Corruption can worsen food insecurity in several ways, such as by affecting food availability (for example, by reducing the small farmers’ food production capabilities) or because households have to spend money on bribes that would otherwise be destined for food. Corruption is also predicted to aggravate the current food crisis. There are several corruption risks that emerge at different points in the food value chain, depending on the nature of the food product as well as the context of its production, storage, distribution and delivery. Two of the most important resources for food, land and water, hold several corruption risks that include embezzlement, land grabbing and sextortion. Government subsidies and aid programmes also have important corruption risks that can prevent them from reaching those in need. Women, the poor and other marginalised populations are disproportionately affected by the food crisis, and any anti-corruption strategy aimed at food security should take their specific necessities into account.

Caveat: food security depends on many different factors and has a context and product specific supply chain that can make it difficult to discuss every possible corruption risk. As such, this Helpdesk paper should not be considered exhaustive and corruption affecting other areas – for example, climate change, which can also affect food production – should be taken into account.
Query

Could you please provide an overview on how corruption can affect food security?

Contents

1. Background
   a. Food security
   b. Role of corruption in the current food crisis
2. Corruption and food security
3. Corruption risks in different food sectors and along the value chain
   a. Corruption in food production: Agriculture, Cattle and Poultry, and Fishery
   b. Corruption in food storage and certification
   c. Corruption in food supply and distribution
   d. Corruption at the point of delivery
   e. The whole value chain
4. Corruption and food security resources
   a. Land
   b. Water
5. Curbing corruption in food security

Food security

Food security is a concept that has evolved over the years from being mainly focused on supply to one including physical, social and economic access, safety and nutritional concerns, as well as food preference (an element that was added as a response to the cultural acceptability of foods) (Engler-Stringer 2014). As such, food security has several dimensions: food availability; food access; food use (which relates to a person’s diet and access to clean water, sanitation and health care, all leading to “nutritional well-being where all physiological needs are met”); and, notably, stability (meaning that food security should not...
depend on the absence of sudden shocks or cyclical events but should prevail even in the face of those) (FAO 2006).

At the household level, food insecurity has four dimensions (Engler-Stringer 2014):

- quantitative, which refers to sufficient food to meet basic needs
- qualitative, i.e., food is both safe and diverse
- socially acceptable – how food is acquired (charity can sometimes lead to feelings of loss of dignity)
- psychological, which refers to the worry of not having enough to eat

Focusing not only on the household but also at the community level is an important expansion of household food security as it deals with human rights, community empowerment, self-reliance and the environmental sustainability dimensions of food security (Engler-Stringer 2014).

Although food scarcity usually comes to mind when discussing food security, food security is also crucially related to distribution. The global supply of food averages 3,000 calories, 85 grams of protein and 90 grams of fat per person daily, which exceeds basic human needs (Barrett 2022). The challenge often lies in making produced food accessible to everyone, particularly to the poor and marginalised. For instance, as per current calculations, 30 per cent of the food produced is thrown away (Castro 2020). This is particularly important for this Helpdesk answer since corruption exacerbates the effects of marginalisation, among others, making it harder for marginalised groups to access public goods and services or to participate in politics (Bullock & Jenkins 2020). As we shall see in the next sections, corruption in food security, and particularly corruption in the land and water sectors, tends to affect small-scale farmers the most, who are usually poor and rely on their crops for subsistence. Although natural disasters and competition from non-food crops can directly affect food output, addressing physical, social and economic access to food at the global and local levels remains at the centre of improving food security (Land Portal, no date).

Food crises tend to have two dimensions, structural causes that are more driven by how food is produced and distributed globally, and more immediate drivers, where factors like the expansion of biofuel crops or the rising costs of energy have an immediate effect on the output of smallholders or the price of food. For example, some of the structural causes of the 2007-2008 food price crisis were the concentration of the food system in corporate hands, less public investment in agriculture and less development assistance for rural development (OXFAM 2019:07). While the short-term supply and demand drivers of the crisis were, among others, urbanisation, growth in meat and animal feed demand, more reliance on imported food, biofuel, concentration on four main crops (rice, maize, wheat and soybeans, which led to the displacement of traditional crops) and higher

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1 From 2005 to 2008, the global prices of wheat and rice nearly doubled, triggering a food crisis. The immediate drivers of the increase were rising oil prices, a growing demand for biofuels and trade shocks in the food market (European Commission 2011). The trade shocks included panic buying of imported goods as well as export restrictions, both of which significantly affected prices and availability (European Commission 2011).
production costs also related to an increase in the price of energy (OXFAM 2019:07).

In the past decades, instead of production being improved for the sake of better and more food, it has been designed to increase revenue (Castro 2020), which means that the existing food systems do not address the needs of the poor and vulnerable, leading to local hunger and malnutrition (Land Portal, no date). In a territory in Colombia, for example, palm monoculture, a more attractive crop in terms of profit, has created a shortage of usable land for the local residents, who used to grow their own food (Castro 2020). In Africa, increased agricultural exports actually led to a decrease in per capita food production as the fertile land was allocated for export crops (Bjornlund et al. 2022). Corruption, understood as the abuse of power for private gain, can facilitate and exacerbate all of these factors.

Beyond nutrition, food insecurity can affect political stability. The 2007-2008 food crisis, particularly the rising cost of food, was one of the drivers of the Arab Spring (Barrett 2022) and food insecurity has led to conflict for competing for water and land, two crucial factors of food production (Bora et al. 2010). While dealing with the more structural factors is crucial to obtain global food security, it is also important that countries build better safety nets that will prevent food price spikes from affecting the more vulnerable and poor in the short term (Barrett 2022).

The current food crisis

The number of people facing acute food insecurity has reached 345 million, and 50 million people in 45 countries are currently on the verge of famine (WFP 2022a). Four factors are driving the current hunger crisis (WFP 2022a):

- conflict, 60 per cent of the world’s hungry live in conflict areas
- climate shocks
- the consequences of the pandemic
- costs, in general, have soared

In October 2021, global food prices had already surpassed the previous all-time high of December 2010 (Barrett 2022; Trading Economics, no date). Adding to these existing issues, the war in Ukraine has only made the situation worse by raising the costs of food, fuel and fertiliser (WFP 2022b) and the Food and Agriculture Organization of the United Nations (FAO) calculates that global food prices were 23 per cent more expensive in May 2022 than at the same time in 2021 (Barrett 2022).

Effects of ongoing food insecurity can be wide-ranging while affecting several parts of the world. For instance, the current food crisis is predicted to hit Africa particularly hard and could lead to protests and violent uprisings as well as socio-economic instability (Le Parisien 2022). The mix of corruption and an increase in food prices has already impacted politics and was one of the reasons behind the mobilisations that toppled the Sri Lankan government (Arudpragasam 2022; Barrett 2022).

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2 For the period of time for which FAO has collected statistics.

3 The Rajapaksa government undermined the independence of the national audit office and the Commission to Investigate Allegations of Bribery or

Corruption and banned chemical fertilisers (a measure that had to be reversed after widespread protests but had already affected yields, increasing the costs of food) (Arudpragasam 2022; Reuters 2022).
However, the impact of the Russian aggression in Ukraine is bigger in countries in the Middle East and North Africa that import wheat from the two countries at war, and where wheat can reach up to 35 per cent of total calories consumed (Glauber & Laborde 2022). For certain countries in Africa, up to 80 per cent of wheat came from Russia and Ukraine (Le Parisien 2022), and Ukraine also supplies about 50 per cent of the global market of sunflower seed oil (Glauber & Laborde 2022).

This needs to be understood in the African context where people were already besieged by hunger before the war, with more than half of the continent’s countries requiring food aid (Gix 2020). The problems regarding food security in the continent varied from country to country, from droughts and a lack of water to armed conflicts that made it difficult to import food where local production was insufficient (Gix 2020). In particular, Yemen, Somalia and South Sudan have been under the threshold of food security for more than 50 years (Gix 2020).

**Corruption and food security**

A regression analysis found that there is a significant association between corruption and food insecurity as increasing corruption (measured through the Corruption Perception Index – CPI Score) increased food insecurity (using the FAO’s Food Insecurity Experience Scale) (Du Perron Helal 2016). Another study found that, in the West African sub-region, weak governance regarding food security enhancement mechanisms could decrease food security by 20 per cent (Anik et al. 2021:06).

In Malawi, urban dwellers largely identified the Cashgate scandal as the main cause of household-level poverty and their food insecurity (Riley & Chilanga 2018). The Cashgate scandal had a network of high-ranking bureaucrats diverting public funds to fraudulent vendors for over US$30 million (Riley & Chilanga 2018:488). The urban dwellers felt Cashgate was related to “rising food prices, loss of wages from causal labour, and loss of charitable remittances” (Riley & Chilanga 2018:491). Although the connection between the corruption scandal and the urban dwellers’ daily experiences is complex it points to the perception that corruption directly affected their livelihood, and by extension their food security.

On the subject of food access, other studies have looked into how corruption hurts the calorie consumption of low-expenditure households (Anik et al. 2013). In a country like Bangladesh, where corruption is quite prevalent,4 corruption plays a role in households’ access to sufficient food as “households have to reduce their food consumption to accommodate the increased cost of corruption” (Anik et al. 2013:569). Having to pay to secure other services (paying bribes for education, health, etc.) is less money in the pocket of poor families who then have less to spend on food. This means that the poor are more affected by corruption, since they have less power and thus are more likely to have to pay bribes (Tacconi & Williams 2020:306). Since corruption tends to disproportionately affect the poor and marginalised, who need to pay to access basic and public services they are legally entitled to

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4 According to the 2021 Corruption Perceptions Index, Bangladesh ranks 147 out of 180 countries, with a very low 26 out of 100 score.
(Bullock & Jenkins 2020), this means the leftover money they have for food tends to be less.

Other more indirect effects of corruption relate to the fact that it can divert public investment away from basic services, like education and social protection programmes, thus affecting food security (Du Perron Helal 2016:15). If corruption diverts public funds to private pockets, this leaves smaller budgets to fund social protection programmes that put food on tables and delivers worse services. Since mothers’ education is positively correlated with higher levels of food security (Ben-Davies et al. 2014; Mutisya et al. 2016; Schmeer et al. 2015) if corruption affects education access and quality it has a posterior impact on household food security. Corruption can also be a driver of internal conflict, which in turn undermines a country’s food security (Anser et al. 2021:03). Conflict can destroy agricultural production as well as increase unemployment, leading to food insecurity (George et al. 2019).

Finally, climate adaptation and mitigation interventions aimed at food production processes, such as farming, can be undermined by corruption. In Benin, for instance, the mistrust of local government led to farmers changing the climate change adaptation measures forwarded by the government (Tacconi & Williams 2020:313). In Kenya, a study found that farmers considered the problems with agricultural production to be caused by the government’s corruption and not due to soil erosion, which in turn led them to not take the implementation of the National Soil and Water Conservation Programme seriously, a programme they also thought of as corrupt (Ekbom et al. 2001:442).

If we consider this overview of the relationship between corruption and food insecurity, the current food crisis, which started late in the pandemic and has been aggravated by the Ukraine-Russia war, is likely to get worse due to corruption. Apart from corruption fuelling conflict and preventing the implementation of climate change adaptation measures, there are other ways in which it can exacerbate the ongoing food crisis (Le Billon 2003; Tacconi & Williams 2020:313; Ekbom et al. 2001:442). For instance, unscrupulous characters can also seek to take advantage of the war and further raise the price of food coming out of the two warring countries. Also, as the specific corruption risks at the value chain and affecting land and water will illustrate, corruption in the food sector tends to affect small-scale farmers, who have less power, are usually poor and tend to rely on small outputs, which means that even petty corruption (having to pay more for a subsidised fertiliser, for example) can greatly affect their subsistence.

**Gendered forms of corruption and food security**

Research shows that women can be particularly affected by food insecurity. For example, one study found that there was a statistically significant relationship between being female and an increase in food insecurity (Du Perron Helal 2016). Rural women are among the most affected by food insecurity since agricultural gender inequalities remain important (OXFAM 2019:07,08). In Sidi Bouzid, a rural area in Tunisia, for instance, more risks of climate shocks, another of the causes of the present crisis (WFP 2022a).
than 40 per cent of women experienced a form of food insecurity (Gaillard et al. 2022). Women and girls tend to get less food than males (Karl 2009:10) despite the fact that women tend to spend a larger share of the family budget on food than male household heads (OXFAM 2019:08).

Their already insecure standing can be aggravated by corruption. Due to their roles in society and gender norms, women are more vulnerable to specific types of corruption. They are usually less educated and have less access to information about their rights (Transparency International 2018:8). Women are also disproportionately affected by sextortion, a type of sexual coercive corruption where someone abuses their power to extort an unwanted sexual activity in exchange for something (IBA 2019: 8). Instead of money, sex is the currency of the exchange. In many cases what victims of sextortion obtained was something they were legally entitled to in any case (UNODC 2020: 44; Transparency International 2019b:30).

One way in which women are differently affected is with land, a crucial component in food production and, by extension, food security. Women and children’s right to land is not well defined in some societies (Fink 2002:1). In some parts of Africa, women make up to 50 per cent of the agricultural labour force but have limited access to land, and their resource rights are less secure, making them more vulnerable to expropriation and land grabbing (Land Portal, no date; FAO 2011, Namubiru-Mwaura 2014). Women in Africa tend to rely on land as a resource, which makes them particularly vulnerable to corruption in this sector. This corruption can take many forms, including bribery and sextortion in exchange for land access or multinational corporations taking land worked by women (Transparency International 2018:8).

Women are also often excluded from the negotiations regarding land deals and thus less likely to get a fair compensation (Transparency International 2018:8).

In the Upper East Region of Ghana, for example, widows are especially affected by the region’s traditional practices. They usually lose most, or all, of their land when the husband dies, leaving the widows few options to continue providing food and shelter for their children. Many widows thus have to resort to bribing traditional leaders or marrying relatives of their dead husbands (Transparency International 2019b:12). Widowhood carries a strong stigma in the region, which facilitates corrupt practices and leaves them landless and thus incapable of supporting their children (Transparency International 2019b:12).

Gendered forms of corruption, such as sextortion have also been reported in the food aid delivery. For instance, in the aftermath of Cyclone Idai, there were accusations of women in Mozambique being sexually exploited in exchange for aid and food (Al Jazeera 2019).

Corruption in different food sectors and along the value chain

The supply chain of food has many corruption risks that affect people’s access to food (Transparency International 2019a). However, it is complicated, and its different stages can be spread across different countries (even simultaneously). Taking meat as an example, Silver Fern Farms, a New Zealand firm that sells meat from grass-fed cows, does not deal directly with the supermarkets that sell its meat to. Between the company and a supermarket in China lie several intermediaries,
import firms, distribution companies, etc., leaving room for fraud and corruption at different moments and by different actors (Subramanian 2021). This section discusses the different corruption risks at different stages of the value chain.

**Food production**

Different food commodities have varying production processes, each presenting unique corruption risks. Since corruption strategies have to be specific, it is important to understand the different risks that arise in different food types. In this section, instances of corruption in food production will be separated by type of food product, agriculture, meat, and fishery.

**Agriculture**

There are several actors and processes needed to start an agricultural process, including land, irrigation, fertilisers, labour and financial services, which can all be affected by corruption (Rahman 2022:4). As such, the costs of corruption in the agricultural sector can arise from: i) corruption on agricultural inputs (like the difference between the government-set prices for subsidised items like fertilisers or seeds) and bribes to irrigation pump owners; ii) value of wasted time and transport costs; iii) corruption in government extension services (the farmer does not receive the necessary inputs the government should provide) (Anik et al. 2013:567).

The allocation of subsidies and public funds entails high corruption risks. Government-subsidised credits are subject to corruption, and their allocation can respond to fees and percentage payments given to the officials in charge of granting them (Fink 2002:2). In the European Union, the second largest agricultural subsidy provider in the world after China,\(^6\) the misuse of agricultural funds is a major concern, particularly in Central and Eastern Europe (Emerging Europe 2020).

A report by the Green members of the European Parliament posit that EU funds made their way into the hands of oligarchs with political connections or big conglomerates, instead of medium and small-sized farms, the intended recipients (Emerging Europe 2020). In Sicily, an investigation uncovered fraud in agricultural public funds. The scheme involved high-level officials allegedly steering decisions to allow private companies to receive public funds (EPPO 2020). The officials helped the companies replace already submitted documents to improve their position in the final ranking and slowed control procedures (EPPO 2020).

Corruption can also arise in agricultural supplies. Government officials can collude with private sector firms resulting in undelivered goods, higher prices or poor-quality products (Fink 2002:2). Big firms can use corrupt practices to avoid or circumvent safety practices. For example, while pesticides from Monsanto have been revealed to cause severe health issues, the company tried (and in many cases succeeded) to evade restrictions and was the ghostwriter of a report that sought to challenge the links between glyphosate and cancer (Weyler 2019). Similarly, certain fertilisers that can degrade the quality of the soil remain in use despite this fact (Cartier 2021).

In Nigeria, corruption is an important obstacle in the agricultural sector, which is the biggest source of rural employment (Godson-Ibeji et al. 2016). The Nigerian government had fertiliser and seed supply services that were not always delivered to

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\(^6\) US$101.5 billion was spent in 2019 (Calder 2020).
genuine farmers, affecting the sustainable production of crops (Godson-Ibeji et al. 2016:546). Politicians controlling credit also creates opportunities for embezzlement (Godson-Ibeji et al. 2016:546). In Liberia, the Minister of Agriculture Jeanine Milly Cooper and her deputies were investigated for how they awarded agricultural contracts (RFI 2022).

In Malawi, the Affordable Inputs Programme (AIP) sought to improve food security and reduce poverty by targeting smallholder farmers and provide them with subsidies for packages that included fertilisers and seeds (Ragasa et al. 2022:2). Although the programme was successful in reducing the farmers’ expenditures on those items, some issues with its implementation led to corruption by the selling agents, who sold the subsidised fertiliser to vendors or demanded extra money from farmers for the inputs (Ragasa et al. 2022:4). In the report collecting the farmers’ impressions of the programme, one interviewee mentioned that women were “using their bodies to get inputs” (Ragasa et al. 2022:4), probably instances of sextortion.

One way to curb corruption at this stage – when subsidies have to reach small-scale farmers – is to have as few intermediaries as possible. For decades in Nigeria, the government would procure fertilisers through a subsidy scheme. The distributors in charge of selling them to farmers would often sell them at higher prices (The Business Year 2015). To change the situation, the Ministry of Agriculture and Rural Development launched an electronic wallet in 2012, which delivers the subsidised fertiliser and seed vouchers directly to mobile phones so farmers can use them to buy directly from agro-dealers. In its first two years, the electronic wallet reached more than 14 million farmers. It not only improved the lives (and livelihoods) of the farmers but also paved the way for more investment as banks saw agriculture as a more legitimate business (The Business Year 2015). By cutting the middlemen between the Federal Ministry for Agriculture and Rural Development and the targeted farmers, the electronic wallet reduced the risk of intermediaries asking for bribes or favouring relatives and acquaintances, which improved the efficiency of the programme that now reaches more of its intended beneficiaries.

**Cattle and poultry**

The meat sector can be affected by corruption in different ways. Some corruption risks in cattle production refer to its illegal acquisition and sale. For example, back in 2009, in Ahmedabad, in the Indian state of Gujarat, four employees of the Cattle Menace Control Department were fired after it was discovered they were involved in selling stray cows that the department had captured and sold them illegally to butcheries (The Times of India 2009). East Africa is known to have criminal networks entrenched in the wider cattle business, that steal cattle and then sell them, crossing borders and assisted by government corruption (Gumba 2020). Curbing the issue is further complicated by the fact that several countries do not have legislation requiring that the source of the cattle be properly identified at slaughterhouses, further enabling this illegal activity (Gumba 2020).

Other situations of abuse of power arise from monopolistic behaviours. For example, an individual is trying to obtain monopoly rights over a type of buffel grass that two pastoralist communities in Kenya use to feed their livestock (GRAIN 2022). In these pastoralist communities, women are usually
responsible for feeding the livestock, which makes them more dependent on storing this type of grass and more vulnerable to its scarcity (GRAIN 2022). Women can also sell buffel grass seeds, providing them with income for personal and household needs that could terminate if the monopoly rights are granted (GRAIN 2022).

At the global scale, only a couple of firms control meat, giving them a lot of power over global food production (Wasley et al. 2019). The Brazilian company JBS is particularly dominant, with annual revenue of US$50 billion. JBS slaughters as many as 77,000 cows, 116,000 pigs and 13.6 million chickens daily (Wasley et al. 2019). It has been involved in several scandals, including illegal deforestation, labour infractions (including unsafe work conditions) and hygiene breaches and, in 2017, the company was fined US$3.2 billion for bribing politicians (Wasley et al. 2019).

Corruption risks in the poultry segment of food products are known to be related to health issues. In their research on behavioural misconduct, Hirschauer and Zwoll (2008:46-48) focused on the German poultry industry and some of the potential risks found were:

- thinning down contaminated food products by mixing them with batches with toxins below the maximum level
- skip cleaning of equipment when switching from regular to organic farmers
- reducing the waiting period after treatment for parasites
- illegal use of drugs for the treatment of diseases
- use of spoilt meat for processing (like sausage production)
- using higher temperatures during transport to cut costs
- selling defrosted poultry as fresh ones
- selling conventional poultry as organic

Fisheries

The main risk regarding fishing, corruption and food security is the threat illegal fishing represents for the sustainability of fisheries (Graycar & Lindley 2020). Fish has become more important for food security as the global per capita fish consumption has increased from 9.9kg in the 1960s (Graycar & Lindley 2020) to 20.4kg per year in 2017 (OECD-FAO 2020). However, globally, around 58 per cent of fish stocks are decimated while an estimated 26 million tons of fish is caught illegally every year (Graycar & Lindley 2020).

Combating corruption in fisheries is a difficult task, as fish are caught and then processed and sold in different locations across countries and continents (Yan & Graycar 2020:177). As such, different corruption risks emerge at the different stages of the fishing value chain. However, the corruption risks that critically affect food security tend to take place in the early stages, as it is then that the sustainability of fisheries is affected. In the licence and access agreement stages, bribes can be given to obtain licences or permits to fish more or to fish illegally (a licence that is given to the boat but then not recorded in the books) (Yan & Graycar 2020:183). Corruption can also ensure that enforcement does not occur or that inspectors look the other way (Yan & Graycar 2020:183). In South Africa, the petty corruption that secures licences and avoids inspections is widespread (Sundström 2013, 464). There is a long history of corruption in the management of Lake Victoria, which lies between Kenya, Tanzania and Uganda (Tacconi & Williams 2020:315). Boat owners have claimed that they pay bribes for weak or no enforcement of the fishing restrictions (Nunan et al. 2018).
Corruption in food storage and certification

The different steps at this stage can involve bribes exchanging hands to secure transportation, storage and the processing of products (Fink 2002:4). Storage and distribution can pose risks of theft and embezzlement (Rahman 2022:6), while inspectors can be bribed to obtain the desired certification (Fink 2002:3). In Brazil, JBS was accused of bribing health inspectors to sell rotten beef and to avoid proper inspections of their meat plants (Wasley et al. 2019), while the use of shell companies along complex supply chains can be used to pass off products as something else, as the horse meat scandal of 2013 illustrated (Transparency International 2019a).

Corruption in food supply and distribution

Commodity trading

Commodities traders in agricultural products can have corrupt networks that enable them to operate illegally (Rahman 2022:7). Big commodity trading firms can wield a significant amount of power and can favour working from jurisdictions with weak institutions and little accountability (Rahman 2022:7). In agriculture, the four largest commodity traders control between 75 to 90 per cent of the global grain trade (Baines & Hager 2021; Lawrence 2011). While small-scale farmers have little bargaining power vis-a-vis intermediaries, who can take advantage of this situation (Rahman 2022:6).

The financial appeal of food carries a further risk, attracting illegal actors to the business. In 2014, the Knights Templar drug cartel of Mexico, knocked over lime truck shipments heading for the US. As lime companies had to hire guards to secure the trucks, the increased prices were forwarded to the consumers (Vice 2016).

International trade

Despite its large territory and abundance of natural resources, Africa imports large quantities of food – up 83 per cent of its total food items in 2013 (UN News 2015). As such, international trade can become susceptible to corruption in different forms. An entry point to counter corruption is to contribute to the modernisation of customs systems in Africa (Sorgho 2011:22). In Malawi, a former agriculture minister was arrested as he was suspected of taking bribes for a contract to import maize from Zambia after a serious drought the previous year (Africa News 2017; The Times Group 2017). During a raid, the police found US$232,000 in cash in his house (Africa News 2017).

Corruption can take place when custom taxes are high and the customs officers’ salaries are low and the quality of the institutions weak (Bouët et al. 2021a). Although the Economic Community of West African States (ECOWAS) is a trading union, and as such, no tariffs for local products are paid for trade between member states, internal controls exist (to check safety standards, to certify the origin of the products, etc.) (Bouët et al. 2021b:6). These controls pose corruption risks as the officials working there might ask for bribes to speed up processes and people might offer bribes for officials to look the other way. According to ECOWAS regulations, all payments to officials by transporters are prohibited (Bouët et al. 2021b:6). The control points abound and, in 2018, it was found that transporters would have to pay and lose time waiting at several control points estimated to be a little less than five per every 100 kilometres while the illicit payments per travel could vary from US$920 to US$1,671 (Bouët et al 2021a). The
illegal payments vary from one corridor to another, and while they amounted on average to a 1.31 per cent tax, it reached 22.6 per cent in one corridor between Côte d’Ivoire and Nigeria (Bouët et al 2021b).

**Pricing**

Pricing schemes and supply cartels can increase the final price the consumer pays, greatly affecting the poorer segments of the population. In the United States, in Colorado, a conspiracy to fix prices and rig bids for chicken products from at least 2012 to 2019 was uncovered and 10 individuals were charged (Southwest Farm Press 2020). In Europe, a canned food cartel was discovered to have been operating from 2000 to 2013 (Euractiv 2020).

**Aid**

Any aid operation has particular risks, especially when the donor agencies are far from the country of operation and have little scrutiny capacity. Among the different corruption risks that can be encountered are that products obtained by aid or sold to the destination country at a subsidised price can be resold by public officials for personal gain and that local employees of aid agencies can direct aid programmes to their own farms or to those of friends and family (Fink 2002:4-5).

The transparency in handling aid funds will be crucial as the current crisis will undoubtedly trigger more aid flows to countries facing a food security crisis, particularly in Africa. Already in 2019, 31 African countries relied on external food aid (OXFAM 2019:07), and the World Bank has already pledged up to US$30 billion in existing and new projects related to agriculture, nutrition, social protection, water and irrigation (World Bank 2022).

**Corruption at the point of delivery**

Marketing boards can often set prices, creating a potential corruption entry point through embezzlement or by the members being bribed (Fink 2002:4).

Scarcity can also lead to a rise in prices and to the creation of black or parallel markets where food is sold at increased prices. In Venezuela, the regulation of basic product prices and scarcity led to the creation of a black market, where everything from rice to diapers was sold at increased prices (Univision 2016). In Cuba, incidences of food being sold on the black market have also made the news (Quiñones 2021).

But one of the main corruption risks at the point of delivery concerns state food programmes. In Colombia, politicians used food subsidy programmes to gain votes in elections, with a misrepresentation of 3 million individuals, which lead to vulnerable populations not receiving enough (Camacho & Conover 2011). In the Philippines, a study found that when food programmes operated without accounting for how much food had been given, it was more prone to pilfering (Mehta & Jha 2012).

At the beginning of the pandemic, several alleged incidents of corruption took place in South Africa, when reports in several provinces claimed people in charge of distributing food, mostly ANC councillors, were not giving the food to those in need. Two city councillors were suspended after allegations arose that they were asking for food contributions for their own personal benefit (City Press 2020). In Venezuela, several officials and people close to the government were accused of siphoning money from the state-run food programme (New York Times 2019).
The whole value chain

As this document shows, food value chains can be complex and involve several stages with several different actors. When this happens at the international level, tracing the value chain can become even more complex and opaque (Rahman 2022:6).

This is a problem not only due to corruption risks or health concerns but also when taking into account cultural and religious practices that need to be considered for food security. For example, halal integrity needs to be taken into account throughout the food value chain and ensured that no principle was breached at any point, but it has been subject to fraud (Soon, Chandia & Regenstein 2017:40).

Thus, traceability is a key problem. Traceability refers to the possibility of properly accessing all relevant information about a final product throughout its life cycle and the supply chain in a system of recorded information (Williams 2021). For example, by shortening the chain from farmer to the ultimate processor of the product or the consumer, corruption risks are reduced (Fink 2002:10). In general, the traceability of commodities can be difficult and, although it remains important, it should not be taken per se as an anti-corruption intervention (Williams 2021). Integrity in the supply chain is also the responsibility of private companies, which need to engage in more transparency and accountability (Transparency International 2019a).

<table>
<thead>
<tr>
<th>Table 1: Main corruption risks in the value chain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food production: Agriculture</strong></td>
</tr>
<tr>
<td>Misuse and misallocation of public subsidies.</td>
</tr>
<tr>
<td>Corruption to avoid or circumvent safety</td>
</tr>
<tr>
<td>practices (allowing the use of harmful pesticides or fertilisers).</td>
</tr>
</tbody>
</table>

| **Food production: Cattle** and poultry         |
| Illegal acquisition and sale of cattle.         |
| Monopolies.                                     |
| Cutting costs by cutting health and safety       |
| standards.                                      |

| **Food production: Fisheries**                  |
| Bribing to get fishing permits or licences.     |
| Corruption to ensure no inspections.            |

| **Food storage and certification**              |
| Bribing inspectors to obtain certification.     |

| **Food supply and distribution**               |
| Bribing custom officers.                       |
| Supply cartels.                                |
| Corruption in aid programmes, with food        |
| being resold or provided to the family of the  |
| officials.                                     |

| **Point of delivery**                          |
| Black markets, corruption when distributing    |
| state-bought or subsidised food.               |

Corruption and food security resources

Two of the most important resources for food production, and thus food security, are land and water. In this section, some of the main corruption risks regarding these two resources and the production of food will be covered.

Land

Agricultural land is at the foundation of producing food for the world's population and at the heart of household-level food security (Land Portal, no date). Land corruption affects farming, which has a direct impact on food security (Transparency International 2019a). Land and hunger are closely related. Corruption in land administration and land tenure reduces access to land and hinders small farmers’ productivity (Zúñiga 2018).

Some of the corruption risks surrounding land can be related to land titles, illegal land grabbing and land allocations (Rahman 2022:4). Corruption around land issues is quite prevalent; for instance, according to a report by Transparency...
International, one in five people have paid a bribe to access land services in sub-Saharan Africa, and as many as one in two people have to pay bribes to access land (Transparency International 2019b).

**Land tenure**

Having secure land rights is key for improving productivity and, thus, food security (Land Portal, no date). Land tenure refers to the system by which access to land is gained and can be based both on written policies and laws as well as unwritten practices and customs (FAO 2022:iv). In developing countries, land ownership can mean several problems as sometimes multiple titles exist for certain parcels and registration can be a slow and costly process vulnerable to bribes (Fink 2002:1). In Madagascar, only 2 per cent of smallholders have proper official land titles, and women are particularly affected because they have limited access to legal information on tenure due to gender roles in customary institutions (Transparency International 2019b:18). Women are thus more susceptible to corrupt practices in land tenure (Transparency International 2019b:18).

Small-scale farmers also often encounter corruption in land title and tenure, a fact which is aggravated by the fact that a large percentage of small-scale landholders are extremely poor (Rahman 2022:4). Small-scale landholders are crucial as they produce much of the world’s food but are usually also themselves food insecure (Land Portal, no date). By reducing land access or making land tenure more insecure, the livelihood of small-scale producers and landless rural and urban poor is affected (Transparency International 2019a). Making land tenure secure is a crucial step towards improving farmers’ productivity as they are more likely to invest and increase their food access (Land Portal, no date). Women are also empowered when given proper land rights, which leads to improved nutrition for families (Land Portal, no date) since “women who control resources generally have better-quality diets” (OXFAM 2019:08).

Since small-scale landholders are particularly affected by corruption in this sector, it disproportionally affects developing countries, where most of the small-scale landholders are located (Transparency International 2019a). In sub-Saharan Africa and Asia, about 80 per cent of the food supply of those regions comes from smallholders (Transparency International 2019a).

In Zambıa, two different systems coexist in land tenure, statutory and customary. As the customary system does not exist in written form and its processes greatly vary from community to community, traditional leaders enjoy discretion in the use, allocation and sale of land, which has made it susceptible to corruption (Transparency International 2019b:38).

In Tanzania, corruption led to a violent conflict that left 38 farmers dead, as pastoralists paid bribes for herding land access in detriment to farmers (Benjaminsen et al. 2009). Corruption led to both a loss of confidence in the authorities as well as a lack of willingness of the authorities to prevent conflict, leading to individuals deciding to solve their problems by themselves, eventually leading to violence (Benjaminsen et al. 2009).

In Sierra Leone, the legislation that governs statutory land administration is outdated and the government has not implemented reforms, leaving in place a system with land grabs, informal occupation, corrupt land registration and transactions (Transparency International 2019b:38). This has left people vulnerable to
investors and "beneficial landowners", and there is no redress for activities that threaten their food security (Transparency International 2019b:38). Without proper official records of land leased or allocated, corrupt practices abound (Transparency International 2019b:38).

To fight corruption in land property rights, registration and titling processes should be made simple and inexpensive (Fink 2002:10). Land management centralisation can be useful when beneficiaries are spread throughout the country and their needs are more or less homogenous (Rahman 2022:12). Decentralisation is more appropriate for countries where the demands differ from place to place (Rahman 2022:12). It does require robust institutions across the country, not only at the central level, but that can be better for taking local specificities and traditions into account (Rahman 2022:12).

Land concentration and large-scale land acquisitions (LSLAs)

There has been a growing trend of large-scale acquisitions of land “in food insecure countries by governments and private companies based in wealthy countries” which usually force evictions of smallholders, and the crops tend to be destined for export (OXFAM 2019:09). The previous food crisis accelerated large-scale investments in agriculture, with Africa being an important target of large-scale land acquisitions (LSLAs) (Wegayehu & Hendriks 2022) and land grabbing becoming widespread.

Africa became a target for land acquisitions by foreign developed countries and investment funds due to the very competitive prices of its land (Sorgho 2011:1). Corruption of authorities, weak or non-existent agricultural texts and an absence of property titles in some parts of Africa have boosted the massive arrival of investors (Sorgho 2011:2). The illegal acquisition of land includes several corrupt actors, including government officials, judges and business owners (Rahman 2022:8). The impact of land grabbing goes beyond its effect on the local population as land grabbing without prior consultation on land management affected the ecosystem and led to the deterioration of the natural environment (Le Monde Africa 2022).

In Africa, several leaders have negotiated the sale or the rent of arable land to foreign countries, among them South Korea, China and Saudi Arabia (Gix 2020). Particularly in the Horn of Africa, local leaders have followed international financial groups and agro-industrial groups to create export agriculture in countries with famine (Gix 2020). Between 2000 and 2010, about 5 per cent of arable land in Africa was granted to foreign investors via transfers or rentals (Le360 2016). In 2013, Russian billionaire Rashid Sardarov, a client of Mossack Fonseca (known for creating offshore shell companies), bought 28,000 hectares of land in Namibia (ANCIR – ICIJ 2016). In recent years, private equity funds have also made investments in farmland and agriculture, and about US$105 billion in agricultural investments have targeted Africa (GRAIN 2020:4).

In 2008, a deal between a subsidiary of Daewoo and the government of Madagascar was exposed. The deal would have granted the company 1.3 million hectares in Madagascar to grow maize to export back to South Korea without properly informing local communities (GRAIN 2018). The news helped topple the government but showed the magnitude of foreign investment acquiring more and more land in African countries.
There are several examples of land grabbing as well. Kenya’s deputy president from 2013 to 2022, William Ruto, was involved in several land grabbing controversies, and in 2013 he was ordered to pay a victim for the illegal seizure of his land (The African Courier 2022). In Uganda, land grabbing is common, and the government has prioritised foreign investment, giving support to large-scale agribusiness and evicting thousands of people (Transparency International 2019b:24). A survey in 2017, showed that 59 per cent affected by the land grabs had not taken any action regarding land conflict (Transparency International 2019b:24). In general, citizens in Uganda have difficulties accessing basic information on land ownership and other administrative procedures, which the land authorities seldom share (Transparency International 2019b:24).

In Zimbabwe, where corruption is rampant, the land sector is one of the most affected, and it disproportionately impacts women, who are at an increased risk of sextortion and violence (Transparency International 2019b:30). In the land sector, some of the corruption risks are land grabbing by businesses with links to the ruling elite, double allocations of land, “land barons” (who use their power to accumulate land) and forced evictions (Transparency International 2019b:30). Compounding the situation, the patriarchal structure of Zimbabwe’s society means women can have some usufructuary land rights but are prohibited to make any changes (Transparency International 2019b:30). Land ownership is inherited by males, which puts women at a disadvantage (Transparency International 2019b:30). Land grabbing has an important impact on women, who might end in subordination to the people that control land access. Many women also face sextortion when they claim their land rights (Transparency International 2019b:30).

The backlash many of the large land deals provoked has meant some investors are turning to more subtle and diffuse ways to acquire land, like contract farming and special economic zones with the same outcome: land concentration (GRAIN 2018). Even if there is less investment today than after the 2008-2010 food crisis, land grabbing is still a major problem in the region. Between 2010 and 2020, 7.3 million hectares were leased or acquired in sub-Saharan Africa while not even 40 per cent of its was actually developed (Le Monde Africa 2022).

**Competing non-food crops**

In recent years, a new problem in the agri-food system is that the demand for grains and oilseeds for purposes other than human consumption – for biofuels and for feeding animals – has grown quicker than food demand (Barrett 2022), driving acquisitions and investments in crops that are then not destined for nutrition. This is also prevalent in Africa where several of the foreign investors who have obtained agricultural lands are more interested in the production of biofuels (Le360 2016).

And once lands are allocated for this purpose, some companies might keep them even if they change their mind about what to produce there. For example, Italian companies looked to Africa to produce biomass and while some decided to shelf the projects and turn back to Italy, some companies looked for alternatives even after acquiring the land (GRAIN 2013). This can take time, meaning that the land might be unused until a decision is reached.
Green Fuel, an ethanol production company that arrived in the Manicaland Province in Zimbabwe, quickly started occupying land beyond the originally established boundaries, invading areas crucial for the lives of local people (Transparency International 2019b:30). The company even destroyed the local residents’ crops, and when the police got involved, they took the company’s side and beat community members that were trying to resist the landgrab (Transparency International 2019b:30). The conflict had affected women particularly as local traditional leaders had compelled women to perform sexual favours in exchange for access to land (Transparency International 2019b:31).

In Indonesia, a subsidiary of a South Korean corporation expanded its palm oil plantations in peatlands, which are crucial for fighting climate change, without either consulting the local residents or compensating them (Van Hage 2021). The police harassed villagers who resisted the project, and although a court eventually ruled that some of the land had to return to the residents, the ruling was not enforced (Van Hage 2021).

As non-food crops, including ones for illegal purposes, like poppy seeds, become more financially attractive, the incentives to acquire land for these purposes, and push small-scale farmers and food crops through different means, including corruption, will grow.

**Curbing corruption in the land sector**

FAO developed a set of Voluntary Guidelines on the Responsible Governance of Tenure, which are meant to improve the governance of tenure of land, fisheries and forests and to achieve food security (FAO 2022:iv). According to these guidelines, states should recognise and respect legitimate tenure, taking measures to identify the legitimate holders and their rights and to protect them against threats and infringements (FAO 2022:3). The states should also prevent disputes, violent conflict and corruption related to tenure and the allocation of tenure rights, and they need to provide access to judicial remedies when business enterprises affect human and legitimate tenure rights (FAO 2022:4,13). Judicial redress is important to fight corruption and to empower citizens. Public interest litigation was used in Kenya to halt a large-scale housing project and helped empower the community in the process (Transparency International 2019b:6-7).

When transnational corporations are involved, their home states should engage in ensuring the corporations do not violate human and legitimate tenure rights in the countries where they are working (FAO 2022:4). Rule of law is a key element for land tenure, and rules should be properly and transparently publicised in relevant languages and enforced in an equal manner (FAO 2022:5). When developing laws and frameworks and ensuring land tenure, states should take into account the particular obstacles women and girls face regarding land tenure and seek to provide them with adequate protection (FAO 2022:8). To prevent corruption, states should publicise the processes, requirements, fees and any exemptions for tenure rights recording (FAO 2022:30).

Unfortunately, the guidelines have not been implemented in Africa, where a study revealed that more of half of the countries did not have sufficient data to assess their implementation, and 20 countries of the 23 studied had clear breaches of the guidelines (Le Monde Africa 2022). According to the study, Mauritania, Sudan, Mali, Congo-
Brazzaville and South Sudan have the worst records with the most common failings being a breach of customary property rights and relocation of displaced populations (Le Monde Africa 2022).

NGOs and communities can use mapping technology for “counter-mapping”, a strategy to challenge the planning documents produced by the state (Sidiq 2021:191-192) to can help with land tenure issues and to combine customary and statutory tenure.

**Water**

Irrigation is a key input for both agricultural and cattle activities with several possible corruption risks (Rahman 2022:14). Corruption can affect the reliability of irrigation or cause water pollution, rendering it unusable (Albisu & Chêne 2017). This is not insignificant as irrigated land provides 40 per cent of the world’s produced food and problems with water can easily put a strain on food security (Albisu & Chêne 2017).

Specific corruption risks appear in different types of irrigation systems. Canal irrigation refers to water being channelled through canals and can be large-scale systems that require big investments or small-scale systems managed by local communities (Water Integrity Network 2011:5).

This type of irrigation can have corruption at different stages. At the early stages, where the system is designed and built, corruption risks arise as the costs for large-scale irrigation systems are quite large and involve several actors, both public and private (Water Integrity Network 2011:8). Misallocation of funds or giving a contract to a sub-optimal contractor due to corruption can lead to poor irrigation systems or irrigation projects that are never finished but have rising costs (Water Integrity Network 2011:8). The management of large canal irrigation systems can also have corruption risks, as officials working in the centrally managed irrigation systems can abuse their power to obtain bribes for water distribution (Water...
In tube well irrigation, water is pumped up from groundwater reservoirs (Water Integrity Network 2011:5). It is usually developed by private investors, and water users manage it directly (Water Integrity Network 2011:5). One of its main risks is the creation of informal water markets where whoever has the pump charges overpriced fees for the water (Water Integrity Network 2011:11). Another risk lies with permits for water, which are designed to prevent over-exploitation, but can be forged if they do not come with proper monitoring (Water Integrity Network 2011:12).

Systemic corruption in irrigation can involve several levels and reach up to politicians, as Robert Wade’s study in India clearly depicted (Tacconi & Williams 2020:311). In the case of systemic corruption, he found contractors paying bribes to engineers to build irrigation infrastructure that was substandard, but which meant contractors profited from it. Farmers, both the ones included in the irrigation scheme and those that were not, would then have to pay engineers to secure the provision of water for their crops. The whole system relied on the discretionary appointment of personnel as even engineers needed to pay officials to have an irrigation area appointed to them (Tacconi & Williams 2020:311-312). This system led to water fees not being increased over time, since an increase could have reduced the farmers’ willingness to pay the existing bribes. This discouraged proper investment in the irrigation system (Tacconi & Williams 2020:312).

Finally, water allocation can be decided based on connections and corruption and not due to economic and development assessments (Fink 2002:3), and the rich and powerful can capture irrigation systems (Albisu & Chêne 2017). In Mexico, some estimates consider that the largest 20 per cent of farmers had captured the irrigation systems, receiving more than 70 per cent of the irrigation subsidies (Water Integrity Network & Transparency International 2010).

Something that has worked in curbing corruption in big public projects is the use of integrity pacts. Integrity pacts can avoid corruption in the procurement phase of large irrigation projects. These pacts are an agreement between all actors to avoid corruption and is overseen by an independent monitor (Water Integrity Network 2011:8). As with other sectors, it is important to promote transparency, accountability and participation to prevent corruption in irrigation (Water Integrity Network 2011:16).

Curbing corruption in food security

Assessing corruption risks

Controlling corruption effectively can lead to an increase in food security of 20 per cent (Anser et al. 2021:07) and is thus a central challenge for the present food crisis. There is no “one size fits all” anti-corruption policy or strategy. Anti-corruption strategies should be tailored both to the specific sector as well to the country and even to the conditions of a specific area inside a country (Tacconi & Williams 2020:309).

Understanding the corruption risks that emerge in different stages as well as in different sectors and countries is thus an important first step toward reducing the opportunities for corruption (Tacconi & Williams 2020:310). In this sense, it is important to conduct corruption risk assessments of the
specific operation to design and implement adequate anti-corruption measures (Rahman 2022:9).

Although the structural causes of food insecurity might be difficult to solve in the immediate future, addressing the current crisis while curbing corruption risks will ensure more food makes it to the people that need it most.

**Good governance**

Increasing constraints, especially strengthening judicial independence, civil society and freedom of the press, as well as empowering citizens, remain crucial undertakings (Tacconi & Williams 2020:310) and an important part of a governance approach. As with corruption in any sector, transparency should be promoted. Ensuring the presence of independent and well-functioning media is an important way to obtain transparency (Nkombo 2018), and public disclosure of relevant documents and land certificates, as well as other land administration documents, should be encouraged (Rahman 2022:12). Similarly, companies need to disclose their ownership structures to regulators (Nkombo 2018). Accountability can be accomplished through oversight institutions, both national and international, that can independently audit all processes (Rahman 2022:12).

**Curbing corruption in aid**

A key element to reducing corruption risks in aid projects is to promote oversight and build checks and balances into the project from the beginning and avoid placing too much responsibility on only one person (Fink 2002:7). For an aid project to be successful and avoid corruption risks, it is important to set up the guidelines and rules in the planning stages, before funds have been committed (Fink 2002:9).

Participation and community engagement are especially important in small communities. For local projects working with small producers, it is important to foster trust among the participants, ensure everyone working on the project is accountable and all members can express their concerns (Fink 2002:8). Similarly, stakeholders should be included in the agenda setting along with discussions regarding the priorities and focus of the project as well as the destiny of the aid. Effective monitoring and whistleblowing mechanisms should be built into the project and all surrounding activities. The rules of conduct should also be clear and known by all (Fink 2002:8).

**New technologies**

New technologies can be harnessed to curb corruption where possible. The electric wallet introduced in Nigeria to deliver vouchers to farmers to buy subsidised fertiliser greatly reduced the need for middlemen (Nkombo 2018). It reached more than 14 million Nigerian farmers in two years and also improved the confidence, and hence the investment, of the private sector in agriculture (Nkombo 2018).

**Local participation**

Farmers’ institutions and unions are key allies in curbing corruption. They can help hold governments accountable (Rahman 2022:15) and provide oversight for the implementation of policies and tracking of agriculture budgets (Nkombo 2018). In Zambia, for example, farmers organised in a way that they could demand improvements and accountability (Nkombo 2018).
Participatory approaches should also be taken into account. Land decisions should engage those who could be affected by the decisions, taking into account the possible power imbalances between the parties (FAO 2022:5). In Ghana, the use of participatory video gave marginalised groups a platform to make their voices heard (Transparency International 2019b:12). As mentioned earlier, widows are particularly marginalised in the Upper East Region of Ghana and have few opportunities to influence the decisions which affect them most. Participatory video facilitates communication between people that might otherwise not converse, and widows from the Kulbia village used it to share their stories and reach their community and local decision-makers (Transparency International 2019b:12). They filmed a short documentary on their experiences with landlessness resulting from corruption and screened it, fostering a discussion on these issues. The result was encouraging, and government officials and traditional leaders pledged to protect the land rights of widows (Transparency International 2019b:12-13).

Harnessing media

Radios are the primary means of communication in several African countries and can serve as an anti-corruption tool (Rahman 2022:16). In Madagascar, the local chapter of Transparency International, TI-IM, led a survey of rural smallholders and urban dwellers to assess the different experiences of the sexes (Transparency International 2019b:18). A communications campaign on radio and television was then launched to help citizens overcome barriers to obtaining land titles, avoid corruption and report corrupt individuals (Transparency International 2019b:18). Importantly, journalists received training to identify corruption and were given support to report cases (Transparency International 2019b:18). Finally, accompanying information (in the form of guides and a documentary) was shared to highlight the importance of gender equality in land matters. Land councils, which included women and the elderly, were established and helped demarcate land using tablet devices and other GPS tools (Transparency International 2019b:18). The FAO’s Voluntary Guidelines on the Responsible Governance of Tenure were used as a template and gave TI-IM the necessary language to advocate for more transparency (Transparency International 2019b:22).

Addressing gendered forms of corruption

Understanding and mitigating gendered forms of corruption throughout the food value chain is crucial when designing anti-corruption interventions aimed at food security. For instance, to address the gender dimension of land corruption uncovered in Zimbabwe, the local chapter of Transparency International sought to raise awareness of the issues, like sextortion, and gave individuals the opportunity and platform to seek legal redress and share their experiences (Transparency International 2019b:31). TI Zimbabwe also produced a documentary on land corruption and women that has been widely shared and watched, reaching beyond the community originally affected (Transparency International 2019b:31).
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