

The Impacts of Coronavirus on Agricultural Practices and Food Systems in Brazil, Tanzania and Iran

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INTRODUCTION

Countries are hit by a complex set of burdens by COVID-19. The virus itself but also national government policies, changes in international trade regulations and policies in consumer countries impact the lives of many people; and particularly those of small-scale farmers.

Small-scale farmers are crucial for food and nutrition security. Farms < 5 ha produce about 50% of global food calories and conform 95 % of existing farm units. More than 98 % of farms are less than 20 hectares (HLPE, 2013).

Small-scale farmers are most vulnerable to external shocks. (a) for structural reasons (low access to public goods and services, inadequate infrastructure, dependence on weather, poverty, marginalization), (b) the scale and informality of their farming systems and, (c) a low capacity to respond and swiftly recover from effects of external shocks (weather events, public health emergencies).

Previous epidemics have shown severe effects of lockdowns on food and agriculture and smallholders' vulnerability. Restriction measures to limit the spread of Ebola in African countries (closing weekly markets and borders, checkpoints on roads) caused disruption in agricultural market chains and trade; with the biggest impact relating to disruptions in collecting and transporting agricultural products to areas of consumption (FAO).

Considering the global scale of COVID-19, it is crucial to assess its effects on agricultural practices and consumption of smallholders, coping strategies and open needs to contribute to future pandemic management.

RESEARCH OBJECTIVE

COVID-I project investigates impacts of COVID-19 on farming activities and food systems in selected regions of Brazil, Tanzania, and Iran.

RESEARCH QUESTIONS

RQ1: What effects does COVID-19 have on farming activities and food consumption of small-scale farmers in selected rural areas of Brazil, Tanzania and Iran?

RQ2: What measures are taken by farmers to adapt to the new situation?

RQ3: Which policies and rules influence farming activities and food systems most during COVID-19?

RQ4: What services and support could facilitate adaptation to Covid-19?

METHODOLOGY

Multiple steps, mixed method approach



Case study based approach



Desk-based research on socio-economic and environmental impacts



Analysis of government policies on COVID-19






Qualitative semi-structured interviews and quantitative web-based survey

CASE STUDY SELECTION

- The economies are strongly influenced by the agricultural sector;
- The agricultural sectors are highly represented by smallholders;
- National food security is strongly affected by smallholders production;
- Government responses differ from average responses of most remaining countries in the world.

CASE STUDY REGIONS

	Brazil	Iran	Tanzania
Target region	 South Region (Paraná, Santa Catarina, Rio Grande do Sul)	 Khuzestan Province	 Morogoro
Population (Mio.)	213 (#6)	84 (#18)	60 (#24)
GINI Index	53.9 (2018)	40.8 (2017)	40.5 (2017)
GDP per capita (2017)	14,651.6	14,651.6	14,651.6
Economy	#8 world	65 (2019)	74 (2019)
Important products	Soy, corn, wheat, rice, beans, cassava, oranges, coffee, cotton	Vegetables, fruits, saffron, pistachios and raisins	Rice, maize bean Sunflower, Cassava, sweet potato, sugarcane, Vegetable, peas, tomatoes
Smallholders*	Produce about 70-80 % of food domestically consumed (38% of gross value of agricultural production)	90% of agriculture is carried out by smallholders	90 % of cultivated land is used by smallholders who contribute over 75% of total agricultural outputs in TZ

*As defined in national regulations (e.g., family farmers in Brazil)
Source: FAOSTAT, World Bank

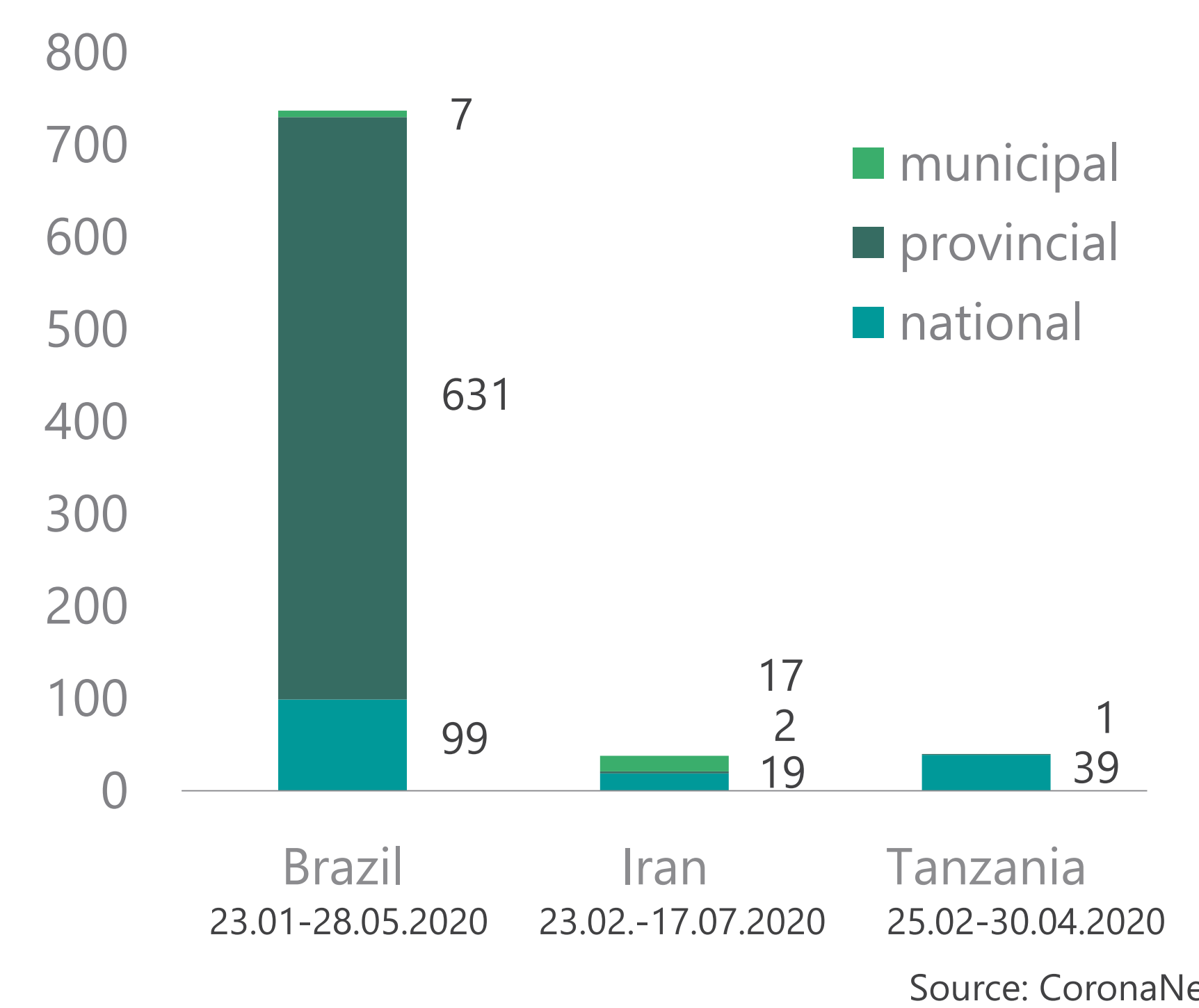
RESULTS

COVID PROFILES

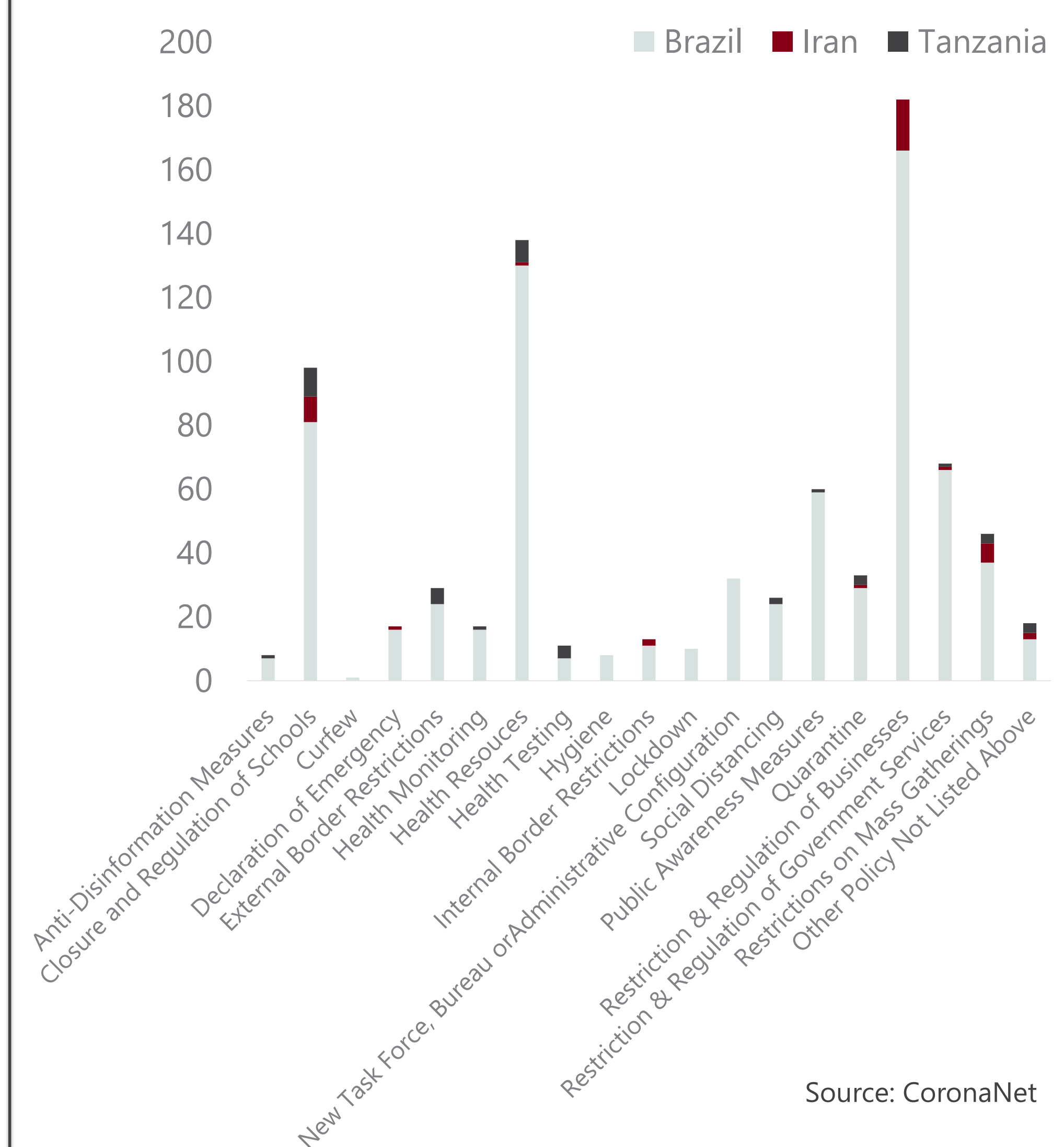
	Brazil	Iran	Tanzania
Covid-19	Epicentre in Latin America	Highest prevalence, infection and mortality in Middle East	Reported numbers low, no imposed restrictions, declared covid-free by gov.
Worldwide ranking #		2	11
Total cases	3,340,197*	345,450	509
Total death	107,879	19,804	21
Tests/1M pop	63,287	34,328	

*numbers likely to be higher due to underreporting and lack of testing
Source: Worldometers (retrieved 17.08.2020)

NUMBER OF POLICY RESPONSES ON COVID-19



ENTRIES OF POLICY RESPONSES BY CATEGORY



OUTLOOK

- The diversity of cases ensures that the project's findings reflect the complexity of COVID-19 induced food and nutrition security meta- challenge
- Opportunity to develop a framework to analyze the impacts of COVID on small-scale farms, with potential to be applied in other areas/countries.
- Prospect to map creative local responses and factors influencing the adaptive capacity of farmers to pandemics.

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