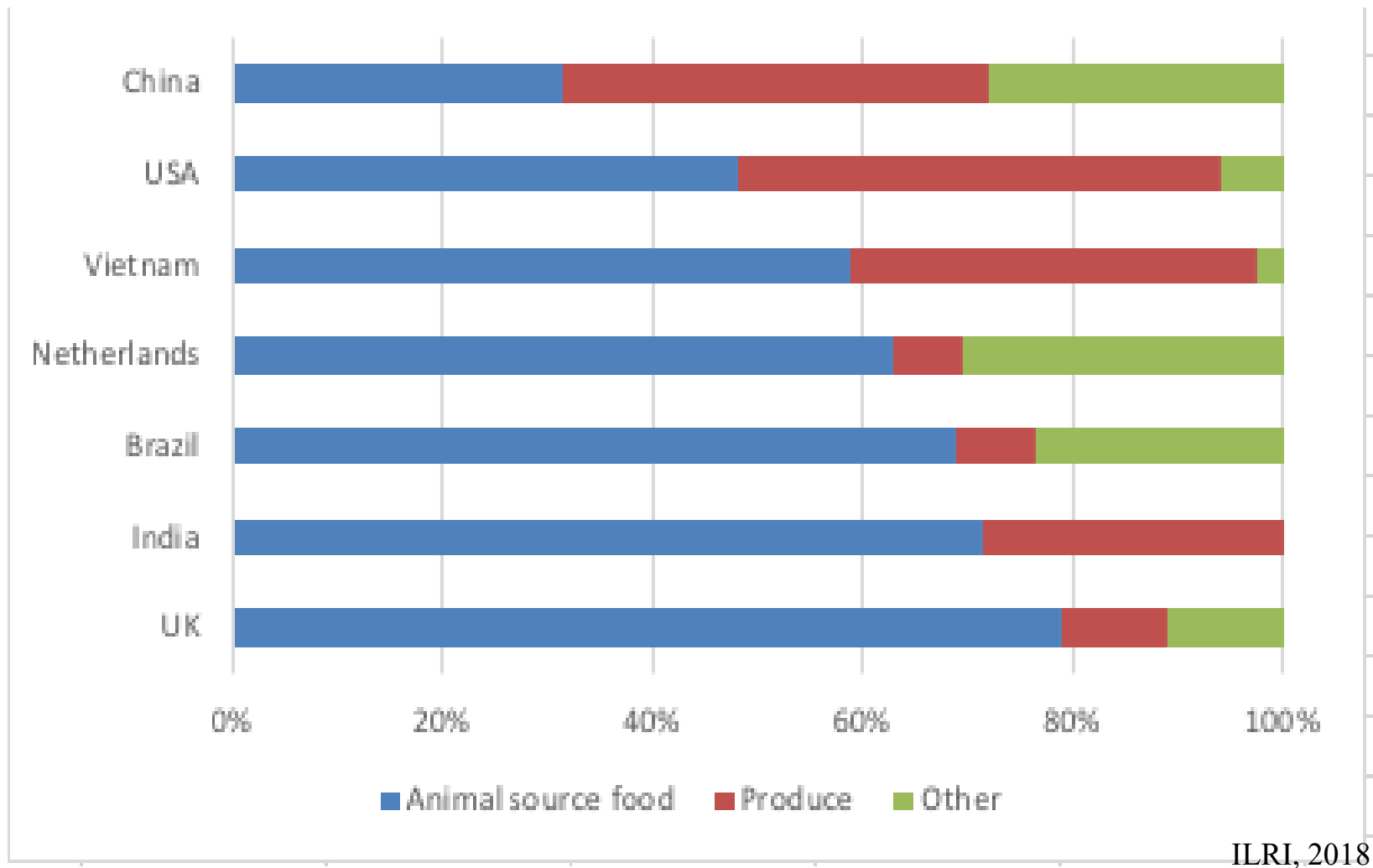
Causes of Food Borne Disease

Burden LMIC (DALYs)



World Health Organisation, 2016

Foods implicated - literature



Cost of foodborne disease in India



Based on

“The economics of food safety in India – a rapid assessment” by Zuzana Smeets Kristkova (Wageningen Economic Research), Delia Grace (ILRI) & Marijke Kuiper (Wageningen Economic Research), 2018

Estimates using 2010 data of:

- FBD burden- FERG
- FBD attribution – 4 estimates
- FBD health costs - literature

Projection of India’s economy in 2030 using MAGNET (global general equilibrium model):

- Population
- Food consumption for 10 household types

Models and experience suggest Foodborne will worsen in LMIC

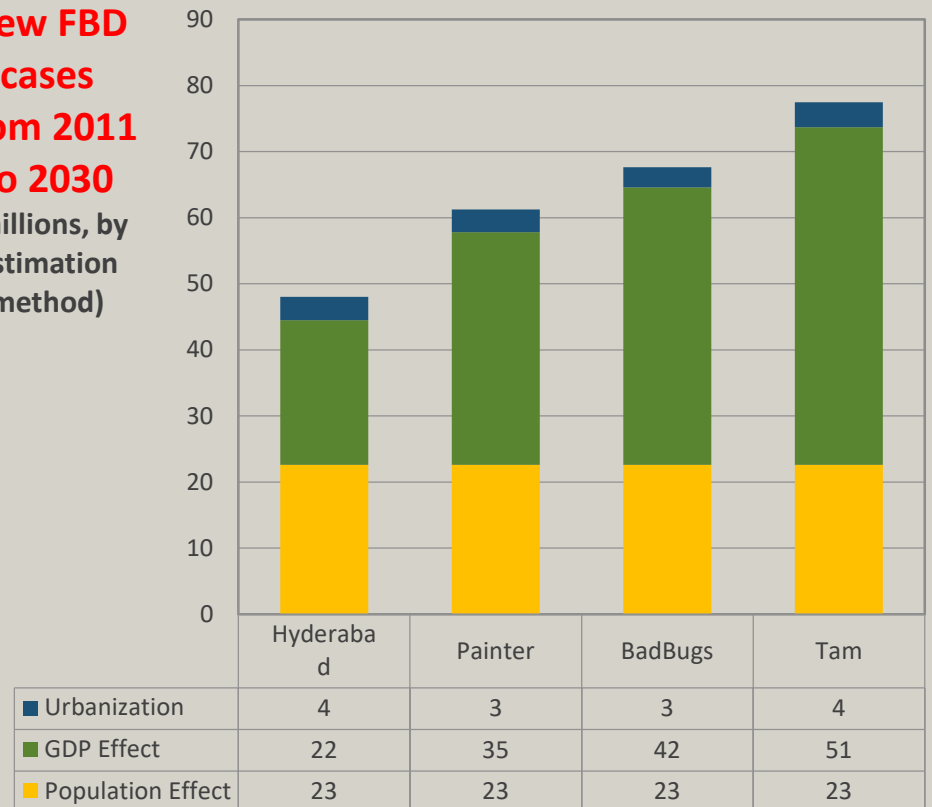
Expected FBD burden in India to rise from **100 up to 170 million in 2030** – increasing from **one out of 12 to one out of 9** people falling sick on average

Increased labour supply but mostly reduced health cost of avoiding FBD amounts to 0.5% of GDP - equivalent to an annually recurring benefit of up to 28 billion USD

Kristkova et al., 2018

GDP growth has largest impact on increase in FBD cases from 2011 to 2030, followed by population growth

New FBD cases from 2011 to 2030
(millions, by estimation method)



The Safe Food Imperative

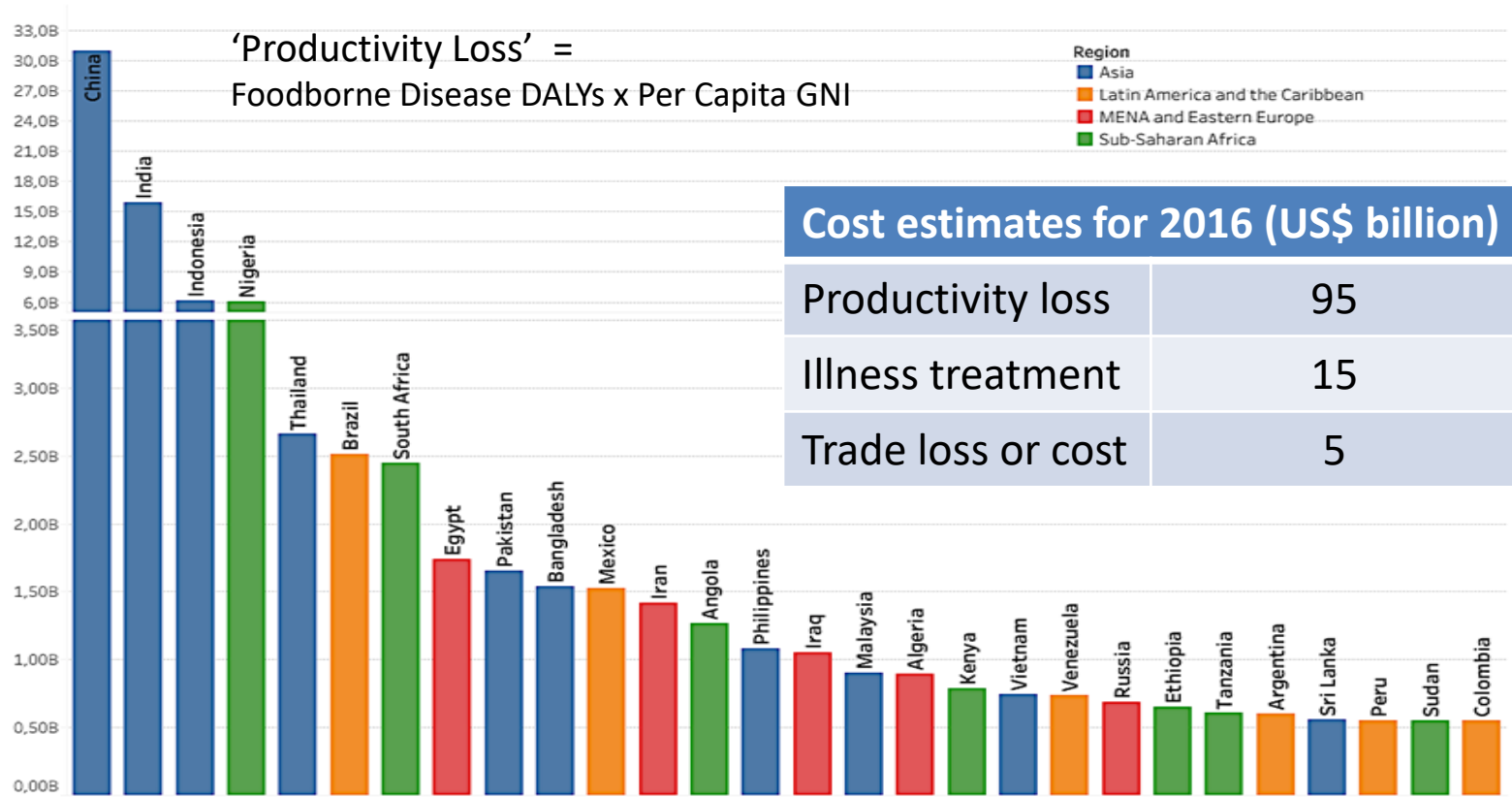
Accelerating Progress in Low- and Middle-Income Countries



Steven Jaffee, Spencer Henson,
Laurian Unnevehr, Delia Grace,
and Emilie Cassou



Unsafe food costs \$110 billion in productivity losses or costs of treating illness in LMIC

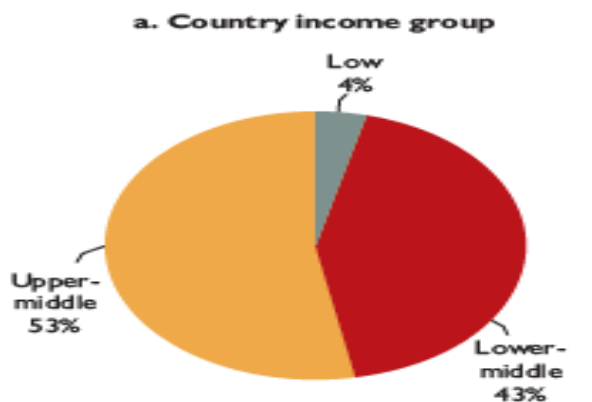


Based on WHO/FERG & WDI Indicators Database

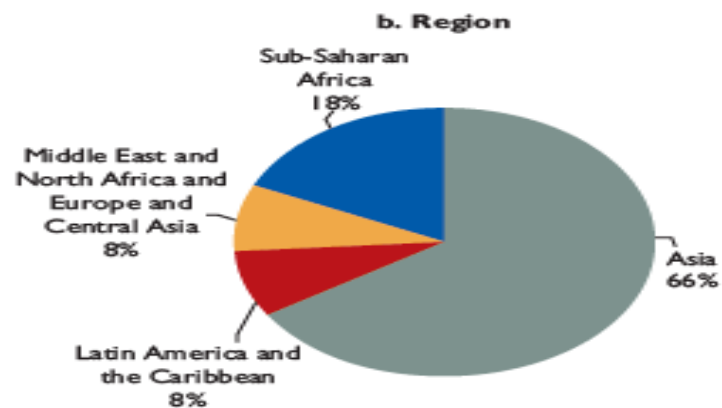
Illness treatment =
US\$27 x # of Estimated foodborne illnesses

Trade loss or costs =
2% of developing country **high value** food exports

The productivity loss is concentrated in middle income countries in Asia and Africa



Income group	2016 human capital loss (current US\$, billions)
Low	3.8
Low Middle	40.6
Upper Middle	50.8
Total	95.2

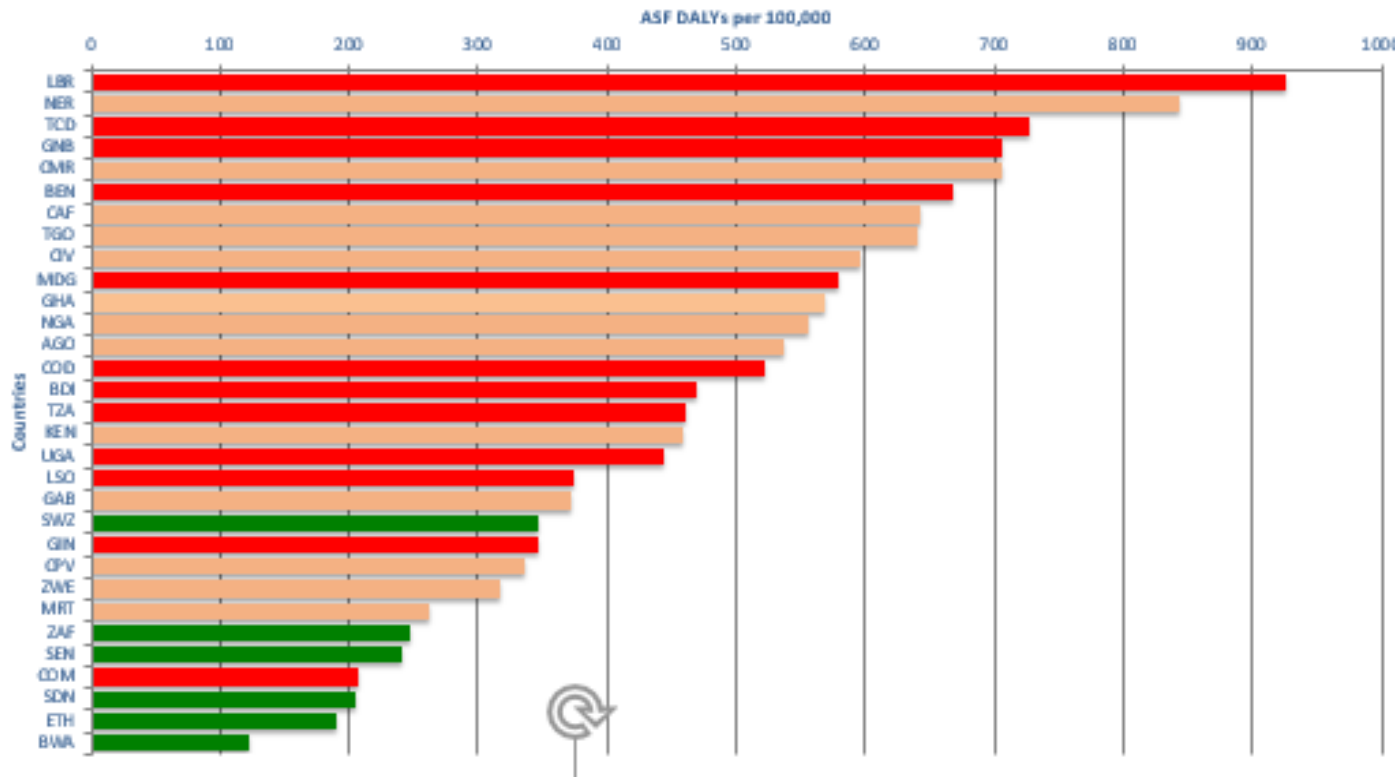


Region	2016 human capital loss (current US\$, billions)
Asia	63.1
Latin America and the Caribbean	7.4
Middle East and North Africa and Europe and Central Asia	7.9
Sub-Saharan Africa	16.7
Total	95.2

Source: World Bank.

Investments pay off: countries with adequately funded vet services do better

Burden of FBD Attributable to Animal Source Foods vs
Rating for Adequacy of Operational Funding for Veterinary Services



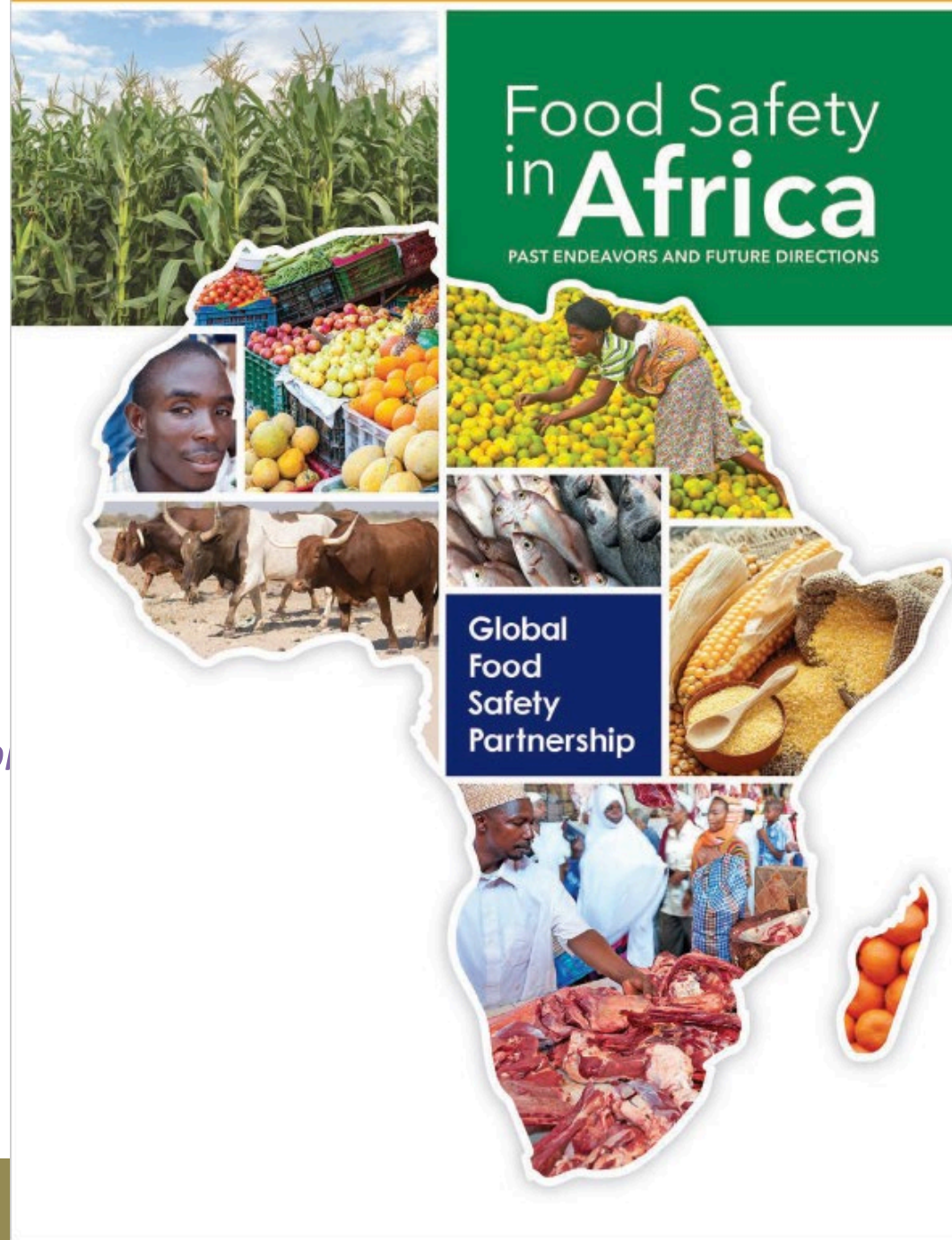
Inadequate
Spending is
Costly!

NOTE: Countries with inadequate funding in red (rating = 1) and in orange (rating = 2); countries with adequate funding in green (rating = 3 or 4).

A Project of the Global Food Safety Partnership (GFSP),
A Public-private initiative hosted at the World Bank

African Food Safety Capacity Building

*Mapping Current Efforts
to Improve Targeting and Coordination*



Results 2: Investments helpful but small

- Donor investment since 2010 difficult to quantify but likely less than \$40 million a year. Small in relation to burden and investments in other health areas.
- **Substantial focus on –**
 - National control systems
 - Exports and other formal markets
 - Chemical hazards
- **Little focus on –**
 - Market-based and demand-led approaches
 - Informal sector where most foods are sold
 - Biological hazards and risks to human

Recommendations

- **Health first:** Better address the health of domestic consumers dependent on informal markets.
- **Risk-not hazard:** Build capacity for well-governed, evidence-and risk-based food safety systems.
- **Market-led:** Harness marketplace drivers of progress on food safety.

better lives through livestock

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ILRI thanks all donors and organizations who globally supported its work through their contributions to the **CGIAR system**

Patron: Professor Peter C Doherty AC, FAA, FRS

Animal scientist, Nobel Prize Laureate for Physiology or Medicine—1996

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