



Alliance



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
Federal Office for Agriculture FOAG

The Ethiopian Food System Country Profile

Christine Chege (c.chege@cgiar.org)

Mark Lundy (m.lundy@cgiar.org)

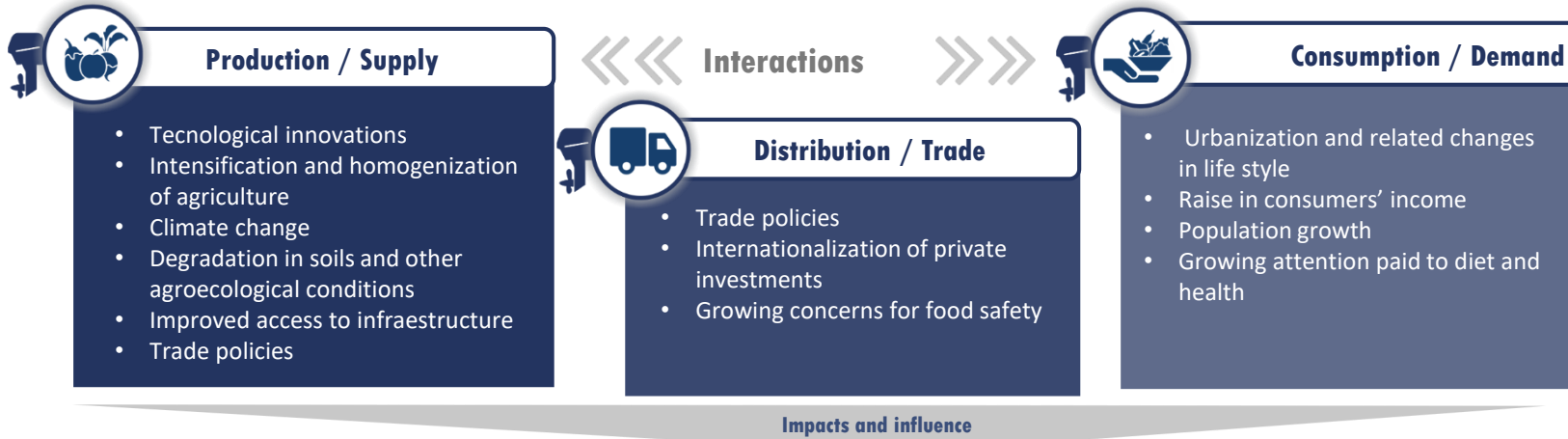
Chris Bené (c.bene@cgiar.org)



December, 14th 2022

5 Components of the food system

1 DRIVERS



2 FOOD SYSTEM SUPPLY: ACTORS AND ACTIVITIES

- Food production
- Food storage and distribution
- Food processing and packaging
- Food retail and marketing

3 FOOD ENVIRONMENT

Availability, quality and safety, affordability, convenience, desirability, promotion and wa

4 CONSUMER CHOICE

Preference/taste, socio-demographic taboos/believes, etc.

5 IMPACTS

- ▶ Environment (e.g. soil erosion)
- ▶ Nutrition & Health (e.g. obesity)
- ▶ Economic (e.g. efficiency)
- ▶ Social (e.g. inclusion, equity)



General context

- Global and national economy
- Macro, meso and local shocks and stresses (e.g. conflict)
- Culture, social norms
- Political economy

Total of 30 indicators

6 indicators

DRIVERS



Impacts and influence

5 indicators

FOOD SYSTEM SUPPLY: ACTORS AND ACTIVITIES

- Food production
- Food storage and distribution
- Food processing and packaging
- Food retail and marketing

FOOD ENVIRONMENT

Availability, quality and safety, affordability, convenience, etc.

5 Indicators

CONSUMER CHOICE

Preference/taste, socio-demographic taboos/beliefs, etc.

IMPACTS

8 indicators

- Nutrition & Health (e.g. obesity)
- Economic (e.g. efficiency)
- Social (e.g. inclusion, equity)

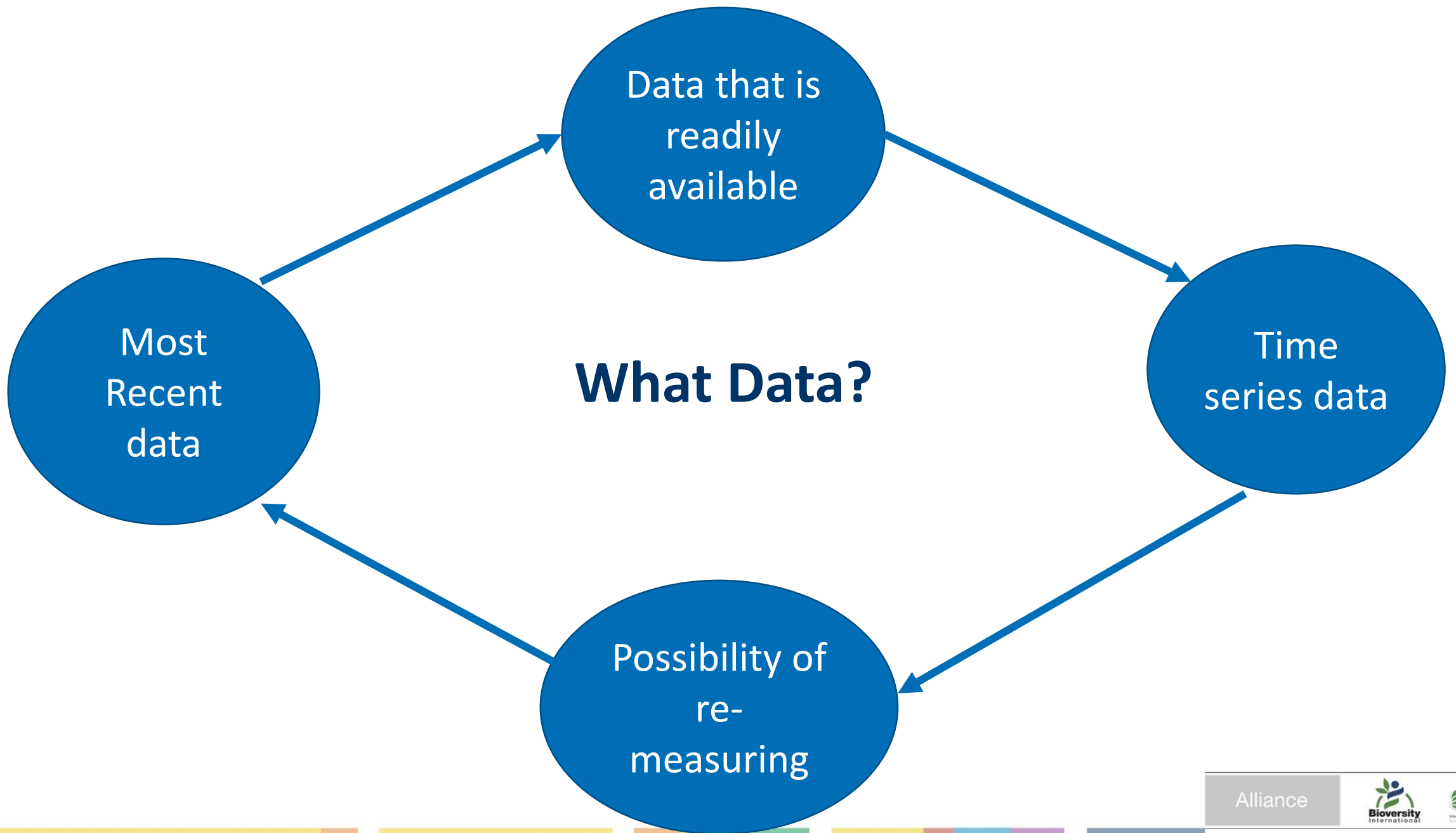
Trade-offs and synergies

feedback

feedback

General context

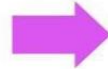
- Global and national economy
- Macro, meso and local shocks and stresses (e.g. conflict)
- Culture, social norms
- Political economy



Current data and Trends

Comparison groups

Eritrea, Kenya, Sudan, Somalia, South Sudan



Geographical Neighbors

Burkina Faso, Guinea-Bissau, Mali, Uganda Zambia



Countries with Similar GDP per Capita



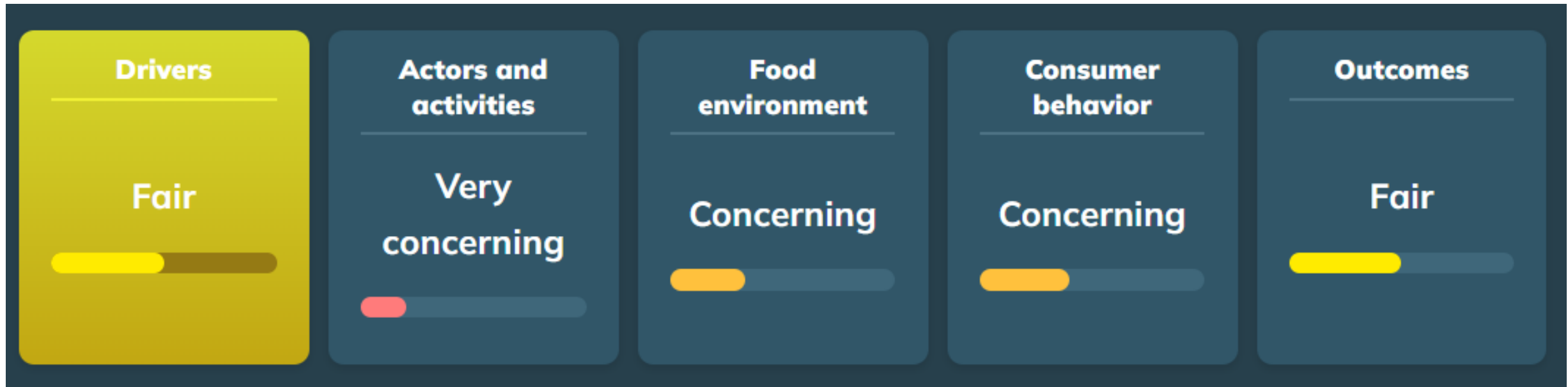
Global Average

LINK TO THE FOOD SYSTEM COUNTRY PROFILE

<https://food-system-country-profiles.cgiar.org>

Ethiopian Food System Profile

Overall performance of Ethiopia on the 5 food system components compared to the world average



Ethiopian Food System Profile

Drivers



The major factors known to directly influence the activities or the actors of the food systems.

Overall performance compared to the world average



6 indicators

Production/
Supply



Distribution/
trade



Consumption/
demand



Drivers - World Average



Improving

65-84% of all indicators for world average have improved or remained unchanged over the time period considered

Alliance

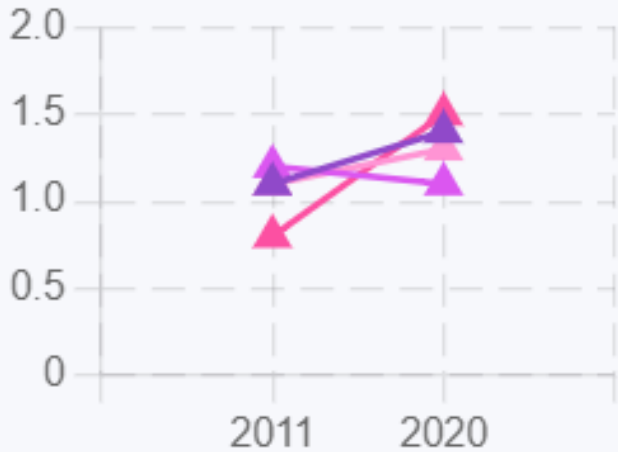




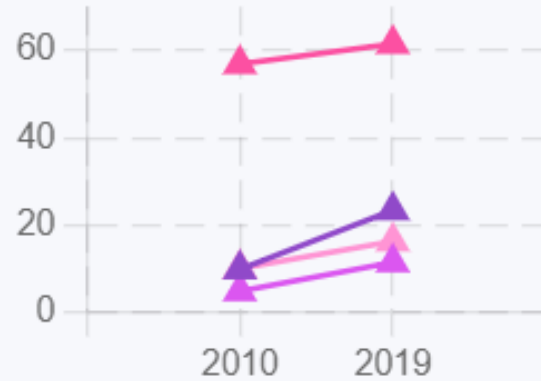
Production/Supply

Temperature change (2011-2020)
 Degrees centigrade
(Proxy for change in climate)

Use of Nitrogen Fertilizer (2010-2019)
 Kg/Ha
(Proxy for change in technological innovations)



Source: FAOSTAT



Source: FAOSTAT

1.1 2011 **1.4** 2020 **0.3** difference

Deteriorate
But doing better than world average

10 2010 **23.5** 2019 **13.5** difference

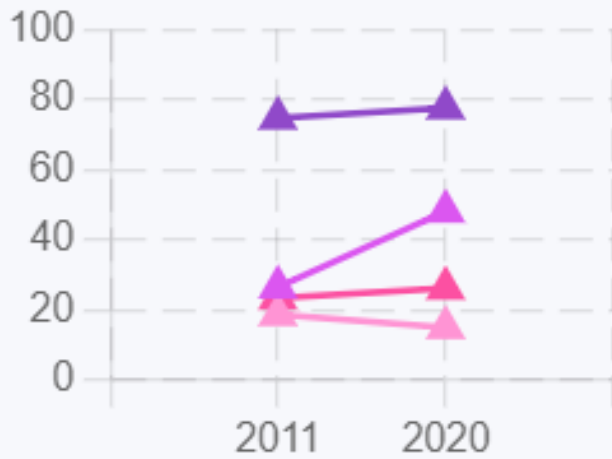
Improving
But doing worse than the world average

- Ethiopia
- Geographic neighbors
- Countries with similar GDP per capita
- World Average



Distribution/Trade

Food exports (2011 - 2020)
% of merchandise exports
(Proxy for changes in trade policies)

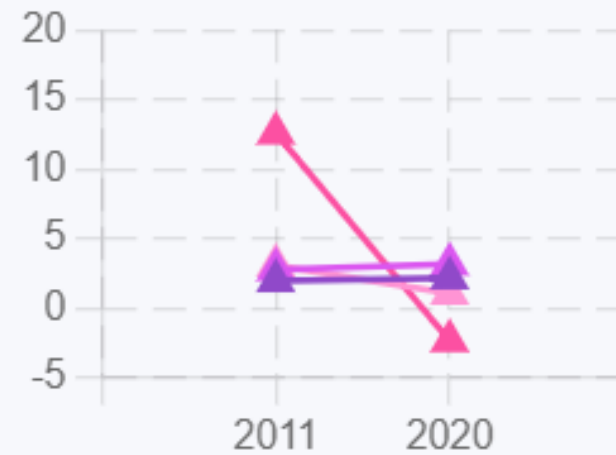


Source: FAOSTAT

74.7 2011 **77.6** 2020 **2.9** difference

Unchanged
 And doing better than the world average

Foreign Direct Investment, net Inflows (2011 - 2020)
% GDP
(Proxy for the contribution of the food system to national economy)



Source: WORLDBANK

2 2011 **0.2** 2020 **1.8** difference

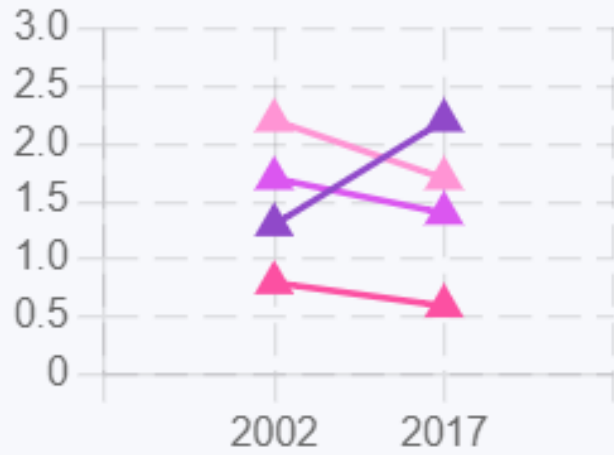
Improving
 And doing better than the world average

- Ethiopia
- Geographic neighbors
- Countries with similar GDP per capita
- World Average



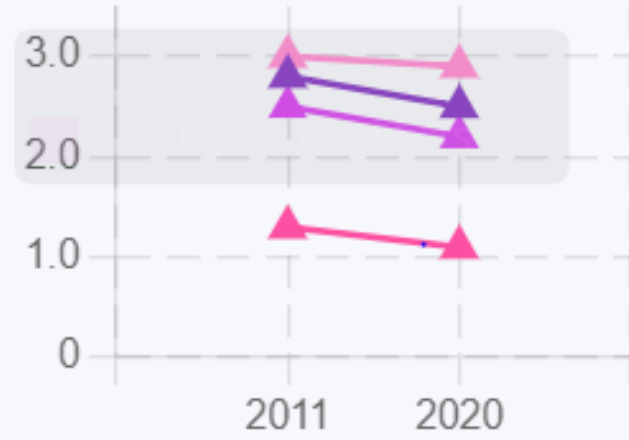
Consumption/demand

Urban population growth (2002 - 2017) 
annual % growth
(Proxy for changes in urbanization and consumer lifestyle)



Source: UNDESA

Population growth (2011 - 2020) 
annual % growth
(Proxy for changes in population and consumption patterns)



Source: UNDESA

1.3 2002 **2.2** 2017 **0.9** difference
Deteriorating
And doing worse than the world average

2.8 2011 **2.5** 2020 **-0.3** difference
Improving
And doing worse than the world average

● Ethiopia
 ● Geographic neighbors
 ● Countries with similar GDP per capita
 ● World Average

General remarks on Drivers

- ❑ Climate change is an extremely important driver of changes in production and productivity within the Ethiopian food system.
- ❑ Ethiopia is doing better than her neighbors in terms of technological innovations, but still way below the world average.
- ❑ Changes in policies that favor food exports increases competition for resources in domestic food production.
- ❑ The decrease in international investment in the agri-food sector delays the modernization and transfer of technology from other countries.
- ❑ Increased urbanization and population drive changes in consumption patterns- a sharp increase in urbanization in Ethiopia

Concerning



Overall performance of Ethiopia compared to the world average



Improving

Global Trend

Alliance

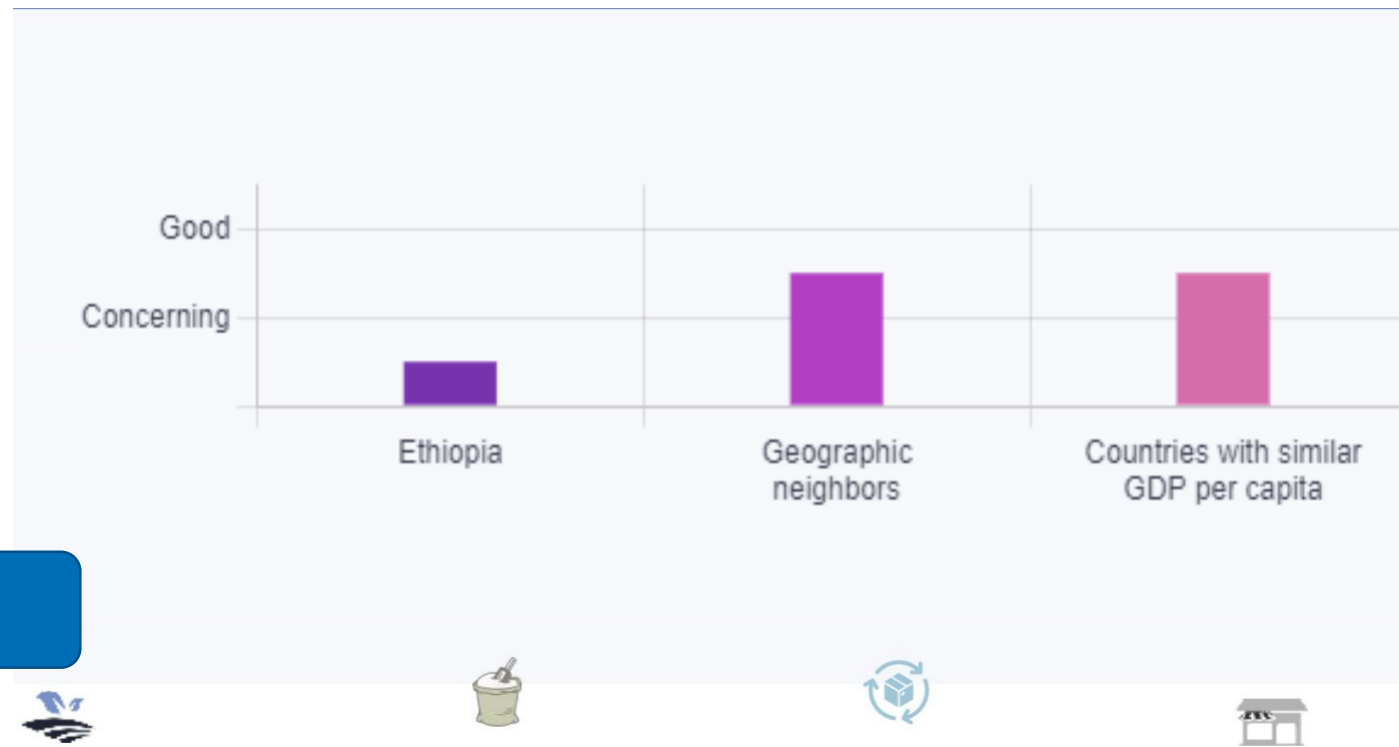


Ethiopian Food System Profile

Actors and activities

People and entities involved in the production, processing and sale of foods

Overall performance compared to the world average



6 indicators

Actors and activities - World Average



Improving

65-84% of all indicators for world average have improved or remained unchanged over the time period considered

● Ethiopia

● Geographic neighbors

● Countries with similar GDP per capita

● World Average

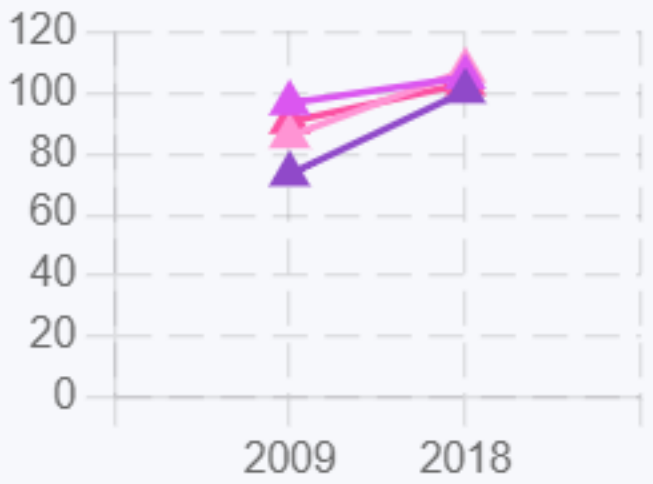
Alliance





Production systems

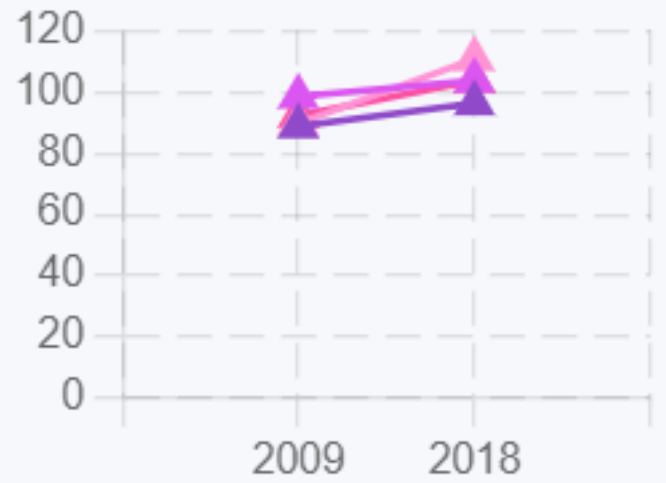
Food production index (2014-2016 = 100) (2009 - 2018)
 Units
 (Volume of food produced)



Source: Worldbank

73.3 2009 **100.4** 2018 **27.1** difference
Improving
But doing worse than world average

Livestock production index (2014-2016 = 100) (2009 - 2018)
 Units
 (Volume of livestock products produced)



Source: Worldbank

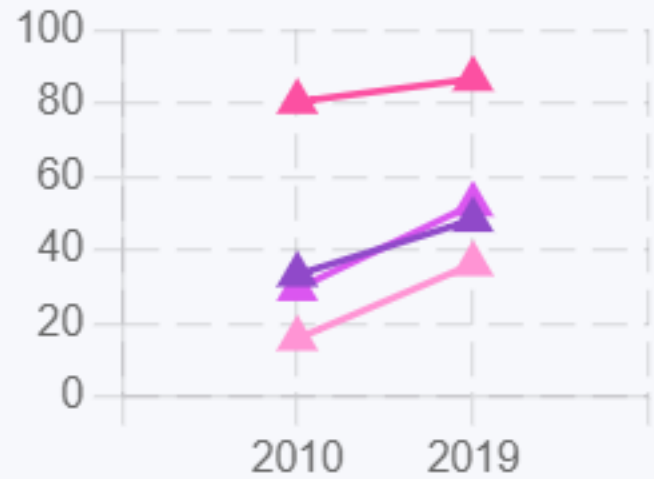
88.7 2009 **96.2** 2018 **7.5** difference
Improving
But doing worse than the world average

● Ethiopia
 ● Geographic neighbors
 ● Countries with similar GDP per capita
 ● World Average



Food storage and distribution

Access to electricity (2010 - 2019)
 % of population
(Proxy for food storage and distribution capacity)



Source: Worldbank

33.4 2010 **48.3** 2019 **14.9** difference

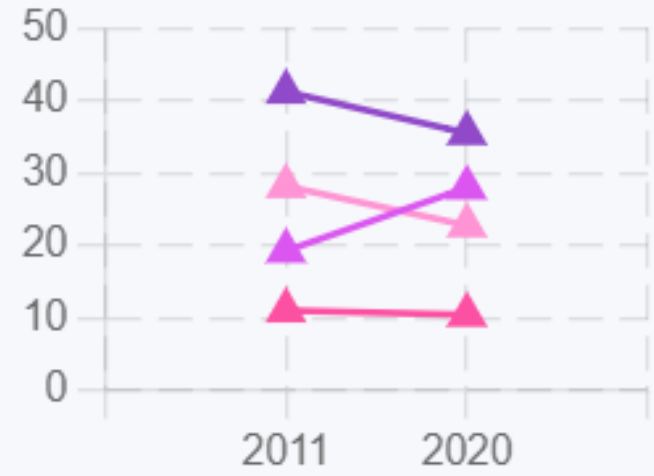
Improving

But doing worse than world average



Processing and packaging

Agriculture, forestry, and fishing, value added (2011 - 2020)
 % of GDP
(Proxy for extent of food processing in the country)



source: Worldbank

41.2 2011 **35.5** 2020 **-5.7** difference

Deteriorate

But doing better than the world average

● Ethiopia
 ● Geographic neighbors
 ● Countries with similar GDP per capita
 ● World Average

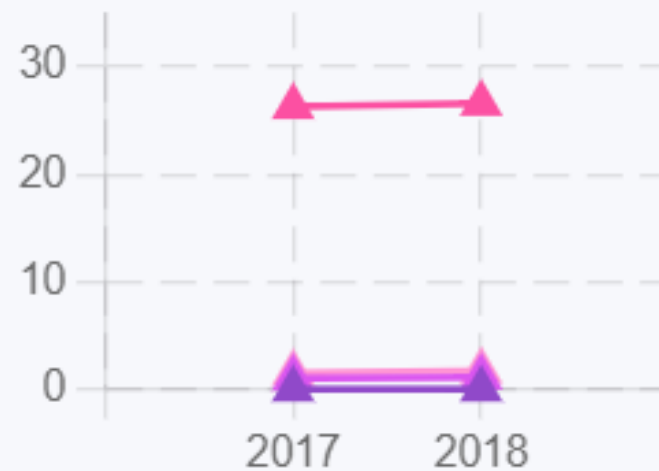


Retail and marketing

Modern grocery retailers per 100,000 inhabitants (2017 - 2018)

Number per 100k inhabitants

Proxy for extent of modernization in food retail



Source: GAIN and Johns Hopkins University

0.1
2017

0.1
2018

0
difference

Unchanged

But doing worse than world average

● Ethiopia

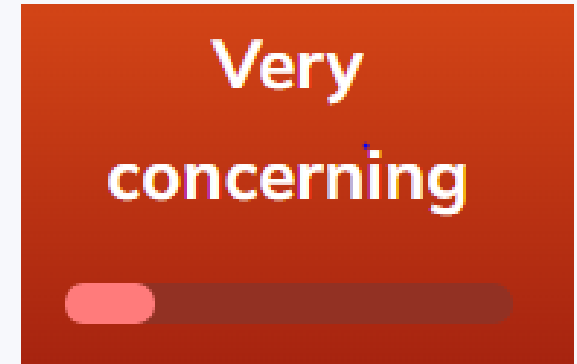
● Geographic neighbors

● Countries with similar GDP per capita

● World Average

General remarks on Actors and Activities

- ❑ The levels of production in terms of food volumes have increased, but still below the rest of the countries.
- ❑ Level of food storage and distribution is improving but still below the global average, although better than some neighboring countries
- ❑ Processing levels are declining rapidly although still better than rest of the countries
- ❑ Levels of modernization of retail trade remain very low



Overall performance of Ethiopia compared to the world average



Global Trend

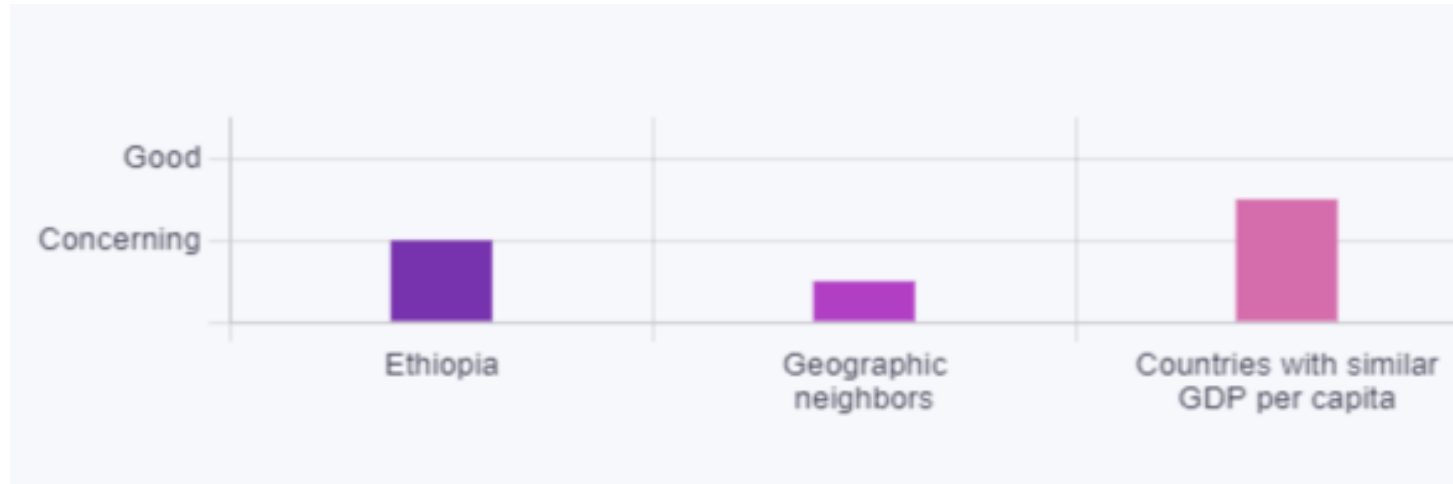
Improving

Ethiopian Food System Profile

Food Environment

Physical, economic, political and sociocultural context in which consumers make their decisions about the acquisition, preparation and consumption of food

Overall performance compared to the world average



6 indicators

Food environment - World Average



Deteriorating

25-49% of all indicators for world average have improved or remained unchanged over the time period considered

● Ethiopia

● Geographic neighbors

● Countries with similar GDP per capita

● World Average

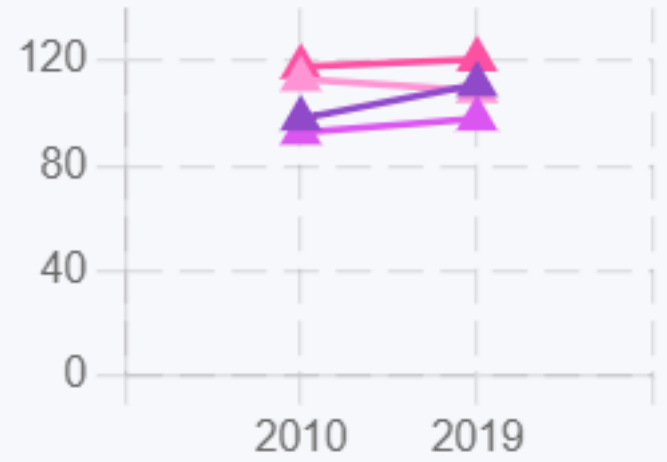
Alliance





Availability

Average dietary energy supply adequacy (2010 - 2019)
 Percentage (3 year average)
 (Proxy for in-country food availability)



Source: FAOSTAT

98 2010 **111** 2019 **13** difference

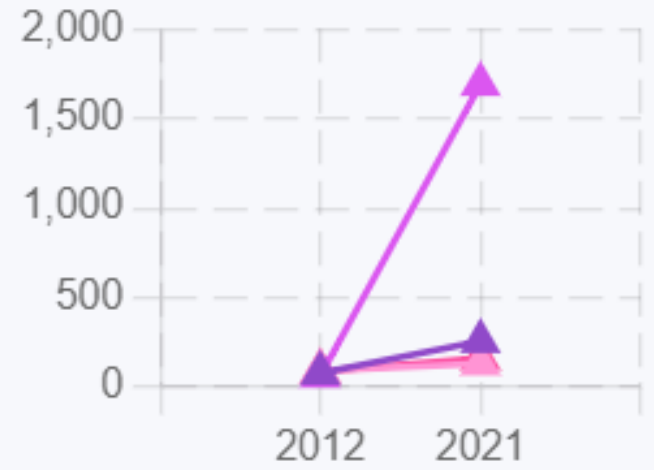
Improving

But doing worse than world average



Affordability

Consumer Prices, Food Indices (2015 = 100) (2012 - 2021)
 Units
 (Affordability of food)



Source: FAOSTAT

80.1 2012 **257.7** 2021 **177.6** difference

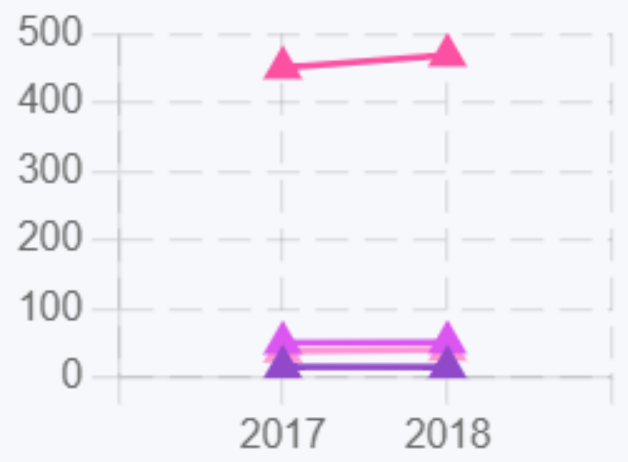
Deteriorate

But doing worse than the world average

● Ethiopia ● Geographic neighbors ● Countries with similar GDP per capita ● World Average

Convenience

Retail value of packaged food sales per capita (2017 - 2018)
 USD/Person/Year
(Proxy for convenience foods available)

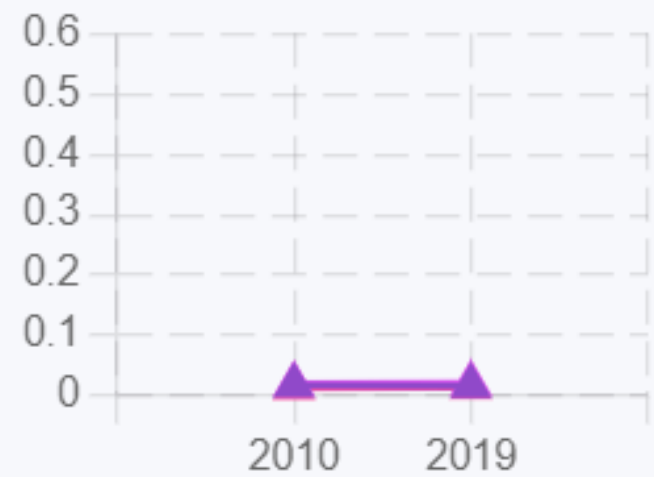


Source: GAIN and Johns Hopkins University

16.4 2017	16.2 2018	-0.2 difference	Unchanged <i>But doing worse than world average</i>
---------------------	---------------------	---------------------------	---

Quality and Safety

Diarrheal diseases-Prevalence-all ages-both sex (2010 - 2019)
 % of population
(Proxy for food safety)



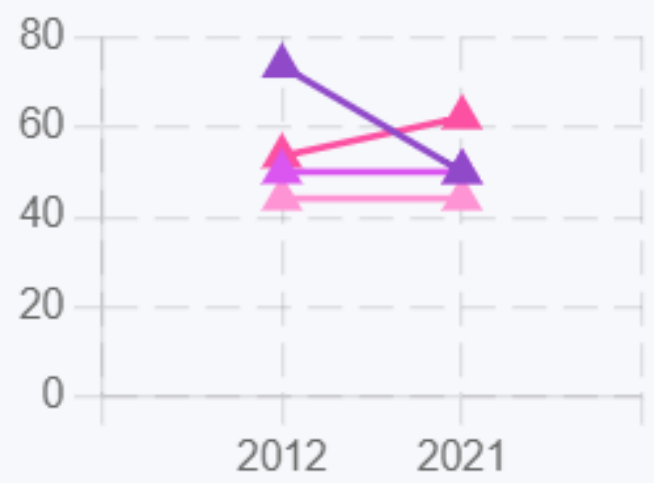
Source: Global Health

0.018 2010	0.017 2019	-0.001 difference	Improving <i>But doing worse than the world average</i>
----------------------	----------------------	-----------------------------	---

- Ethiopia
- Geographic neighbors
- Countries with similar GDP per capita
- World Average

Promotion, advertising and information

Government commitment to improved Nutritional Standards (2012 - 2021)
Units (0-100 score)
(Proxy for promotion of healthy foods)

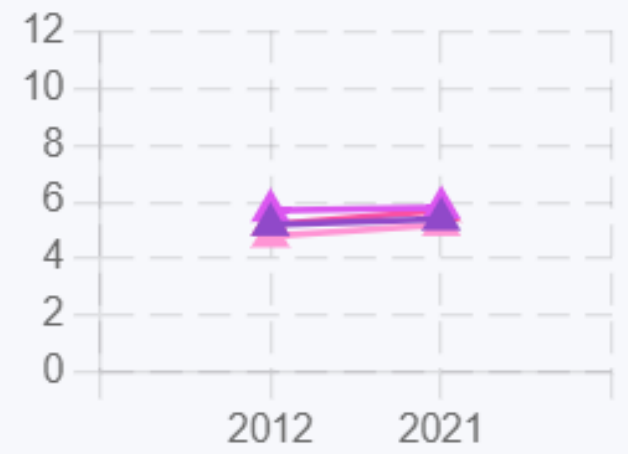
Source: EIU-GFS

73.5 2012 **50** 2021 **-23.5** difference

Improved
And doing Better than world average

Loss and Waste

Food loss (2012 - 2021)
Percentage of total domestic supply
(Food loss and waste)

Source: FAOSTAT

5.2 2012 **5.4** 2021 **0.2** difference

Unchanged
But doing Better than the world average

- Ethiopia
- Geographic neighbors
- Countries with similar GDP per capita
- World Average

General remarks on Food Environment

- ❑ The availability of energy foods in Ethiopia is not of concern
- ❑ Food prices in Ethiopia have increased and are above the global averages. The prices are still going up
- ❑ Consumption of processed/convenience foods in Ethiopia is very low and it has remained relatively unchanged over years
- ❑ There is improved efforts to promote healthy diets. Ethiopia is doing better than global average

Concerning



Overall performance of Ethiopia compared to the world average



Global Trend

Deteriorating

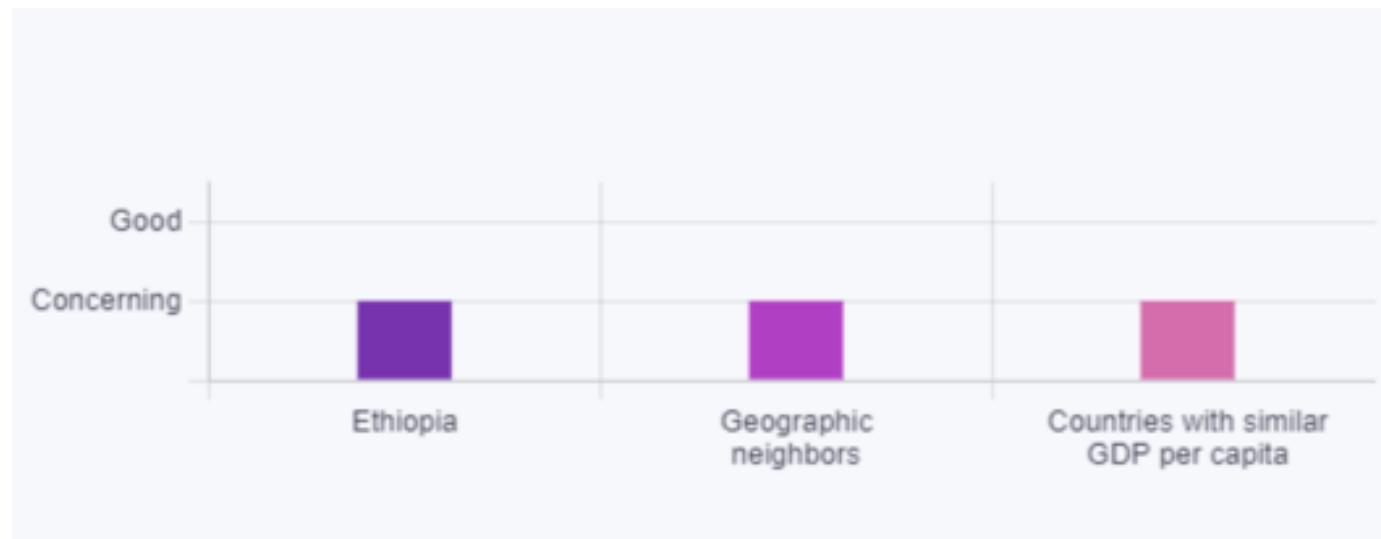
Ethiopian Food System Profile

Consumer Behavior

Acquisition, storage, preparation, distribution of food within the home and consumption; people's taste and preference, their socio-economic characteristics (for instance their income or education level) as well as their cultural identities ("who they are")

Overall performance compared to the world average

5 indicators



Consumer behavior
- World Average



Improving rapidly

85-100% of all indicators for world average have improved or remained unchanged over the time period considered

● Ethiopia

● Geographic neighbors

● Countries with similar GDP per capita

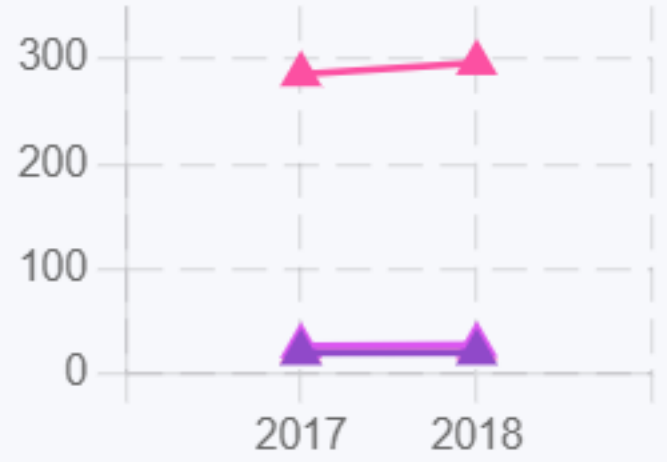
● World Average

Alliance



Preference/Taste

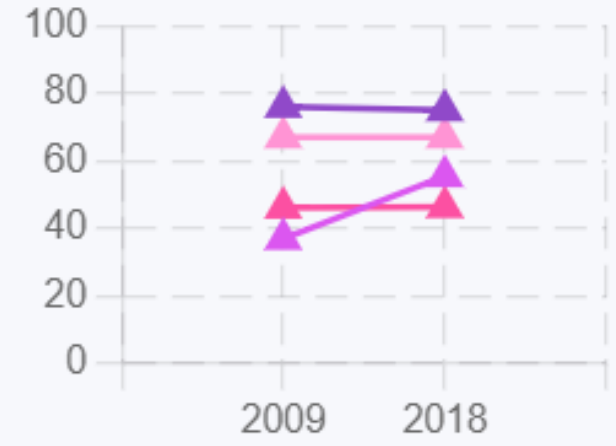
Retail value of ultra-processed food sales per capita (2017 - 2018)
USD/Person/Year
(Proxy for consumption of processed foods)



Source: GAIN and Johns Hopkins University

20.7 2017 **20.8** 2018 **0.1** difference
Unchanged
But doing better than world average

Share of dietary energy supply derived from cereals, roots and tubers (2009 - 2018)
Percentage (3-year average)
(Proxy for consumption of healthy diets)



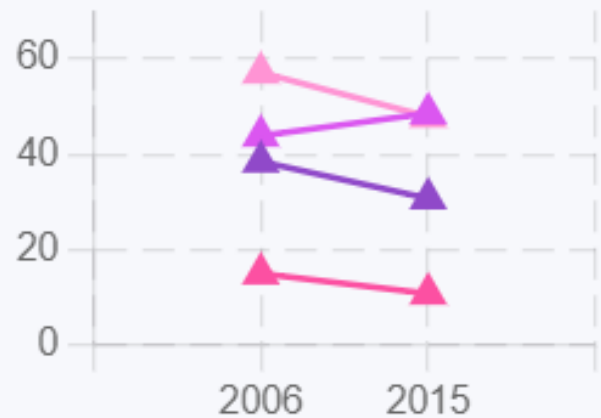
Source: FAOSTAT

76 2009 **75** 2018 **-1** difference
Unchanged
But doing worse than the world average

● Ethiopia
 ● Geographic neighbors
 ● Countries with similar GDP per capita
 ● World Average

Socio-demographic characteristic

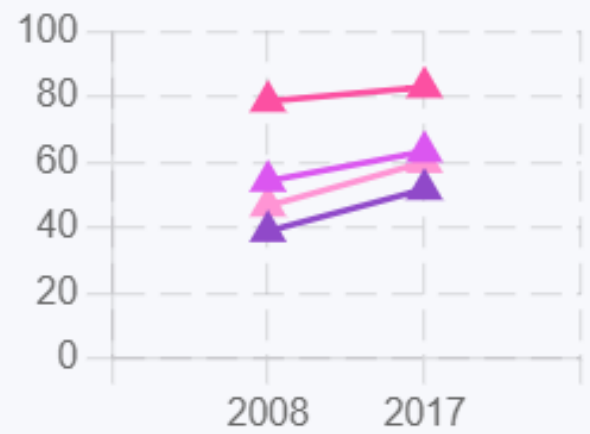
Poverty headcount ratio at \$1.90 a day (2011 PPP) (2006 - 2015)
% of population
(Proxy for economic structure of consumers)



Source: Worldbank

38.5 2006 **30.8** 2015 **-7.7** difference
Improving
But doing worse than world average

Adult literacy rate, population 15+ years, both sexes (%) (2008 - 2017)
% of people >=15 yrs old
(Education structure of consumers)



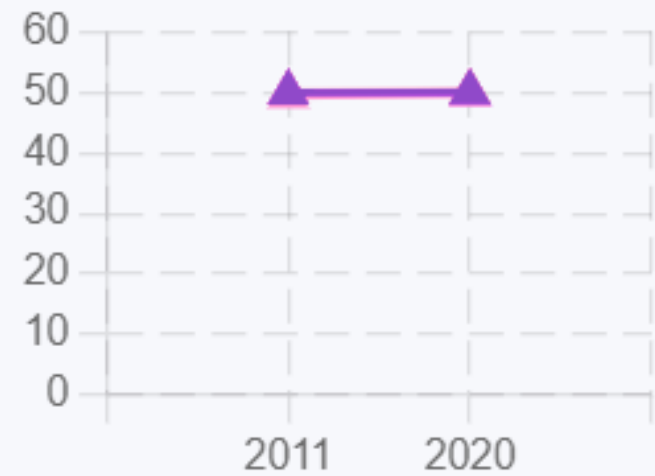
Source: UNESCO

39 2008 **51.8** 2017 **12.8** difference
Improved
But doing worse than the world average

● Ethiopia
 ● Geographic neighbors
 ● Countries with similar GDP per capita
 ● World Average

Socio-demographic characteristic

Population, male (2011 - 2020)
% of total population
(Gender structure of consumers)



Source: Worldbank

49.9
2011

50
2020

0.1
difference

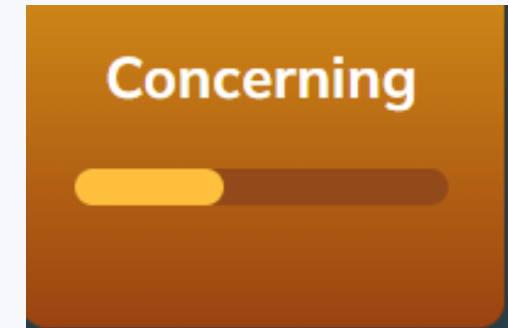
Unchanged

But doing better than world average

-  Ethiopia
-  Geographic neighbors
-  Countries with similar GDP per capita
-  World Average

General remarks on Consumer Behavior

- ❑ Low sales of ultra-processed foods per capita- Ethiopia is doing better than comparison groups including the world average
- ❑ Almost 80% of share of dietary energy supply is from cereals, roots and tubers- Poor diversity
 - Ethiopia is above world average
- ❑ Decreasing poverty levels in Ethiopia-but still higher than world average
- ❑ Improving adult literacy rates, but still lower than comparison groups and world average



Overall performance of Ethiopia compared to the world average



Global Trend

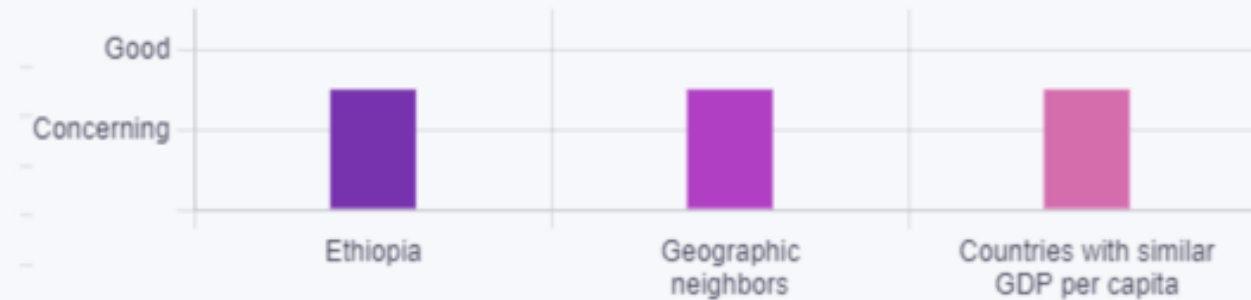
Improving rapidly

Ethiopian Food System Profile

Outcomes

Results of food system activities on the environment, health and nutrition, the economy, and social inclusion.

Impacts – Aggregated values across the 8 individual indicators



Overall performance compared to the world average

Outcomes - World Average



Uncertain

8 indicators

50-64% of all indicators for world average have improved or remained unchanged over the time period considered

● Ethiopia

● Geographic neighbors


● Countries with similar GDP per capita

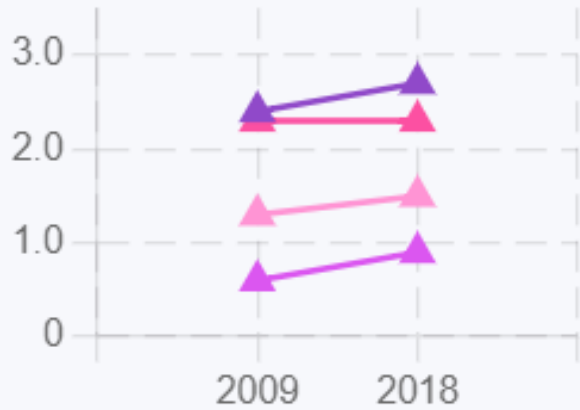
● World Average

Alliance




Environment

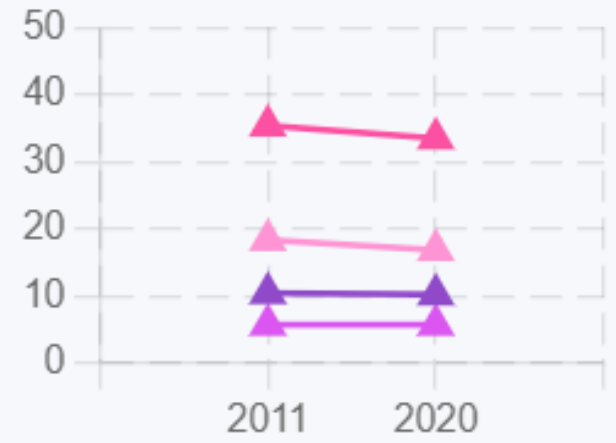
Emissions (CO2 equivalent), Agriculture total (gigagram =1000MT)/Ha (2009 - 2018)
gigagrams/Ha
(Proxy for contribution of the food system to climate change) 



Source: FAOSTAT

2.4 2009 **2.7** 2018 **0.3** difference
Deteriorating
But doing worse than world average

Percent of national land area with tree cover (2011 - 2020)
% of national land area
(Proxy for pressure of the food system on land) 



Source: FAOSTAT

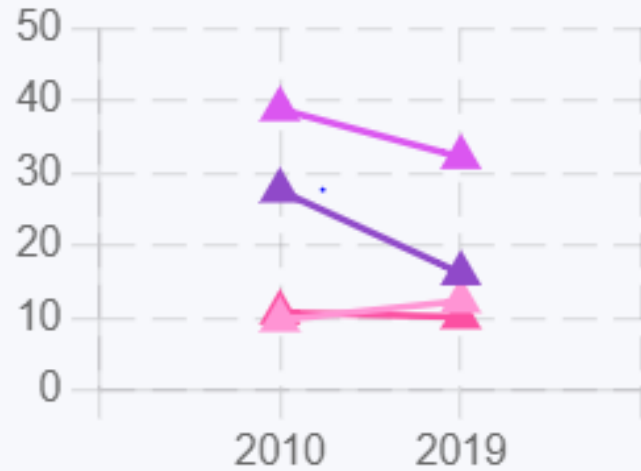
10.5 2011 **10.3** 2020 **-0.2** difference
Unchanged
But doing worse than the world average

● Ethiopia ● Geographic neighbors ● Countries with similar GDP per capita ● World Average

Food and Nutrition

Prevalence of undernourishment (2010 - 2019)
 % of population

(Contribution of the food system to food and nutrition security)



Source: Worldbank

27.6
2010

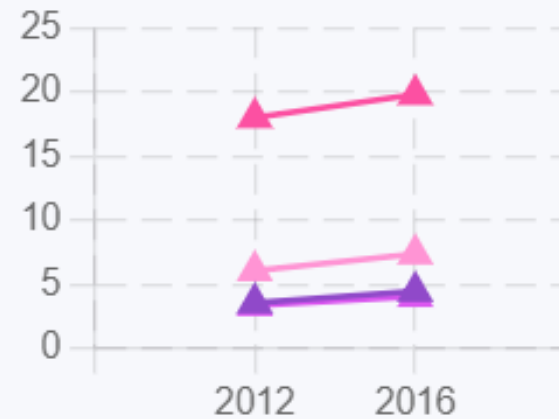
16.2
2019

-11.4
difference

Improving
But doing worse than world average

Prevalence of obesity in the adult population (18 years and older) (2012 - 2016)
 % of population \geq 18 yrs old

(Impacts of the food system on consumer health)



Source: FAOSTAT; EDHS

3.6
2012

4.5
2016

0.9
difference

Deteriorate
But doing better than the world average

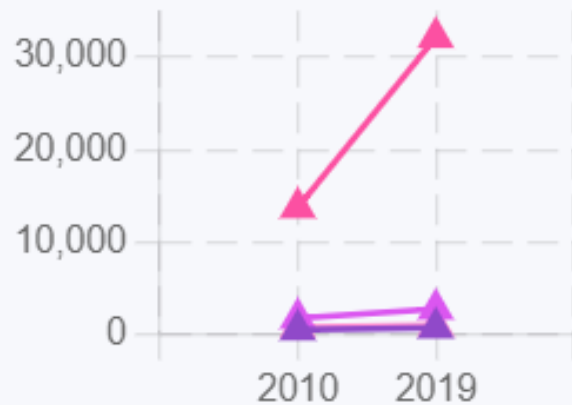
● Ethiopia ● Geographic neighbors ● Countries with similar GDP per capita ● World Average

Economic

Agriculture, forestry, and fishing, value added per worker (2010 - 2019) constant 2015 USD/worker



(Proxy for financial performance of the food system)



Source: Worldbank

597.9
2010

804
2019

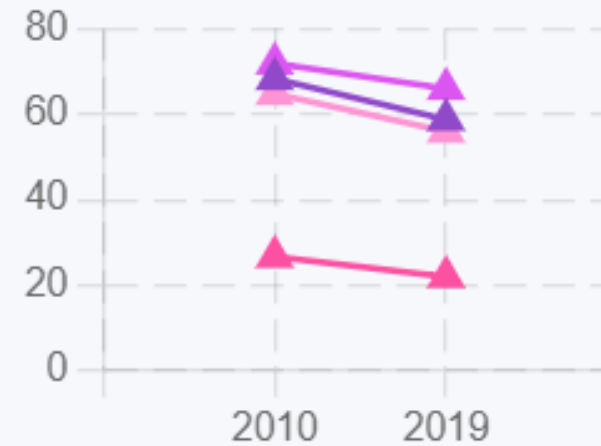
206.1
difference

Improving

But doing worse than world average

Employment in agriculture, female (2010 - 2019) % of female employment

(Proxy for the impacts of the food system on gender equality)



Source: Worldbank

68.2
2010

58.7
2019


-9.5
difference

Deteriorate

But doing better than the world average

 Ethiopia

 Geographic neighbors

 Countries with similar GDP per capita

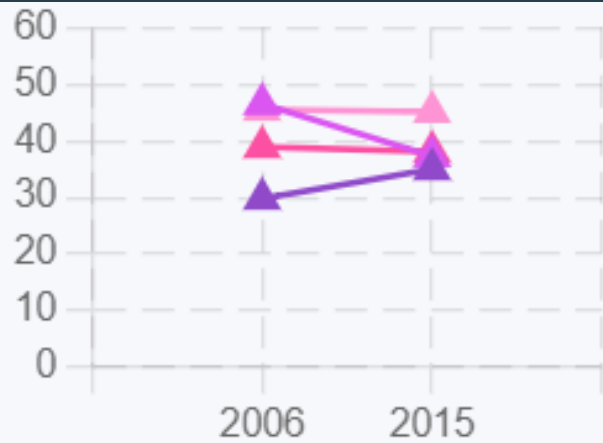
 World Average

Social and political

Gini index (World Bank estimate) (2006 - 2015)

Units (0-100 score)

(Proxy for the contribution of the food system to economic inclusion)



Source: Worldbank

29.8
2006

35
2015

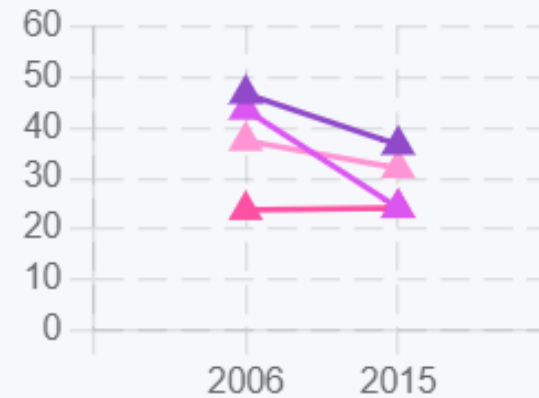
5.2
difference

Deteriorate

But doing better than world average

Food, beverages and tobacco (2006 - 2015)
% of value added in manufacturing

(Proxy for the contribution of the food system to national economy)



Source: Worldbank

46.6
2006

36.6
2015

-10
difference

Deteriorate

But doing better than the world average

Ethiopia

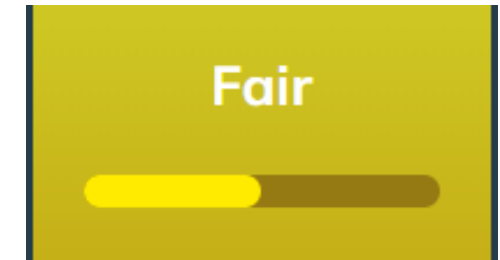
Geographic neighbors

Countries with similar GDP per capita

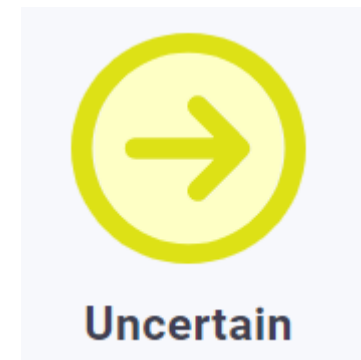
World Average

General remarks on Outcomes

- ❑ The Ethiopian food system is contributing to the global climate change
 - Low tree cover; high and increasing Co2 emissions
- ❑ Although there have been improvements in food security and nutrition, consumer health problems related to poor diets like obesity are emerging as a broader societal problem
- ❑ The food system remains important to the Ethiopian national economy, although its contribution is declining
- ❑ There is increased trend in inequality over the last decade in Ethiopia, albeit lower levels than the world averages.



Overall performance of Ethiopia compared to the world average

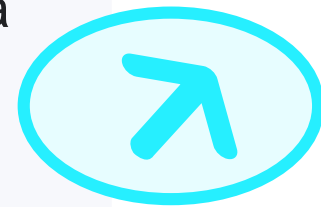


Global Trend



POSITIVE aspects in the food system that would be important to maintain:

- Ethiopia has good food production capacity for its food
- Low consumption level of ultra-processed foods
- Food processing- Ethiopia is doing well than the neighbors, but this is going down. Efforts are required to keep a positive trend on healthy processing of nutritious foods -without losing nutrients
- Food storage and distribution is improving and Ethiopia is doing better than the neighboring countries although still low. Could also think of ways of advancing food distribution –to be more inclusive and modernized
- Promotion of healthy foods by government of Ethiopia



Ethiopian Food System Profile: **POSSIBLE AREAS OF ACTION**

Areas where Ethiopia **NEEDS IMPROVEMENT** (If we look at the peer countries, it seems that Ethiopia has the potential to perform better in these areas):

- Technological innovations-quite low in Ethiopia compared to her neighbors
- Dietary diversity-Need for Ethiopia people to diversify their diets. Currently there is high consumption of cereals and energy dense foods
- Urbanization- Sharp increase in urbanization. Design food system interventions considering the increasing urbanizations; introduce interventions that will reduce urbanization
- Low modernization in food retail. Need to improve this given the increasing urbanization rates
- Food unaffordability
- Convenience foods. Need for access to convenience healthy foods especially with the increasing urbanization
- Need to attract more foreign investment for improved FDI in the country



Ethiopian Food System Profile: POSSIBLE AREAS OF ACTION

Elements of the context to **REFLECT** ON their implications in the system:



- Rapid Urbanization
- Trade policies
- Improving the current food distribution channels from traditional to more modernized and inclusive offering opportunities throughout the system for micro, small, and medium-sized businesses- could attract youth?



Alliance



Thank you!

Christine Chege (c.chege@cgiar.org)

Mark Lundy (m.lundy@cgiar.org)

Chris Bené (c.bene@cgiar.org)

