

IMPACT OF COVID-19 ON WOMEN IN AGRICULTURE IN MALI AND BURKINA FASO

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ABSTRACT

This paper examines the impact of the Covid-19 crisis on women who work in the agricultural sector in Mali and Burkina Faso. This study is based on a literature review and interviews of stakeholders who are active in West-Africa. These interviewees gave useful insights in the current situation in both countries, and they could also reflect on the conclusions made from the literature review. The main conclusion describes that the virus itself was not a problem, but the precautionary measures taken by the government to fight the virus were tremendous for women in Sub-Saharan Africa. Moreover, the Covid-19 pandemic enlarged the already high gender discrepancies. The existence of these discrepancies is mainly due to male dominance and gender roles in both Mali and Burkina Faso. Discrepancies are noticeable in every sector but especially in the agricultural sector where the poorest people are active. On the one hand, it is highly recommended to implement women targeted actions, such that women can really benefit, and education for women on the other hand. This all considering their culture and taking into account the do-no-harm principle.

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III. LIST OF ABBREVIATIONS

ACNG belges	Acteurs de la Coopération Non Gouvernementale belges Actors of the Belgian nongovernmental cooperation
AIDS	Acquired Immune Deficiency Syndrome
AGRA	Alliance for Green Revolution Africa
ARES	Académie de recherche et d'enseignement supérieur Research and higher education academy
ARGO	Adviesraad voor Gender en Ontwikkeling Advisory council on gender and development
COVAX	Covid-19 Vaccine Global Access Facility
CMDT	Compagnie Malienne pour le Développement du Textile Malian company for the development of textile
CNABio	Conseil national de l'agriculture biologique
ECOWAS	Economic Community of West-African States
FAO	Food and Agriculture Organization of the United Nations
HIV	Human Immunodeficiency Virus
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
INSTAT	Institut National de la Statistique International institute for statistics
ITUC	International Trade Union Confederation
NGO	Nongovernmental Organization
OECD	Organization for Economic Co-operation and Development
SDG	Sustainable Development Goal
SIGI	Social Institutions and Gender Index
SPRING	Strengthening Partnership, Results, and Innovations in Nutrition Globally
VAT	Value Added Tax
WHO	World Health Organization
UNDP	The United Nations Development Programme
UNICEF	United Nations Children's Emergency Fund

1. INTRODUCTION

Nowadays, everyone is familiar with the word 'Covid-19'. This pandemic is already more than a year present in our daily lives and affects everyone. In the beginning of July 2021 there are already more than 188 million cases known and approximately 4 million people lost their lives. Fortunately, also more than 172 million people have been cured (Worldometer, 2021). These enormous amounts of cases and the precautionary measures implemented in a lot of countries to control the spread of the virus result in the fact that everyone is suffering from this pandemic, but some suffer more than others. Inclusion and solidarity are highly needed because "none of us is safe until all of us are safe and no one is left behind" according to Ahunna Eziakonwa, the United Nations Development Programme assistant administrator and regional director for Africa (United Nations Development Programme, 2021). This is one of the biggest lessons of this pandemic according to Eziakonwa and that is why it is important to investigate the impact of the pandemic on everyone, regardless of the country, status, gender or age.

Some people suffer more physically, while others suffer more because of the socio-economic impact of the pandemic. Older people, people with an underlying health risks and men are the ones who suffer more physically (Global Health, 2021). The fact that men face a higher mortality rate explains that pandemics are not gender neutral at all and why Simba and Ngcobo (2020) argue that it is important to look at this pandemic through a gender lens.

Although researchers found that for this Covid-19 crisis men have a higher mortality rate, and thus suffer more physically, women suffer more from the socio-economic consequences of the pandemic because the gender inequalities and social disparities rise due to Covid-19 (Global Health, 2021). These gender inequalities and also male dominance are a struggle that women face every day, especially in Sub-Saharan Africa. Even though, gender equality is a human right, male dominance is still present in many parts of the world. "Discrimination based on sex is prohibited under almost every human rights treaty" (United Nations and the Rule of Law, n.d.). Still many women suffer from unequal access to land ownership or education. Moreover, according to the United Nations and the Rule of Law (n.d.), economic discrimination is rather the norm than the exception.

Regarding the socio-economic consequences of the pandemic, Simba and Ngcobo (2020) argue that women not only need to fight the disease but also the threats beyond the infection because they take

care of the family and stay home, that leads to a decline in earnings. This will later be discussed more thoroughly. Furthermore, women get easily overworked in domestic care, which in their turn leads to depression, anxiety and other mental health issues. Another threat that women face because of the Covid-19 measures is the increase of violence and abuse due to the lockdown or isolation. This can also lead to an increase in unwanted and/or teenage pregnancies (Chandan et al., 2020).

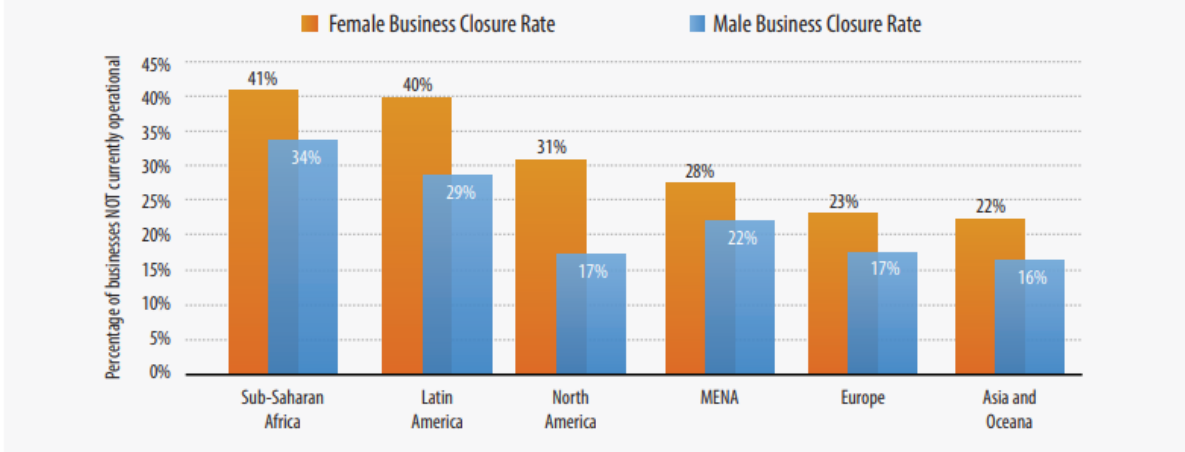
The vulnerability of women regarding this pandemic applies for all countries in the world but especially for those in Africa, where the gender disparities are already among the highest. The World Economic Forum (2020) mentions that Burkina Faso is ranked on the 129th place out of 153 countries in the global gender gap index. Mali is even doing worse on place 139. Considering this, the World Bank Group (2020b) states that it is very important to look at this pandemic through a gender perspective because such crises impact the most vulnerable and deepen existing inequalities across countries, households, communities and individuals and of course the inequality between gender.

Another inequality that is on the rise due to this crisis is the inequality between the rich and the poor. The World Bank Group (2021) argues in one of their blogs that poverty will increase, making more people fall below the poverty line. They estimate that 31 million people cannot escape extreme poverty in 2020 due to Covid-19. "More than 90% of Sub-Saharan Africa's extreme poor are engaged in agriculture" (World Bank Group, 2020b, p 5). Moreover, based on the paper of O'Sullivan, Rao, Banerjee, Gulati, & Vinez (2014), more than 60% of women employed in Africa work in agriculture. These are reinforcing arguments to focus this research on the impact of the pandemic on women in agriculture in African countries. In this way, the extreme poor and women, who are two vulnerable groups in this pandemic, are targeted.

Another reason why it is so important to look at the impact of Covid-19 on women in Sub-Saharan Africa is well represented in figure 1. This figure shows the difference between male and female small businesses closure rates among different regions. It is clearly noticeable that women all over the world experience disproportionately the negative consequences of the pandemic because more of their businesses have to close compared to the businesses of their male counterparts. These businesses in figure 1 are often agricultural related in Sub-Saharan Africa, as will be stated in next paragraphs. Businesses in general are hit most in Sub-Saharan Africa. It is undoubted that female led businesses are suffering more in this region, closely followed by Latin America. These numbers can be misleading in some way for Sub-Saharan Africa because the World Bank Group (2020b) mentions that 58% of the

self-employed population are women. This makes, by definition, that women-led firms have a higher chance of being closed due to the pandemic. Fortunately, the authors mention that the majority of the closures in all regions will be temporary since they are mainly due to the regulations implemented by the government to fight the virus. Once the regulations are abandoned, the owners plan to reopen their business. Due to the fixed costs during closure and the costs for reopening, the owners require liquidity (World Bank Group, 2020b). Unfortunately, female-led firms are smaller and therefore have smaller capital buffers and thus less liquidity. This explains why their closure rates are higher because the lack of capital buffers and liquidity makes them less resistant to crises unlike the big firms led by their male counterparts (Word Bank Group, 2020b). The complete impact of Covid-19 on female owned firms in agriculture will be discussed in more detail later on.

Figure 1: Gender gap in micro and small firm business closures across regions



Note: this figure illustrates the gender gap in the rates of business closure within the Facebook Covid-19 survey sample, for micro and small businesses closed between January 1st and June 1st, 2020. Regional averages computed using country averages (conditional on more than 100 observations). South Asia closure rate is 44% (gender gap not shown since female-owned sample size too small for a meaningful comparison). Globally, female-owned businesses were 5,9 percentage points more likely to close their business than male-owned businesses, controlling for region.

Source: World Bank Group (2020b)

In what follows, the focus will be on two specific African countries, namely Mali and Burkina Faso, which are both West African countries. These two countries have been chosen because of the fact that they are both part of the fourteen partner countries of the Belgian development cooperation. This

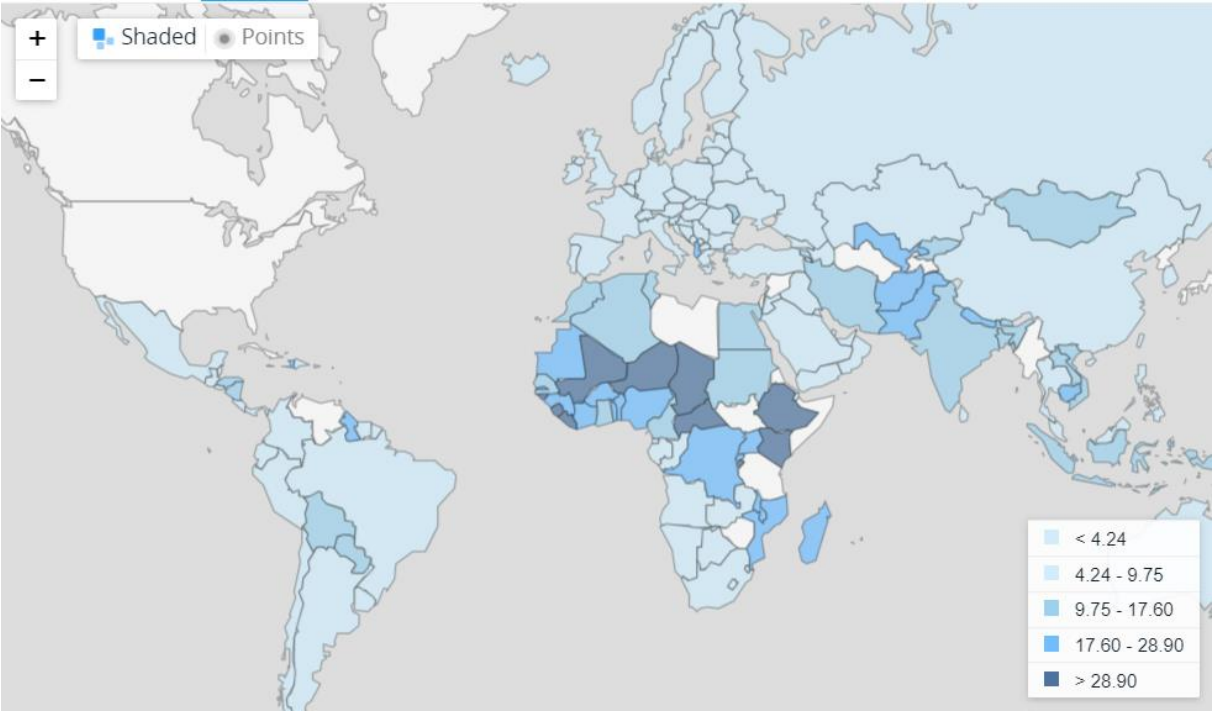
gives the opportunity to make policy recommendations directly to the advisory council on gender and development of the Belgian government, which is the main goal of this paper. This in order to preserve the third Sustainable Development Goal (SDG) of good health and well-being and the fifth SDG of gender equality and empowering women and girls. Moreover, Mali and Burkina Faso are neighbouring countries, which makes it easier and even more relevant to compare them. Although the focus will be on these two countries, the literature review will also borrow insights from West African countries in general in order to be able to frame the general concepts.

In what follows, the role of women in agriculture in Sub-Saharan Africa in general, even before the pandemic will be discussed first. As mentioned before, the gender disparity was already high before the Covid-19 crisis and these disparities will be highlighted in that part. Section 3 will include the impact of Covid-19. This part will deal with the Covid-19 cases and precautionary measures, lessons from previous epidemics, vaccination campaign, the impact on the agricultural sector and local government responses. This section will be based on a literature review. In the fourth part, there will be a reflection of the literature based on interviews taken from stakeholders in these countries. Furthermore, some policy recommendations will be provided. Finally, this paper will give a profound discussion and conclusion to give the main results and limitations.

2. WOMEN IN AGRICULTURE IN SUB-SAHARAN AFRICA

Women face already a lot of discrimination in Sub-Saharan Africa (SSA) even before the pandemic. In this section the gender discrepancies in agriculture will be highlighted. To understand the impact of Covid-19 on women in agriculture, it is very important to first understand the significant role of agriculture in Africa. This can be seen in the figure 2, where the importance of agriculture, forestry and fishing in value added as a percentage of GDP in 2019 is shown. It can easily be seen that Africa has the largest agricultural dependency as a percentage of the GDP worldwide. Mali has one of the highest numbers in Africa with 37,32%. Burkina Faso is slightly less dependent but is still facing a number of 20,17%. These are high percentages when compared to the world average of 3,27% in 2019. One reason why these two countries are so dependent on agriculture is because they cannot rely profoundly on agricultural import because of the lack of access to the sea. This makes them more self-reliant (W. Vereecken, personal communication, April 4, 2021).

Figure 2: Agriculture, forestry and fishing, value added (% of GDP) in 2019



Source: The World Bank Group (2020, April 30). Agriculture and rural development indicators.

Since Mali and Burkina Faso are reliant on agriculture, a lot of people, men and women, are employed in this sector. The Food and Agriculture Organization of the United Nations (FAO) mentions that Mali is a country primarily depending on small, family scaled agriculture where women are key (FAO, 2018). The employment rate of women in agriculture is an easy way to understand the importance of women in agriculture. This importance can be seen in figure 3 and 4 showing the overall and female employment rate in agriculture for the most recent year available, namely 2019. Especially Mali employs a lot of people in agriculture: 62,44% of total employment and 62,58% of the female employment. Burkina Faso has lower employment rates but still significant enough: 26,21% of total employment and 21,41% of female employment.

Figure 3: Total employment in agriculture (% of total employment)

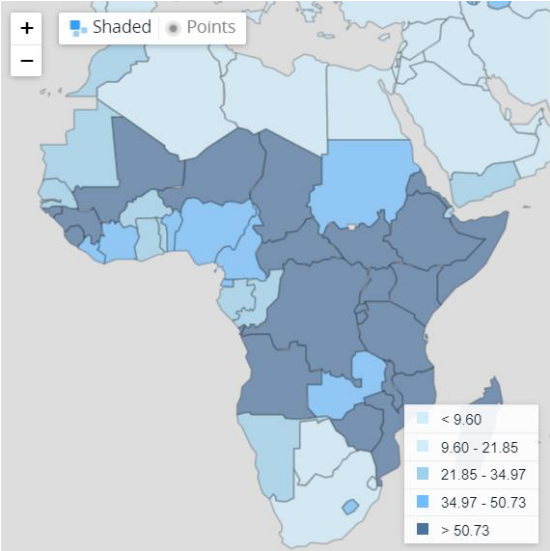
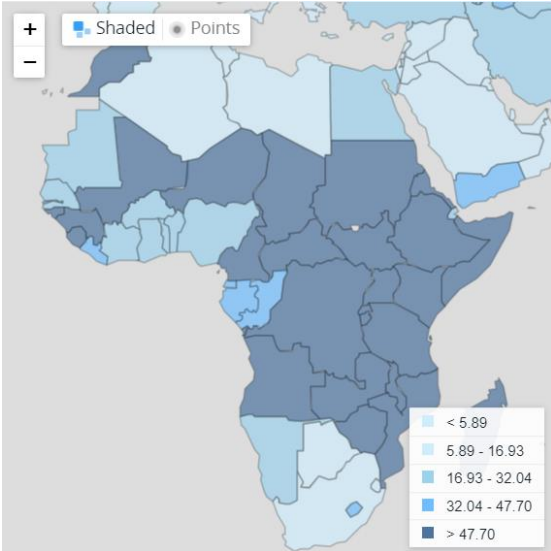


Figure 4: Female employment in agriculture (% of female employment)



Source: The World Bank Group (2021). Agriculture and rural development indicator

Doss, Njuki, & Mika (2020) mention that the role of women in agriculture is often invisible as they mostly work in the informal sector, and they have a smaller enterprise. The former is confirmed by the World Bank Group (2020b), that states that firms owned by women in Sub-Sahara Africa are mainly part of the informal sector. Unfortunately, these are “non-skilled and low paid jobs with no benefits or job security” (OECD, 2016, p6). The invisibility of the informal sector often leads to a lack of basic social protection by the government. This protection could help the people working in this sector to create a buffer against economic distress (World Bank Group, 2020b), which is exceptionally needed in this pandemic. Moreover, African Union (2020b) confirms that the informal African economy, that

represents more than 75% of the workforce, implies a higher degree of vulnerability to external shocks, such as the Covid-19 pandemic. The latter is confirmed by Doss et al. (2020), who mention that more than a third of all small and median enterprises are owned or run by women in emerging markets. Doss et al. (2020) point out that men only move into specific crops if they become more commercially valuable. Before that, it is up to women to experiment with these crops and that is one of the many causes why their business is rather small.

Another reason for their small businesses is mentioned by Doss et al. (2020), who state that women have less access to key inputs, equipment, information, seeds, fertilizer and (male) labour forces compared to their male counterparts (O’Sullivan et al., 2014). As will be mentioned later, this will be strengthened by the Covid-19 pandemic. One major cause of this lack of main inputs is the lack of access to credit to buy these inputs (Meinzen-Dick, 2019). This leads to smaller yields of the land owned by women and thus to lower income of women, which can lead to less inputs. The lack of access to credit for the targeted countries, being Mali and Burkina Faso, will be further dealt with in the next sub-sections.

Even before Covid-19, women-led enterprises faced some difficulties because of gender norms as well as access to finance and assets. One of the gender norms we can think of is the access to land. In Mali and Burkina Faso, it is a social norm that it is not appropriate for women to own land. They mostly use land via a male relative, but this can make the women very vulnerable. According to a blog of the International Food Policy Research Institute (IFPRI), “a death, divorce or a man’s change of mind can leave a women farmer landless overnight” (Meinzen-Dick, 2019). According to her, this also changes the way women farm. Productivity increasing investments will not be made by women because men can take away the land as soon as the investment is done. Another reason why women do not do many investments is the lack of access to financial resources. This and other gender norms will be dealt with in the next sub-sections, where the gender norms, next to the general agricultural situation, for Mali and Burkina Faso will be analysed. These gender norms make government support more difficult. The support only reaches these women if they are explicitly targeted because of these constraints regarding gender norms (Ragasa, & Lambrecht, 2020).

Another main issue that Regasa et al. (2020) consider as problematic – even before the pandemic – is the access to digital platforms. Although digital platforms can be very useful for women working in

agriculture, their access is limited and their literacy is lower than that of their male counterparts, which means the usage of digital platforms is also limited.

Ragasa et al. (2020) state that women dominate the workforce of modern supply chains for high-value products, such as horticulture products for high-income markets. Although there are exceptions, women's participation in these modern supply chains, for example fresh fruit, vegetables and fresh flowers processing and trading, has often increased their income and empowerment. Strengthening Partnership, Results, and Innovations in Nutrition Globally (SPRING, 2016) contradicts this statement by explaining the barriers of market gardening, such as limited markets, water scarcity and storage space. Even though horticultural products were once dominated by women, men are now taking over this dominance because of the higher potential profit margins. This confirms the reason stated by Doss et al. (2020) why women have smaller businesses, namely because men take over the more commercially valuable crops.

Moreover, the role of women depends mostly on the country or area in which they live as well as on the type of crop they cultivate. This will become clearer in the next section, where the general agricultural situation and the role of women in agriculture in Mali and Burkina Faso will be analysed.

2.1. Mali

2.1.1. Agriculture

Wangchuk (2021) discusses the general agricultural system in Mali. The southern region of this country is mainly dependent on the production of maize, millet, sorghum, and legumes for their own food production. Further, they also depend on the cotton production for their income, with nearly 90% of the population engaged in this type of agriculture. The 'Compagnie Malienne pour le développement du textile' (CMDT) is a state-owned company that gives support to smallholder farmers in southern Mali. This company buys cotton and provides credit to the farms for their inputs. These credits are made accessible via village-level cooperatives. In the beginning of each season, the price is negotiated by the CMDT and the national union of cotton farmers.

SPRING (2016) argues that mostly men work in the cotton sector because this is the cash crop. Also maize, miller, sorghum, and legumes are considered mostly male crops since they have a long production process according to FAO (2018), while women mostly produce the food crops such as peanuts and rice. Their main tasks in these crops are water collection, transplanting, weeding, and

winnowing (FAO, 2018). SPRING (2016) mentions that if women do work in the production of the cash crops of male relatives, they are often not paid for this work. Regarding livestock, men are the ones responsible for the cattle, while women take care of the smaller ruminants. Poultry is reared by both men and women (SPRING, 2016).

According to FAO (Food and Agriculture Organization of the United Nations, 2017), agriculture in Mali also faces some constraints. These main constraints are “a lack of innovative technologies, irrigation, and private storage and infrastructure, combined with food price volatility” (Food and Agriculture Organization of the United Nations, 2017, p2). Fortunately, they argue that Mali has an enormous potential to grow because only a quarter of the potential land is used for agriculture.

2.1.2. Gender norms

Gender norms in Mali reinforce the extent of gender inequality (OECD, 2019). This because, according to the law, the husband needs to be responsible for the family as head of the household. Another law in Mali is that the wife has to obey her husband. This dominant role of men is mostly due to their religion, the majority of people in Mali are Muslim, and habits (OECD, 2019). Because of this legal obligation to obey their husband, women have a lower access to bank accounts, even though they have the same rights as men to open a bank account. Moreover, the law does not prohibit gender discrimination when it comes to access to bank accounts (women, business and the law, 2021a). The share of bank accounts holders who are women is 27%, which makes it difficult for women to participate in the economic life according to the OECD (2019) based on the United States Department of State (2017).

Even though the constitution provides men and women with the same rights regarding employment, 22% of the population states that it is not acceptable for a woman to search for a paid job outside their house (OECD, 2019). This results in the fact that women sometimes only work at home or on the farm of their husband because their husband does not allow them to work in the formal economy. Even if they work in the formal economy, they often face lower wages due to the discriminatory religious and customary laws (United States Department of state, 2017).

Additionally, the OECD (2019) mentions that the access to land for women is extremely difficult resulting in the fact that only 3% of the share of agricultural land holders are women. These women have received land ownership via their husbands or via an official organization (USAID, 2010).

According to SPRING (2016), these civil society organizations are strong in Mali which causes a higher collective influence of women. Fortunately, the acquisition and decision making over the property is by law the same for men and women (United States Department of State, 2017). It is due to the unawareness of the law and customary or religious laws that in reality, women face a lot of difficulties in accessing land. SPRING (2016) states that receiving access to land is even more difficult for widows or divorced women. Moreover, they argue that not only the access to land is a problem but also the condition of the land can be problematic. Because men are higher in rank than women, the men get the best, most fertile land. Women often get smaller, less fertile plots or land that needs to be left to fallow.

The women, business and the law (2021a) department of the World Bank Group constituted an index about the lifecycle of a working woman. The higher the number, the more equal the society. Mali scores for this index 60,6 out of 100. This is a relative low score compared to the average of Sub-Saharan Africa of 71. If we look at the sub-indicators, as illustrated in figure 5, only one strongly decreases the index, namely the marriage. This is mostly because women cannot be the head of the household like men can, as mentioned before. The other indicators score at least 50%, with 3 of the 8 indicators giving a high percentage.

Figure 5: Women, business and law index for Mali



Source: Women, business and the law (2021a)

Fortunately, the government of Mali tries to help improve the socio-economic development of the agricultural situation of the country based on four main documents (FAO, 2017). First of all, the growth and poverty reduction strategic framework needs to help Mali to become an emerging economy. This can be done by strengthening peace, building more economic stability and promoting inclusive growth to help the poorest in society to benefit from economic growth as well. Increasing equality of access to social services and improving governance are other methods to make Mali an emerging economy.

The agricultural orientation law is the second document, and its objective is to make the current agriculture more modern, sustainable and more competitive. Equal land access and land management for both sexes is provided by this document. FAO (2018) also mentions that this document tries to put female farmers on the same footing as male farmers. The third document that is mentioned by FAO (2017) is the national food security strategy that needs to improve the food security of Mali and focusses on economic growth led by agriculture. Finally, the strategic framework for economic recovery and sustainable development in Mali needs to help the government to achieve the Sustainable Development Goals (SDGs) by encouraging more diversified crops and sustainable agriculture (FAO, 2017).

2.2. Burkina Faso

2.2.1. Agriculture

According to the statistics of FAO (2019), sorghum, maize, millet and cotton are the most produced crops. 1,9 million tons of sorghum, 1,7 million tons of maize, 0,97 million tons of millet and 0,73 million tons of cotton seed were produced in 2019. Just like in Mali, the latter is mostly used as an income source because of the export of the good. According to the World Bank Group (2017), cotton is presenting 60% of the agricultural exports of Burkina Faso. They also mention that next to cotton, also sugar cane is excessively used as an income source because the yield is more than 1 million hg per hectares (FAO, 2019). As mentioned before in section 2.1.1. about the agriculture of Mali, mostly men work in the production of cash crops, such as cotton and sugar cane, while women work in the food crops (SPRING, 2016). This also holds true for people working in the agricultural sector in Burkina Faso.

Jones (2019) mentions that women work a lot on the farm, but also at home with domestic work by preparing the meals. The work on the field mainly consists out of planting and harvesting. The former is only done by women if there are no tools available. If there are some mechanized tools, men will take over this job of planting the crops.

As mentioned before, a lot of economic activities take place in the agricultural sector (World Bank Group, 2021). However, women are facing some discrimination in this sector because the country is only ranked 108th out of 153 countries regarding economic participation and opportunity (World Economic Forum, 2020).

2.2.2. Gender norms

In Burkina Faso, women face large difficulties in accessing financial resources, land, entrepreneurship and employment. Additionally, they have a low decision-making power over their own income. Regarding the access to financial service, only 9% of women in Burkina Faso own a microfinance or bank account in their own name (OECD, 2021). These OECD statistics are based on a SIGI survey in 2016 in Burkina Faso. This is because women are not protected by a non-discriminatory law when trying to get access to credit.

The SIGI survey in Burkina Faso also declares that 82% of the respondents think that it is easier for men to access land ownership than it is for women. Maybe even more surprising is the fact that a quarter of the people think women and men should not have the same access to land ownership. With regard to the access of entrepreneurship, the statistics of the survey mention that 70% of the contributors stated that it is easier for men to create their own business. Access to employment is another issue for women in Burkina Faso because 46% declare that women cannot decide themselves to seek for a paid job outside the house. This results in the fact that 68% of the respondents think it is easier for a man to access paid employment. Finally, the statistics about the decision-making power of women over their own income shows some other unpleasant findings. 81% of the women in Burkina Faso do not decide on the daily investments or expenses in their region and another staggering 64% declare the women should not be involved in the decisions regarding the daily expenses and investments. All these numbers show that women have to rely a lot on their husband and that gender discrepancies are still very significant in this country.

Women, business and the law (2021b) mention that Burkina Faso has an index of 79,4 out of 100, which is much better than the index of Mali and also better than the average across Sub-Saharan Africa. As mentioned in figure 6, the sub-section pay is bringing this number down, while the other sub-sections score 75/100 or more. The poor result for the sub-section pay is mostly because the law does not prohibit gender discrimination based on remuneration resulting in women getting a lower wage than their male counterparts.

Figure 6: Women, business and law index for Burkina Faso

Burkina Faso - Scores for Women, Business and the Law 2021



Source: Women, business and the law (2021b)

3. IMPACT COVID-19

In this part, the cases in Mali and Burkina Faso will be highlighted together with the lessons from some previous epidemics, such as HIV, AIDS and Ebola. Moreover, the impact of the Covid-19 crisis will be handled based on four main interlinked nodes in agriculture: production, processing, trade and consumption (Doss et al. 2020). This all using a gendered perspective.

3.1. Cases and precautions/measures

Even though Africa is not the hardest hit continent in the world, it is still suffering because of the pandemic and, as mentioned before, if not everyone is cured, no one can be safe. According to the Covid-19 monitor with the WHO tracker (WHO, n.d.), Mali has 14.477 cumulative cases and 528 cumulative deaths at the beginning of July 2021. This all on a total population of almost 20 million people. As Burkina Faso has a similar population to Mali, it faces a similar number of cumulative cases (13.520) but fortunately, more people survive the virus with only 168 cumulative deaths in the country. Additionally, for the majority of the countries, it can be shown that men have a higher mortality rate than women (Global Health, 2021). This can also be seen in figure 7 and 8.

Figure 7: Gender division of confirmed cases and death rates in Burkina Faso



Source: Global Health (2021)

Figure 8: Gender division of confirmed cases in Mali



Source: Global Health (2021)

The low number of Covid-19 cases in Mali and Burkina Faso is due to a low degree of international migrants entering the countries (African Union, 2020b). Fortunately, because of the low number of infected people, the care regarding the Covid-19 virus is free for everyone, which is positive considering the limited number of people having a medical insurance that would cover these costs (United Nations Mali, 2020). This care includes the testing and medical consultation. However, the fact that the care is free could result in overcrowded hospitals.

Hospitals in Burkina Faso are now overcrowded but not with Covid-19 patients. Vercruyssen (2020) mentions that mostly malaria and food shortages are the cause of the high number of patients in the hospitals. He mentions that this pandemic is only one of the many problems that inhabitants of Burkina Faso face. African Union (2020b) confirms the humanitarian crisis in Burkina Faso by stating that more than two million people need humanitarian aid in the country and that more than 750,000 people are displaced. Additionally, more and more extreme violence is observed in the country. Jihadi violence

has increased, and more than 516 attacks were done between mid-2019 and mid-2020 (Van Poucke, 2021).

Also Mali faces other crises next to the Covid-19 crisis. According to Belga (2021), the military forces of Mali arrested the president and prime minister of the country in May 2021, while in August 2020 the former president has been deposed during a coup. Bisson, Schmauder, & Claes (2020) validate the fact that the Covid-19 crisis might not be the biggest problem in the Sahel region, but it can make a challenging situation even worse.

The United Nations Development Programme (UNDP) tries to support African countries based on their knowledge about previous epidemics, which will be discussed later. Their quick response is mainly because they want to reduce poverty and inequality by reacting fast to this crisis (United Nations Development Programme, 2021). Contacting the society about the measures taken by the government or educating people about this pandemic happens different in Africa than it happens in Western countries. Most African people do not have access to high-tech innovative technologies, but fortunately, the majority of the African population owns a smartphone. To help the African society, UNDP decided to message people widely with the basic actions that can be taken in order to stay safe. These basic actions are washing your hands frequently, staying at home when you feel sick and not touching your face. Moreover, a WhatsApp coronavirus information hub is created in order to spread correct information about the pandemic. In previous food crises in Mali, CARE made radio shows about nutrition and agriculture together with local radio stations to inform farmers about how to deal with the crisis (Patterson, 2020). Unfortunately, he also states that 71% of men have a smartphone but only 58% of women have a mobile phone in their possession. Additionally, men often control communication platforms such as phones and radios. Patterson (2020) also mentions that “access to technology is not gender neutral”.

Both countries took strong measures to fight the virus despite their relatively low number of cases. According to Bisson et al. (2020), this is due to the fact that both countries do not have many beds and ventilators at the Intensive Care Units. A slight outbreak could already be disastrous for hospitals in both countries. Some precautionary measures are the same for all countries in Africa and with enlargement all countries in the world, such as social distance, wearing masks, washing hands regularly and using hydro-alcoholic gel. Furthermore, people need to go in self-isolation when they feel sick or

show symptoms of the virus. Other measures are specific for some countries. The ones specific for Mali and Burkina Faso will be dealt with in the next paragraphs.

3.1.1. Precautions Mali

First of all, UNDP Mali (2020) claims that borders were closed in March 2020, and they are still closed at the time of writing, which is the beginning of July. Only some necessary travels were allowed. According to the African regional organization of the International Trade Union Confederation (ITUC-Africa, 2020), temperature of travellers entering Mali are measured and they are reminded of the basic measures pointed out in the previous paragraph. If these travellers show symptoms, a test is conducted. People who have tested positive and who require hospital care need to go to sites explicitly selected by the government. Moreover, a gathering ban is put in place. This means that social, political, cultural and sports gatherings are limited to 50 people and participants need to pay attention to social distancing rules (United Nations Mali, 2020). The gathering ban could ensure the opening of the mosques, which is very important for the local culture as stated by Bisson et al. (2020). Together with this social distancing, handshakes and embraces are not allowed (ITUC-Africa, 2020). Thirdly, busy places such as markets and bus stations need to be disinfected. United Nations Mali (2020) mentions that these markets stay open between 6 am and 4 pm in order to provide essential commodities to the population. Additionally, a curfew has been imposed at the beginning of the crisis, running from 9 pm until 5 am, but it has been lifted in May 2020. Unfortunately, only 36% of the population found this measurement to be effective (United Nations Mali, 2020). Also schools were closed but reopened in June 2020 (ITUC-Africa, 2020). Furthermore, bars and nightclubs are closed (United Nations Mali, 2020).

Despite all the efforts of the national government, only 54% of the people in Mali claim to apply the precautionary measures at home. This percentage is the average of the country with more people (63%) applying the measures in urban regions and slightly less people (52%) apply them in the rural areas. One reason to explain this can be the high number of people that do not believe in the Covid-19 pandemic, which is 24% on national level (INSTAT, 2020).

Hygienic measures, and thus water, are very important in this pandemic. Especially in Africa, where water is very scarce, there is the need for NGOs focussing on water access. Join For Water is one of them. They are active in Mali and focus on drinking water, hygiene and water for agriculture, which are all very important in this crisis (Join For Water, n.d.). During this pandemic, they focus on two

objectives. The first one consists out of the mitigation of Covid-19 in crowded urban areas and their access to potable water (Join For Water, 2021a). The second objective focusses on the water used in agriculture in rural areas in order to sustain the food supply (Join For Water, 2021b).

Regarding the first objective, Join For Water intervened in some regions to limit the spread of the virus. First of all, they distributed hygienic kits containing soap and alcoholic gels. This was done in most crowded areas such as mosques, markets and health stations (Join For Water, 2021a). Together with this distribution, people were made aware about the virus and its impacts on the society. This sensibilisation was also done around public water collection points. The importance of handwashing with soap, wearing a mask and respect social distance was explained. An advantage of this location is the fact that mostly women collect water. Join For Water (2021a) states that it tries to reach more women because they are the backbone of society through which communication runs more smoothly. A third way of sensibilizing the people was done via radio with spots in the local language and in French. In these spots, the symptoms, the ways one can get infected, and the precautionary measures are explained (Join For Water, 2021a).

The second objective regarding the water usage for agriculture in rural areas also tries to focus on women. Before the pandemic, the NGO has built water mixed supply structures combining drinking water and water for agricultural purposes. Moreover, each of the structures include a garden led by a women association or cooperative to help women in order to get access to good land (Join For Water, 2021b). During the pandemic, the NGO increased the efficiency and capacity of water. This is most likely why they did not see an increase in water shortages caused by an increasing frequency of handwashing. Furthermore, Join For Water (2021b) tried to increase the knowledge of the farmers to improve the efficiency of their water usage and organise the farmers with prevention in mind.

3.1.2. Precautions Burkina Faso

ACNG belges (2021) mentions that there was a four-to-five-week government intervention regarding precautionary measures in Burkina Faso. These included, among others, a closure of the borders and markets and a travel ban. These measures are confirmed by Zidouemba, Kinda, & Ouedraogo (2020), who mention that Burkina Faso's authorities have adopted several measures rather quickly. These measures include closure of air, land and rail borders. According to AGRA (2020), some necessary travels were allowed but there were intensive border controls and health checks. Additionally, universities and schools needed to close. Also the business life will face a slowdown because markets,

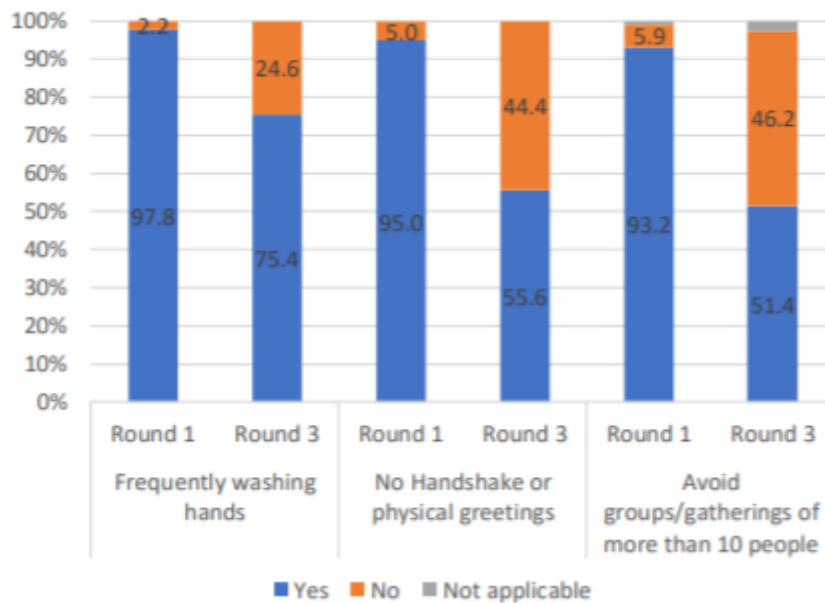
production units and services needed to shut down. Another measure to slow down the spread of the virus that Zidouemba et al. (2020) mention, is a ban on gatherings of more than 50 people. Because of this gathering ban, some big markets are closed (UNDP Burkina Faso, 2020).

The UNDP Burkina Faso (2020) confirms these precautionary measures. They add that the country has established a curfew from 7 pm until 5 am. Furthermore, there was a suspension of the biometric enrolment operations, including the issuing of national identity cards of Burkina Faso (UNDP Burkina Faso, 2020).

UNDP Burkina Faso (2020) mentions that women are the most hit by these precautionary measures because 52% of the women state that they need to delay their working activities due to the pandemic and the measures taken by the government. Fortunately, only 26% of the people mention that they stopped their activities. Others only faced a slowdown or a delay of their working activities, but this does not mean that they are out of trouble. 84% of the microenterprises claim that they will not be able to repay their loan on time (UNDP Burkina Faso, 2020).

Despite all the precautionary measures taken by the government, the discipline of the inhabitants of Burkina Faso has decreased (World Bank Group, 2020a). This can be seen in figure 9 regarding the adoption of preventive measures in Burkina Faso. In October 2020, only 55% of the households reported that they do not greet people physically compared to 95% in July 2020. Social distancing rules are neglected as well since only 51% of the households in Burkina Faso avoid gatherings, while 93% of the households avoided gatherings in July 2020.

Figure 9: Adoption of preventive measures



Source: The World Bank Group (2020a)

Note: Round 1 is conducted in July 2020, while round 3 is conducted in September and October 2020

This can be partially due to the decrease in knowledge of the population. The same survey conducted by the World Bank Group (2020a) concludes that less people are aware of the current measures regarding physical greetings, social distancing, and travel bans.

3.2. Lessons from previous epidemics

As mentioned in the introduction, the World Bank Group (2020b) states that it is very important to view this pandemic through a gender perspective because such crises impact the most vulnerable and deepen existing inequalities. Not only gender inequalities are deepened but also the inequalities across countries, households, communities, and individuals. Patterson (2020) mentions that many crises have deteriorated the rights women have and their economic gains. The loss of these economic gains can lead to a loss in decision-making roles that accompany these economic gains (Patterson, 2020).

The most important previous epidemics according Doss et al. (2020) are HIV, AIDS, and the Ebola crisis. They conclude that the impact of an epidemic will be different between groups because of morbidity, mortality rates, scale and locality, the gender structure of the local institutions and the policy responses of the government. Moreover, the authors want to emphasize the fact that women leave their job to take care of family members in an epidemic, mostly unpaid. This happens because of the lack of access or trust in the health system (Simba and Ngcobo, 2020).

SPRING (2016) argues that women work on average more than men. 13 hours is the average amount of time that men spent working, while women work on average 15 hours a day. These hours also include water collection, a job that takes an hour a day or even more and is done mostly by women. This is highly important because of the additional sanitation and handwashing requirements for Covid-19, which implies that women have to collect more water and work less in their daily jobs. Care jobs and household jobs are also included in these hours. Moreira da Silva (2019) argues that women spent more than double the time spent by men in unpaid care work. For women in Sub-Saharan Africa, this is on average five hours per day. In Mali, the female to male ratio of time spent on unpaid care work is 11 (OECD, 2019). These care and household jobs are a larger part of the 15-hour workday if the women have younger children. Once the children are old enough to take care of themselves, the women can work more in a paid-job or on the land of their husband or their workload just decreases (SPRING, 2016). Since men do not have to spend time on household activities, they have more leisure time or they can spend more time on income-generating activities, making their income higher than that of their wife's. The lower income of women and their household jobs make them more vulnerable to crises since they face job and income losses due to their inability to keep working at their paid job.

Simba and Ngcobo (2020) and Brainard, Hooper, Pond, Edmunds, & Hunter (2015), mention that women face a higher risk of being infected. This can be partially due to their unpaid care work, but women also conduct funerals, making them more exposed. This sociocultural factor that women do funerals and caregiving jobs make them more vulnerable for being infected than their male counterparts.

Because women need to leave their job to take care of their relatives or to collect water, they need to adjust their way of working in agriculture. Women can opt for a less labour-intensive cropping pattern or short duration crops (Doss et al., 2020; see also Slater & Wiggins, 2005). Doss et al. (2020) also mention that due to the HIV/AIDS crisis, farmers opt for crops where there was no peak in demand for labour. One example of this type of crop is maize. As mentioned before, male farmers are mostly active in cash crops so when they fall sick, this is the first crop to be abandoned (Slater et al., 2005). Food crops are more used in order to secure the food consumption.

As mentioned in the paragraph of women in agriculture, the World Bank Group (2020b) states that businesses owned by women are mainly active in the informal sector. Previous pandemics have shown that this informal sector reduces the changes of receiving basic social protection against the crisis. This

can partially explain figure 1, mentioned in the introduction. This figure of the World Bank Group (2020b) showed that women business closure rate is among the highest in Sub-Saharan Africa.

UNDP Burkina Faso (2020) mentions a few social effects of previous pandemics. They mention that social cohesion has decreased following the Ebola crisis since suspicion and stigmatization arisen towards survivors and people working in care facilities. Furthermore, the number of conflicts has increased due to the rising food insecurity. Slater and Wiggins (2005) mention another social effect based on the HIV/AIDS epidemic, namely the increase in poverty. Poverty has risen a lot due to this crisis because of the extra health costs. To finance these costs, sometimes working equipment or other productive assets are sold, which is detrimental for the agricultural productivity (Slater, & Wiggins, 2005). As mentioned in the introduction, women have a smaller capital buffer due to their smaller businesses, so they are most hit by this negative impact on their savings.

3.3. Vaccination campaign

Even though the Covid-19 crisis is a worldwide problem, UNICEF (n.d.b) states that more than half of the world has no access to the solution of this pandemic. This is why COVAX is brought to life, which is the Covid-19 Vaccine Global Access Facility. It is a platform where WHO, UNICEF and Gavi work together to do research to the vaccine but also the development, production and price negotiation is conducted by this platform (UNICEF, n.d.a). The vaccines are being equally divided among low- and middle-income countries that have applied for it. This in order to help the countries that cannot afford the vaccines themselves. 92 countries in total have applied for vaccines and Mali and Burkina Faso are part of it. According to WHO (2021, July 13), in Mali already 196.862 vaccine doses have been administered, while in Burkina Faso 33.960 doses of the vaccine have been administered.

3.4. Impact on agriculture

It is very important to look at the impact of the Covid-19 crisis on the agricultural sector because this is the main economic sector in Mali and Burkina Faso. The relative low number of infected people in Mali is one of the reasons why United Nations Mali (2020) mention that the indirect effects of the pandemic, such as the economic slowdown (in the agriculture) or increasing poverty, will be more disastrous than the direct effects. They mention that more than 800 000 people in Mali will face poverty due to the Covid-19 crisis.

UNDP Burkina Faso (2020) also states that the impact on agriculture has an impact on poverty. According to them, poverty will rise due to a decrease in agricultural productivity. This is due to the fact that already 94% of people working in agriculture live below the poverty line. Doss et al. (2020) confirms the rise in overall poverty due to Covid-19. They state that precautionary measures are at the base of this poverty rise because incomes decrease if the markets slow or even shut down.

Moreover, according to Doss et al. (2020), it is very important to take the gender impact of this pandemic into account because the impact of Covid-19 on the global supply and demand will impact different groups unequally. Focusing on agriculture, Doss et al. (2020) concentrate on four main interlinked nodes of agriculture, which include producers, processors, traders, and consumers. Not only are these groups effected unequally, also within one group there is gender inequality because of the different roles men and women play in the agricultural system. The gender disparities mentioned in the previous part will be widened due to the pandemic. Doss et al. (2020) mention that women play a crucial role in the production, distribution, and consumption of food crops, although the intensity can differ across countries.

3.4.1. Production

Doss et al. (2020) express the loss of input availability and use as main effect of the pandemic. This is due to the fact that international trade has significantly slowed down. This slow down can also increase the prices of the production inputs, which can lower the profitability of the farm. The lack of availability of inputs is also a result of the decline in subsidies going to the agricultural sector. These subsidies were mostly used to finance the purchase of inputs (AGRA, 2020). Because of the loss of inputs, some women opt for a production of different crops for which the inputs are more available. Wangchuk (2021) mentions that good quality seeds, tools and agricultural inputs are not accessible anymore for many farmers in Mali due to the market closure and drop in transportation. The World Bank Group (2020a) confirms this phenomenon for Burkina Faso. They state that travel restrictions limit their access to fertilizers, while a higher market price limits their access to seeds. Moreover, Wangchuk (2021) mentions that mostly women face difficulties in accessing inputs because of their already lower wages. If the price even increases a little due to travel restrictions or the closure of borders, women are faster put out of the market since they cannot afford key inputs anymore.

Also land is an input that can be lost. Patterson (2020) mentions that the pressure put on resources because of a crisis make women the first to lose access to land and income in Mali and Niger. Doss et

al. (2020) agree that women suffer more in this pandemic due to the property laws. Due to Covid-19, more elderly men lose their lives because of the higher mortality rate of men. Those men are most likely to own land and due to paternal inheritance patterns, women are most likely to lose access to their land. Even though women have the right to inherit the land according to constitutional laws, another male relative will most likely inherit the land due to religious laws and habits, as mentioned before.

Furthermore, male workforce is another input that is less available. Women rely on men to do the hard work that they cannot do but if men cannot come to the farm due to Covid-19 precautionary measures or if they become sick, the farm becomes less profitable (Doss et al., 2020). Moreover, the farm suffers a productivity loss due to women taken over care for their relatives who are hit by the virus. Also due to the closure of the schools, women need to take care of their children more than before, leading to an increase in domestic work for women so a decrease in their work on the land (Patterson, 2020).

However, Ragasa et al. (2020) state the contrary. They argue that it can be possible to have more labour force because local people cannot travel anymore for their work, so they look for a job closer to home. Returning migrants and laid-off workers can likewise intensify production. Another kind of workers that can intensify production are the children that cannot go to school anymore because those are closed due to the crisis. If these children cannot go to school, they can either take care-related tasks on themselves or they can work but the travel ban needs to be taken into consideration. Although this is not good for those children, it can be very beneficial for the women in agriculture (World Bank Group, 2020b). The World Bank Group (2020b) mainly focusses on the negative effects of the children because the temporary closure of schools can imply a permanent exit from education for these children.

Water is another very important input factor, especially in this pandemic where hygiene is an essential matter. Water is highly used in this pandemic due to the increased frequency of handwashing. Join For Water (2021a) states that this scarcity has driven the price up but due to the decline in income, the budget allocated to income has decreased meaning that less people can afford water for handwashing. This can have a negative impact on the spread of the virus. Regarding urban areas, Join For Water (2021a) concludes conflicting results. On the one hand, they confirm that women face difficulties in collecting water due to the pandemic because of the increased frequency of handwashing. Already scarce water is now even more scarce, which can lead to a decrease in water as an input for agricultural

purposes. On the other hand, they state that women are scared to go to water collection points due to the increasing probability to get infected there, leading to a decrease in water collection. Furthermore, Join For Water (2021b) state that they expected a water shortage in rural areas as well but that this was not the case.

Not only a loss of productive inputs can occur due to the pandemic, but women also have less access to information (World Bank Group, 2020b). Women try to gather information via a person-to-person network but due to travel bans and social distancing, this kind of information gathering has become extremely difficult (Patterson, 2020). Moreover, due to the pandemic, digital communication methods are used to inform people. However, as mentioned before, women lack access to digital platforms and are less literate than men. This can widen the digital divide and deepen the gender inequality.

The slowdown of the global food market can also be seen as an advantage of the pandemic because local people rely more on locally produced food, which increases the price and also the profits of the farmer (Doss et al., 2020). However, this price increase also has negative consequences. Zidouemba et al. (2020) mention that the estimated rise in food prices is around 8% in Burkina Faso. This price increase causes an estimated drop in production of grains, fruits, vegetables, and animal product of around 9% in Burkina Faso, which is displayed in table 1 (Zidouemba et al., 2020). They mention that this induces a raise in unemployment of 10,94%.

Table 1: Drop in food production and rise in consumer prices in Burkina Faso

	Food production	Consumer prices
Grain	- 8.43	7.44
Legumes	- 8.91	10.73
Tubers	- 8.24	9.89
Vegetables	- 7.14	7.79
Fruits	- 10.63	7.60
Vegetable oil	- 10.43	2.30
Meat	- 6.80	7.15
Milk	- 11.61	8.28
Fish	- 10.00	8.30
Eggs	- 9.99	13.63

Source: Zidouemba et al. (2020), CGE model simulations

The price increase did not take place in Mali. Join For Water (2021b) states that the production on their garden around the water supply structures in Mali has somewhat slowed down due to the restrictions imposed by the government to fight the spread of the virus. Moreover, they stated that a decrease in workforce due to the virus has not led to a halt in their agricultural activities. Wangchuk (2021) agrees with this by stating that the southern region of this country is mainly dependent on the production of cotton for their income, and they depend on maize, millet, sorghum and legumes for their own food. Due to the pandemic, the national union of cotton farmers and the state-owned institution CMDT failed to negotiate a better price for cotton for the farmers. The price was set low because the CMDT needs to be competitive on the world market. Also United Nations Mali (2020) mentions that the price of cotton has decline with 25% since January 2020 due to the closure of the clothing and textile shops due to the pandemic. This price drop caused a decrease in the cotton farms but also the number of farms cultivating maize decreased with 3 percent. Contrary, the farms who cultivate millet, sorghum and legume increased significantly (Wangchuk, 2021). This confirms the first point made in this paragraph, which state that farmers need to change crops in order to maintain profitability and in this case also self-sufficiency, which will be further explained under the topic of consumption. Wangchuk (2021) concluded that mainly the food self-sufficiency remained stable, which means a decline in the income of farmers.

3.4.2. Processing

In this section, the second interlinked node of agriculture, namely processing, will be handled. This is mostly done in businesses. According to Doss et al (2020), Sub-Saharan Africa is a region with the lowest gender gap in entrepreneurship and it has the highest entrepreneurial activity among women, although their businesses are most likely smaller and with less capital (Cirera & Qasim, 2014). The most occurring enterprises are the small and median enterprises. In these enterprises, a lot of people cannot go to work because of the pandemic: they are sick, they have to take care of their sick relatives, or they cannot come because of precautionary measures such as social distance, curfews or travel restrictions. Moreover, Doss et al. (2020) acknowledge that the lockdown and transporting restrictions make the distribution very difficult. Comparable to the first interlinked node of agriculture, also here there is a lack of access of inputs. Additionally, the increasing cleaning and sanitizing costs make it difficult for some companies to survive (Doss et al., 2020).

Women owning enterprises are hit more by this crisis because of their limited access to formal credit and reliance on their family for the necessary investment to overcome the challenges that Covid-19 brings (Doss et al., 2020). Ragasa et al. (2020) confirms that the lack of finances and assets due to gender norms constrict women led businesses and their recovery from the Covid-19 crisis. This and other gender norms stated in previous sections limit women in their entrepreneurial activities. This also means that they take longer to recover from the impact of the pandemic. Another reason why women led enterprises may face a longer recovery period according to Doss et al. (2020) is the fact that women entrepreneurs only lead businesses in low productive sectors and the informal sector. This result in a limited growth potential in both income and employment.

Reardon, Bellemare, & Zilberman (2020) states that most likely the downstream food enterprises will be hit the most. Doss et al. (2020) elaborate on this by stating that mostly women work in these small downstream enterprises. Moreover, these are often informal, which result in the fact that women are repeatedly underrepresented and forgotten in analyses. This is why FAO (2020b) opts for more gender diversified data to monitor several crises.

Fortunately, we can notice the same advantage as in the production node. Women are mainly running the small and median enterprises that serve the local markets. Because of the slowdown of global markets, people rely more on these local markets, which give them the opportunity to grow.

3.4.3. Trading

Trading is a third interlinked node in the agricultural sector (Doss et al., 2020). Also people, and especially women, active in trading are impacted by the Covid-19 crisis. Reaching markets to trade goods has become very difficult because of the pandemic. Precautionary measures such as travel bans, and lockdowns have restricted the movement of a lot of people. FOA (2020b) agrees by stating that producers in rural areas can barely reach the markets in urban areas. Additionally, mainly women are responsible for this kind of trade.

The restricted market access has also led to an increase in transportation costs. Traders can partially charge these costs to their customers, but they will also pay a part of it themselves leading to a decrease in income (AGRA, 2020). If farmers travel outside the country, they mention that the increase in transportation time due to border controls and health checks has led to tremendous amounts of

financial losses. This not only because of transportation costs but also because their agricultural products can perish (AGRA, 2020).

The majority of the crops are sold in small-scale, informal or 'wet' markets (Doss et al., 2020). This kind of street trading is one of the largest sectors of the informal economy in many African countries and the vendors on these markets are most likely women. Covid-19 is impacting trading because of lockdowns, social distancing, and restrictions on movement of people. For a lot of women, the selling of food is their only source of income and therefore the crisis hit them harder than men, who can earn a living elsewhere. Additionally, the World Bank Group (2020c) emphasizes the risk of this informal markets since they do not offer formal social protection measures. FAO (2020b) elaborates on this by stating that pension, health insurance or another form of social insurance is absent for women working in the informal sector. This leaves them very vulnerable in this pandemic because of the risk of illness or unemployment.

Some women divided the market to make social distancing possible so they can keep selling their goods. Moreover, some governments made it possible to allow markets into other public spaces that cannot be used due to Covid-19, for example sport stadiums. Furthermore, some governments allowed women to sell in markets because it is an essential service (Doss et al. 2020).

Crimes and violence against the vendors on informal markets have increased around the globe (Ragasa et al., 2020). Fortunately, Burkina Faso has implemented a response program targeting these women entrepreneurs and especially the entrepreneurs in trading and vending sector. According to IFPRI (n.d.), a fund is established to help women revive their economic activities, mainly in trade of vegetables and fruit. The fund consists out of the discharge of VAT and taxes on wages.

3.4.4. Consumption

The role women have in consumption is more known and visible (Doss et al., 2020). It is known that they do most of the household jobs including food preparation. This is the demand side of agriculture, and the pandemic impacts it in several ways. First of all, women cannot buy the inputs of their meals because markets are closed, or they cannot travel to the nearest market due to the precautionary measures. Additionally, the income of the household is lower, for several reasons, so women cannot always buy enough food. Moreover, Doss et al. (2020) mention that women take more care of their relatives in this crisis so their time to cook is limited. Therefore, they switch to less time intensive

meals, which often means less nutritious meals. Women may also be more malnourished because they sacrifice their food for their children and families in case of a food shortage (Simba and Ngcobo, 2020). Patterson (2020) states that this means that if food shortages rise, women are hit more because they are the first to sacrifice their food. This also lowers the immunity and increases the vulnerability to get infected with the virus. The increase in food shortages also increases the amount of gender-based violence (Patterson, 2020). Many men in Sub-Saharan Africa state that their abuse is justified if food is poorly prepared.

United Nations Mali (2020) mention four other causes of an increasing food insecurity due to the pandemic. First of all, the decline in economic activity may also lead to a decline in food supply. Therefore, women can buy less food. Moreover, a decline in food security can be caused by a lower income, which can be induced by the fact that people receive less income from migrating family. Thirdly, the rising transaction costs may increase the price of food, leading to less people who can afford enough food for their family. Finally, a disruption of domestic and foreign food suppliers to local markets, due to the closure of the borders or travel bans, lead to a decrease in food supply (United Nations Mali, 2020).

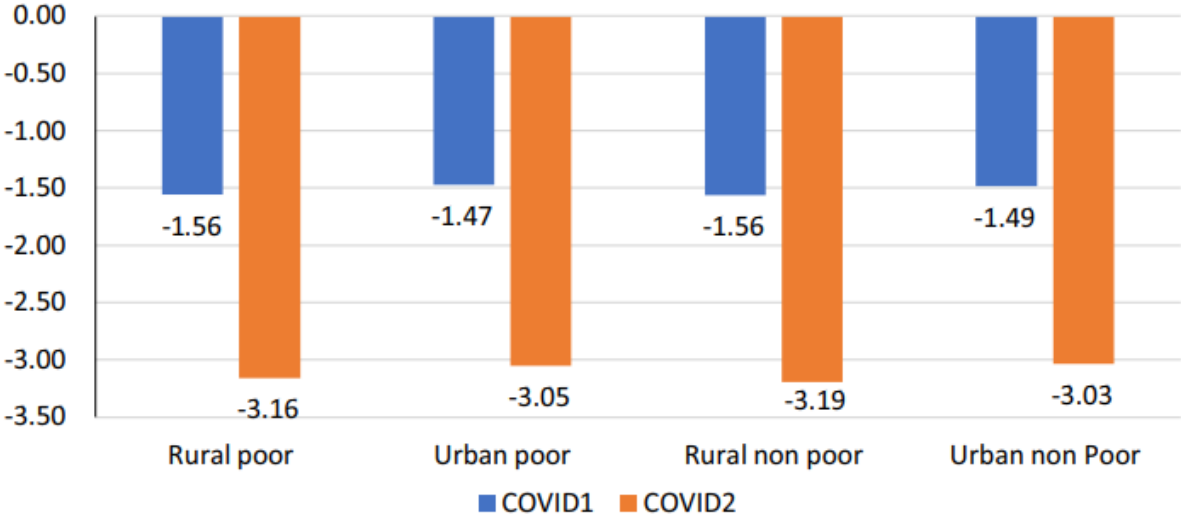
To survive these food shortages, Patterson (2020) mentions that people sometimes eat the whole seed reserve in order to survive. This results in a shortage of seeds to plant the next year, leading to even more food shortages in the next year. This vicious circle, which can go on for years, can only be broken by cash transfers or other kinds of support (Patterson, 2020). United Nations Mali (2020) investigated the food (in)security in Mali by conducting a survey. Fortunately, only nine percent of their respondents feared a lack of agricultural inputs, meaning 91% believes that they will have enough inputs to start the upcoming winter season. However, the results regarding food insufficiency were less positive, with 972 households who mentioned a deterioration of their food consumption. 55% of the respondents mention that they fear food shortages (United Nations Mali, 2020).

Regarding the food insecurity in Burkina Faso, Bisson et al. (2020) mention that the inhabitants of Burkina Faso noticed bigger threats due to food insecurity than that there were threats due to Covid-19. Of course, the pandemic has increased this food insecurity. According to Zidouemba et al. (2020), who focus on the impact of Covid-19 on the food insecurity in Burkina Faso, conclude that the food deficit on grain consumption of poor rural households in Burkina Faso can increase with more than ten percent if the pandemic extends beyond end-2020, which we know is now the case. Also, the rural

areas in Burkina Faso face a grain consumption deficit. This goes to -38,13% which is also more than ten percent worse than the baseline of -27,39%. Furthermore, Zidouemba et al. (2020) mention two categories in their study, namely the poor and the non-poor. The latter, the non-poor, face a grain consumption below the threshold. This means that a large share of this non-poor people will fall into the poor category due to the Covid-19 pandemic. The consumption deficit of fruits and vegetables also increases with more than ten percent for the poor. The non-poor in rural areas also face a higher consumption deficit but less extreme than the poor. Fortunately, the non-poor in urban regions in Burkina Faso can maintain their level of consumption of fruit and vegetables. Moreover, they conclude that the deficit of animal products is widening for poor people, while it stays above the standard for the non-poor.

Zidouemba et al. (2020) point to the increase in food prices and decrease in nominal incomes as the main causes for the raising food insecurity. Figure 10 shows the impact of Covid-19 on nominal incomes in Burkina Faso. Zidouemba et al. (2020) focused on two scenarios, whereby the first one is an optimistic scenario, thinking that the pandemic could be under control by end-2020. The other, more pessimistic scenario includes an impact of the pandemic beyond end-2020. By now we know that is this more pessimistic model is reality so we can focus on the orange, COVID2 scenario. This shows a drop in nominal incomes of about 3% in all areas in Burkina Faso.

Figure 10: Impact on nominal incomes (in percentage)



Source: Zidouemba et al. (2020), CGE model simulations

The World Bank Group (2020a) states that the number people who could not access the most important staple foods in Burkina Faso have raised until 64,5% in October 2020. This can be compared to 24% of the households in Burkina Faso who could not access food in July 2020. The main reason people gave for this phenomenon is the increase in prices due to the pandemic. Fortunately, households living in rural areas face a smaller percentage (46,5%) because they eat the food they plant and do not have to buy them like people in urban areas have to do.

Food insecurity is thus a major problem in this country but not only because of Covid-19. Vercruysee (2020) states that Burkina Faso already faced a humanitarian crisis with food shortages even before the pandemic. An even higher food shortage due to the Covid-19 crisis is a disaster for this country. Unfortunately, this pandemic has caused a shift in the focus of international aid organizations. This has caused a delay in aid, such as food packages or workers of the International Committee of the Red Cross, going to Burkina Faso. This is the indirect impact of the corona crisis on the food shortages.

Although Zidouemba et al. (2020) mention a raising food insecurity in Burkina Faso, Wangchuk (2021) mentions a stable food self-sufficiency for farmers in Mali. This is calculated by dividing the calories produced on a farm by the household requirement of calories based on gender and generation. This means that in Mali, the household of the farmers do not suffer a decline in food security. This is mainly because of the shift in area allocation from cotton to millet and sorghum, which is explained in a previous paragraph. There are two remarks that Wangchuk (2021) wants to make. First of all, the stable food self-sufficiency can also be due to good weather conditions in the last years. Second, the food self-sufficiency can differ across types of farms. The low resource endowed farms were closest to the self-sufficiency threshold. Vereecken (personal communication, April 4, 2021) does not fully agree with this second remark because, according to him, there is only one type of farm in Mali, and this is the small family farm with fewer resources. One point that Mali has in common with Burkina Faso is that the income per capita decreased significantly due to the pandemic (Wangchuk, 2021).

3.5. Local government intervention

To help combat the pandemic, the government of Burkina Faso has invested around 300 million US dollars to manage the amount of people who get infected. Furthermore, UNDP Burkina Faso (2020) mentions that another 662 million US dollars is invested in a plan to restore the economy. AGRA (2020) state that this economical restore plan include a lowering of VAT and import duties on the most essential products and tax payments can be delayed. Moreover, the government will buy up stocks of

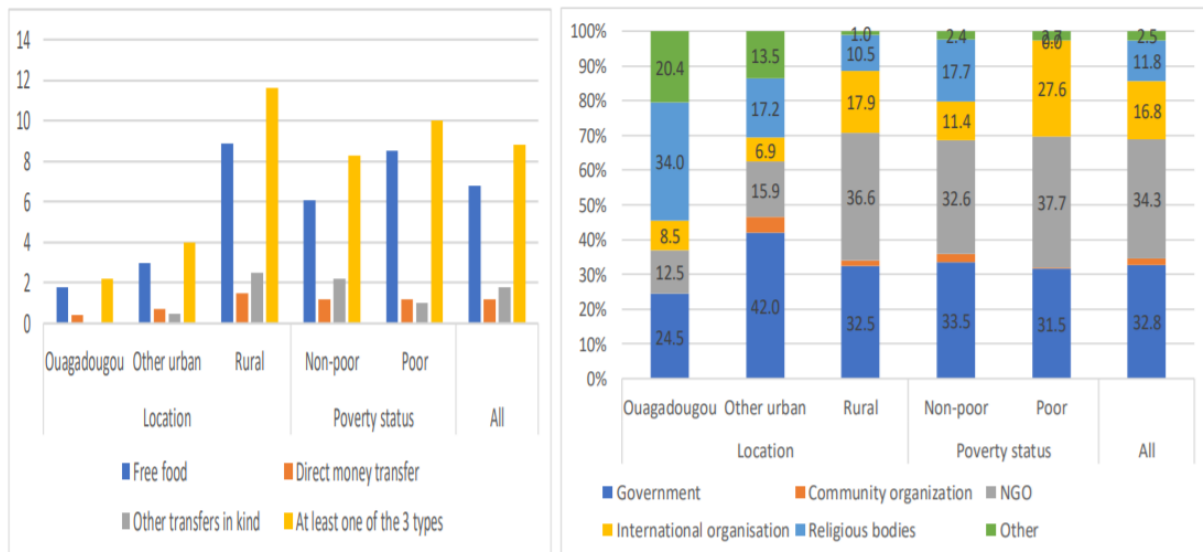
unsold products and prices will be inspected. Food donation to the most vulnerable households and assistance for small businesses will also be provided. According to AGRA (2020), these funds helping the most vulnerable households are subsidized partially by donations from The President, the Prime Minister, and Ministers who donated a part of their salaries. Unfortunately, these major investments in health care makes it impossible for the government to fund the promised subsidies for the agricultural sector.

A phone survey conducted by the World Bank Group in several African countries reaches out to 2200 households on both rural and urban level of Burkina Faso to fill in the survey monthly by phone between June 2020 and May 2021 (Tiberti & Nkengne, 2020). The main objective of the phone survey according to Tiberti et al. (2020) is “to meet the urgent need for timely data and evidence to monitor the crisis and inform interventions and policy responses in relation to the spread of the Covid-19 pandemic and its potential impacts in Burkina Faso” (Tiberti et al., 2020). The first survey took place between June 9 and July 1, 2020, while the third round is conducted from September 12 until October 21, 2020.

This survey investigates the social protection and assistance from the government. Unfortunately, only 8,8% have received some kind of assistance from the government or another institution since the start of the pandemic in March 2020. As can be seen in figure 11, people in rural areas have received more aid than people in urban areas even though the numbers are still very small. If they have obtained some assistance, it was most likely free food. As will be mentioned in a further sub-section about policy recommendations, many experts stress the importance of cash transfers. Unfortunately, cash transfers and other in-kind transfers are rather small in Burkina Faso (World Bank Group, 2020a). Different sorts of institutions can contribute to the social protection of inhabitants of Burkina Faso. The most important institutions for this country are the government, local NGOs, international organizations and religious bodies, as can be seen in figure 12. There is still room for foreign governments, such as the Belgian government, to invest in international NGOs since, as the World Bank Group (2020a) argues, only the transfers of international NGOs have a clear target, namely the poor. The local government gives more assistance to the non-poor (World Bank Group, 2020a).

Figure 11: Assistance from an institution

Figure 12: Main source of assistance since March in percentage of population



Source: The World Bank Group (2020a)

For the second partner country Mali, there are also socioeconomic measures to protect the most vulnerable. For example, they can benefit from distribution of cereals in order to fight the food deficiency. Some people can even benefit from a support that helps them pay their water and electricity bill for two months. Moreover, there is a reduction in duties paid by importers of basic goods and necessities (ITUC-Africa, 2020; United Nations Mali, 2020). According to Bisson et al. (2020), 9 million dollars are invested in an economic support package by the government of Mali. Furthermore, food distribution will take place equivalent to almost 23 million euros. Even members of the government gave a few months of their salary as a contribution to funds to fight the pandemic. Additionally, ITUC-Africa (2020) states that the IMF will give a fund to Mali for the most urgent health spending, such as masks, hydro-alcoholic gel, gloves and test kits. UNDP Regional Bureau for Africa (2021) mentions that Mali received 200 million US dollars from the IMF and 25,8 million US dollars from the World Bank in order to respond to the Covid-19 crisis. Despite these health spending on masks, only 32% of the households in Mali claim to wear one every day and 27% never wears them. The others only wear them occasionally or because they have to (INSTAT), 2020). Despite all the government investments to help the poorest, the government can never compensate the income losses that occurred due to the Covid-19 crisis (Bisson et al., 2020).

As mentioned before, the government of Mali is facing some difficulties. The Economic Community of West-African States (ECOWAS) is a regional organization that helped Mali to mitigate the pandemic. Their aid resulted in a mediation between different institutions and authorities but only 42,6% of the

population believed it could end the Covid-19 crisis (INSTAT, 2020). Additionally, ECOWAS has applied an economic embargo between the resignation of the president in August 2020 and the installation of transitional authorities in October 2020. Unfortunately, according to INSTAT (2020), only 13,1% of the population was in favour of this economic embargo. The government of Mali suffers a lot due to other crises, as mentioned before, while the Covid-19 crisis is placed in the background.

4. REFLECTION

To evaluate the previous findings based on the literature, some interviews were conducted. This in order to consult the voice of the South. The number of interviews is rather limited because of the difficulty to access stakeholders in both countries. On the one hand, this paper is written around the time that Belgian NGOs needed to deliver their five-year plan, therefore many of them had no sufficient time for the interview. On the other hand, a number of stakeholders in Mali and Burkina Faso were reluctant to give an interview to a foreign student. Moreover, the information that could be gathered was somewhat conflicting, yet they include interesting findings.

4.1. Stakeholders

Most of the stakeholders confirmed the above-mentioned findings of the literature. One of them working in the targeted countries that confirmed these findings is Wim Vereecken. He is the program manager in Mali, Burkina Faso and Senegal for Solidagro, a Belgian NGO that supports the poorest farming families by working with local partner organizations to support agro-ecological agriculture (Solidagro, n.d.). Although he could not give much insight in the impact of the Covid-19 crisis since he did not visit the countries during the pandemic, he shared great insights concerning the gender discrepancies that already existed before the pandemic. Another stakeholder that contributed to the confirmation of the gender discrepancies before the pandemic is Lisette Caubergs. She worked in both Mali and Burkina Faso and gave excellent insights in the life of women working in agriculture, especially in the textile industry, in Mali. Additionally, she shared important knowledge about the impact of the pandemic on women working in the agricultural sector.

Furthermore, there are two other stakeholders who largely agreed with the above stated literature and who could give insights in the impact of the Covid-19 crisis. One of them is Barry Halimatou, who is born in Guinea, and has carried out several missions to Mali for Monde Femmes. Development cooperation, education and action research are the main focal points of this NGO. Their aim is to integrate gender perspective (Monde Femmes, n.d.). Halimatou could give great insights in the current situation of West-Africa, is very committed to this topic and agrees with the importance of tackling the pandemic with a gender lens. Another stakeholder who gave important understanding of the current situation in West-Africa and Burkina Faso is Lionel Tientega. At the moment, he works in Senegal for

Broederlijk Delen. Both stakeholders were concerned about the impact of the pandemic on women working in agriculture in Mali and Burkina Faso (B. Halimatou, personal communication, May 5, 2021; L. Tientega, personal communication, May 28, 2021).

Other NGOs mention that the pandemic is not the biggest challenge in both countries because the security context has been deteriorating since several years. Even though the pandemic is not the biggest threat, it cannot be ignored because of its impacts. Some Belgian NGOs have worked together to map the impact of the Covid-19 crisis on the agricultural sector in Burkina Faso (ACNG belges). These NGOs include ARES (Académie de recherche et d'enseignement supérieure) that brings together universities, colleges and art schools of Wallonia and Brussel to strengthen the Belgian development cooperation as non-governmental partners (ARES, n.d.). Moreover, Autre Terre and CNABio (Conseil national de l'agriculture biologique) are involved. These NGOs are both active on the rural areas and try to improve the quality of life in their partner countries. The former is active in Mali and Burkina Faso and focusses on the improvement of life quality through sustainable economic activities. Autre Terre also wants to achieve more awareness of the situation in the South (Autre Terre, n.d.). The latter is mainly active in Burkina Faso and focusses on the preservation of agricultural land in order to sustain food security (CNABio, n.d.). Iles de Paix also focusses on increasing the living standards for the farmers active in Africa and Latin America. These living standards are increased by concentrating on the development of durable, small scale, family agriculture (Iles de Paix, n.d.). Another NGO that is mainly active in Africa and Latin America and worked on the impact of Covid-19 with other NGOs is SoS Faim. They try to reduce poverty and hunger by focusing on family farming. The NGO tries to let these farmers become self-sufficient by helping them financially, organizationally and technically. Furthermore, they want to raise awareness in Europe about the situation in the South (SoS Faim, n.d.). Broederlijk Delen is a sixth NGO that is cooperating on this research. The organization focusses on the reduction of inequality in 13 partner countries, of which Burkina Faso is one, by targeting the most vulnerable groups on the countryside (Broederlijk Delen, n.d.). The last NGO working on this research is Vétérinaires Sans Frontières. This NGO helps livestock keepers in Mali and Burkina Faso in order to improve their farming activities. Their help includes microcredits, water maintenance, training and management, equipment usage, emergency aid and peace negotiations (Vétérinaires Sans Frontières, n.d.).

Pierre Togo (personal communication, April 26, 2021) is another stakeholder, active in Mali. He works for the community development support group in Bamako, the capital city of Mali. Together with Johan

Schoors, another stakeholder who works in Mali, he minimizes the impact of the pandemic on women in West-Africa. Schoors works for the Belgian NGO Enabel, that carries out the Belgian governmental aid. They mainly focus on sustainable development in fragile states and least developed countries, mainly in Africa (Enabel, n.d.).

4.2. Gender disparities before the pandemic

Vereecken confirms the gender norms stated in part 2.1.2. and part 2.2.2. about gender norms in Mali and Burkina Faso by mentioning that women are dominated by men in all parts of society. Fortunately, the governments of Mali and Burkina Faso are trying to equalize the constitutional law, but religion and habits are still sustaining the dominance of the men. Even though the government contributes to the equalization of the law between men and women, the society is not aware of this. Often women are not aware of their rights and even government personnel are not fully informed. Even if they are well informed, they can still misinform women because women are less literate. Therefore, Vereecken (personal communication, April 4, 2021) states that it would be very beneficial for the status of women that the society is well informed about the equalisation of the law for men and women.

Not only Vereecken confirms the dominance of men, also Schoors acknowledged the statements regarding the gender norms that were earlier described, by recognizing the dominance of men. According to Schoors, this is mainly due to the religion and habits in both countries. Especially in Mali, where the vast majority of the population is Muslim, women have limited rights compared to their male counterparts. The religious and customary law often take dominance over the constitutional law, putting women in obedient roles. Especially imams, who have a high respect in this culture, are in favour of this male dominance. Because of their high right of say, the dominance is passed through the whole population (J. Schoors, personal communication, April 26, 2021).

Regarding the gender norms in the agricultural sector, Schoors largely agrees with the literature. The limited resources women face, even before the pandemic, are in agreement with the gender norms in both countries. These limited resources can include limited access to inputs and land. Women can only obtain access to land via male relatives or via women association groups. If they can get access to land themselves, they are often misled because of their limited knowledge to their own rights or because of their limited literacy. The latter is another reason why women are dominated. The fact that they are less educated, and thus have a lower literacy rate than men have, decreases their right to say in the household (J. Schoors, personal communication, April 26, 2021).

4.3. Women in agriculture

Regarding women in agriculture in Mali and Burkina Faso, Vereecken mentions that the agriculture is characterized by a very short rainy season and a longer dry season. A lot of work is concentrated in the short rainy season, meaning that women and men work together. Because of the huge amount of work in this season, women cannot carry out their own duties and responsibilities in the household. In order to cultivate crops in the dry season, women are, among other things, in charge of water collection to irrigate the crops. This water is available in wells in the valleys.

According to Vereecken, the harvest is in hands of men, while women also work on the fields. He confirms that women are much less likely to own land and thus need to work on plots of their relatives or on plots of women associations. The limited access to land is mostly due to the lower literacy rate of women. Even though women work on the plots of their family or on plots of women associations, they earn less than their male counterparts. The women association groups reward women more, which results in an increasing income and an increasing right of say in the household. Income of men and women are completely separated according to Vereecken but they take joint decisions regarding the household. The higher the income of the women, the more control she has in these joint decisions. Another way to increase the control is the ownership of poultry. According to Vereecken, this is the piggy bank of poor people. As mentioned in the section 2.1.1. about the agriculture in Mali, women are the ones who own and take care of the poultry, which increases their right of say in the household.

With respect to the earnings, Caubergs agrees with Vereecken by stating that everything stays separate. The law states that men should take care of the women by providing her food, shelter, health security, education, etc. In reality men only pay for basic food, health security and education. Women are in charge of the clothing costs and the maintenance of the elderly people in the family, such as her parents. The fact that women contribute to these costs in the household is positive because then they receive appreciation from their husband, which increases their empowerment and right of say in the household (L. Caubergs, personal communication, May 5, 2021).

Moreover, Caubergs largely agrees with the above stated description of women in agriculture based on the literature review. Caubergs is mainly active in the textile sector. In this industry, the same interlinked nodes that are used in the agricultural sector can be used, namely production, processing, trading and consumption. Starting with production, Caubergs contradicts the literature by mentioning that also women are very active in the cotton industry, but their tasks are limited. They only weed and

harvest. The preparation of the ground, planting and sowing are tasks for their male counterparts in the cotton industry. The yield belongs to men without any doubt and is barely shared with women. Furthermore, she agrees with the fact that women have less access to land. According to her, this is mainly due to the limited access to fertile land in general. This scarcity of land combined with the dominance of men implies less access to fertile land for women. The dominance of men regarding land access is caused by the inheritance law that favours men (L. Caubergs, personal communication, May 5, 2021). She mentions that a lot of sectors are dominated by men, and it is extremely difficult to change their point of view and let women cooperate. It is important for women to have a leader that can help them integrate in this male dominated world (L. Caubergs, personal communication, May 5, 2021).

What Schoors has noticed in Mali is that women producing the crops on the field do the majority of the work, while the yield is for the man owning the land. Women sow, plant, weed, collect water and take care of the maintenance of the crops. This all is done for a small remuneration. This small remuneration, together with the gender norms mentioned above, lead to a limited access to finance and inputs such as land. Moreover, Schoors mentions that even if women earn a small amount of money, men often steal or appropriate this money. However, this is contradicted by another interviewee who states that the income of men and women are completely separable, and no one touches the money of the other (L. Caubergs, personal communication, May 5, 2021). As mentioned before in sub-section 2.1.2. and 2.2.2. considering the gender norms in Mali and Burkina Faso, women in Burkina Faso face more difficulties in deciding about their own income than in Mali. This can be seen in the women, business and the law index for both countries (women, business and the law, 2021a, 2021b). Nevertheless, the fact of corruption in the country cannot be neglected.

Schoors states that the role of women in agriculture is most noticeable in production and trading, while their role in the processing is rather small. This is caused by the fact that farmers in Mali do not add much value to their products before selling it, meaning that the processing segment of agriculture is rather limited in general (J. Schoors, personal communication, April 26, 2021). Only the fishing industry creates value added. Furthermore, he mentions that this is the one place in the agricultural sector where women are dominant. Men are the ones who fish on the Niger, but all intermediate actions taken after fishing is done by women, such as sorting the fish, putting them on ice and cleaning them.

4.4. Impact Covid-19

The points of disagreement between Schoors and the literature mainly consider the previous paragraphs concerning the impact of the Covid-19 crisis. First of all, he disagrees with the lessons learned from previous epidemics because according to him, Mali did not need to fight Ebola, HIV/AIDS or prostitution. The main 'disease' that the country faces is famine, which is also stated by Togo (personal communication, April 26, 2021).

Even though the government took some precautionary measures to fight the virus, Schoors mentions that life takes its normal course. According to him, there are little incentives taken by the government because of the low number of Covid-19 cases. For example, the mosques stayed open, where 200 Muslims could gather. Moreover, the bus and cabdrivers continued their work without any safety regulation. The only considerable change Schoors could notice was the closure of the night clubs. Other precautionary measures are discussed by Caubergs (personal communication, May 5, 2021). A curfew and gathering bans were imposed but, because of the low number of infected people, these measurements were abandoned rather quickly.

Tientega (personal communication, May 28, 2021) elaborates on this topic by stating that the virus itself did not have a great impact on the daily lives of African people. This is due to the low amount of infected people and the even lower number of deaths. Contrary to the situation in western countries, Burkina Faso and Mali do not face a high infection rate, hospitals are not overcrowded, and the death toll is not high. Nevertheless, the crisis followed by this virus has a big impact on the daily lives of African people (L. Tientega, personal communication, May 28, 2021). This is mainly due to the many precautionary measures taken by the government in March 2020, that created a big shock in the economic system, which is still observable today. These precautionary measures include wearing masks and a curfew. The closure of borders is another measure that is still intact. This has an extremely big impact on the daily lives of farmers because they often trade over borders. Not only the output has decreased but also the access of inputs is limited due to this closure of borders. Tientega argues that these negative consequences of the border closure indicate that the true mechanism of trade in the country is not taken into account by the government. This is confirmed by the literature. Bisson et al. (2020) confirm that measurements taken by governments in times of a crisis are not always taken based on evidence and best practices but rather on politics and ideology. Even new laws that restrain civil liberties were imposed with Covid-19 as an excuse. Bisson et al. (2020) mention that elections in

Mali did not take place because the government prohibited them. It is questionable whether this was due to the pandemic or to their own interests.

Other precautionary measures, such as social distancing, have less impact on the rural areas because they are less followed due to cultural beliefs. According to Tientega, social contacts and gatherings are very important and people who follow the social distancing rules are excluded. Moreover, it is easier to keep a safe distance in rural areas than in the crowded cities, which means that the infection rate is higher in urban areas. Tientega (personal communication, May 28, 2021) mentions that therefore, rural inhabitants are convinced that Covid-19 is a disease for the rich people, leading to the fact that many people in rural areas neglect social distance.

Halimatou confirmed the ignorance of measures stated by Tientega. She mentions that social distancing and the wearing of masks is obligatory but none of these measures are implemented consistently. According to Halimatou, this is due to the less severe first wave of the virus. Therefore, many people minimize the crisis, which can have disastrous consequences. She predicts that the precautionary measures will be implemented more thoroughly now the second wave is hitting the countries harder.

4.5. Impact Covid-19 on women

As mentioned before by Vereecken in part 4.3., women take care of the water supply. For some women, this can be a long and time intensive journey. Although, Vereecken could not confirm it, one may think that this can be influenced by the pandemic. Travel restrictions may limit these journeys to the wells and thus influence the harvest because of the lack of water for the crops. Additionally, the gatherings at the well may increase the amount of people infected by Covid-19 and because mostly women collect water, they are more vulnerable for infection. Furthermore, water shortages may increase. The long period of drought in both countries already cause water insufficiencies before the pandemic and with the hygienic measures taken to fight the virus, water is even more scarce.

Regarding the impact of the Covid-19 crisis, also Caubergs discusses guidelines imposed by the government that deals with hygiene. The government recommends people to wash their hands regularly, whether or not with soap, for at least 20 seconds (Africa Union, 2020). The frequent handwashing itself does not impose problems, according to Caubergs, because of the religion in Mali. She argues that in the Muslim culture, hygiene is very important since it is necessary to wash your

hands before praying. However, the collection of the water can cause some problems, especially for women. Caubergs agrees that mostly women take care of the water collection. Men only help if they have a wheelbarrow or other way of transportation at their disposal.

Not only water is an important consequence of the Covid-19 crisis, also the consequences of an infection are an important issue for women. As mentioned in the introduction, men suffer more physically from the pandemic because they have a higher mortality rate (Global Health, 2021). Although Halimatou agrees with the higher mortality rate of men, she also mentions that mostly women are the ones who get infected but fortunately, they only become sick and do not die as much as their male counterparts. The fact that mostly women get infected is due to the higher rate of exposure. Women are responsible for the care of the children, the elderly and their sick relatives, increasing the chance of getting infected with the virus (B. Halimatou, personal communication, May 21, 2021). The higher mortality of men also affects women, according to Halimatou, because if their husband dies, there is an emotional and a financial loss because the main earner of the household disappears. Women may also lose access to land that was before owned by their husband.

The previous stakeholders all largely agreed with the impact of the Covid-19 crisis on women but there is one stakeholder who does not agree with the literature. Schoors insists on the fact that the Covid-19 crisis did not change the situation of women, but it only deteriorated their situations (J. Schoors, personal communication, April 26, 2021). Even before the pandemic, women had limited resources. These resources only became scarcer during the pandemic but the actual life of women did not change significantly.

4.6. Impact Covid-19 on women in agriculture

This section will be divided in the four interlinked nodes of agriculture provided by Doss et al. (2020) that are also previously used. Furthermore, there will be a section about the impact of water collection and the digital technology used to spread agricultural information and information about the Covid-19 pandemic.

4.6.1. Production

Regarding the impact of the pandemic on the first node in the agricultural sector, ACNG belges mentions that there will not only be a loss in production but also more additional costs. These additional costs will also impact the next season hence resulting in a vicious downward spiral (ACNG

belges, 2021). Higher transportation costs of inputs is one of the causes of the higher additional costs. Burkina Faso is a country that is highly dependent on the import of their agricultural inputs and with the closure of the borders due to the pandemic, the access to inputs is more difficult, leading to an increase in the price.

The decreasing access to inputs is confirmed by Halimatou. She mentions that due to the pandemic, there is a decrease in resources such as inputs. These inputs can include seeds and fertilizers but also workforce. She mentions that many people lose their jobs because of the travel ban on the one hand, and the increasing prices of the inputs on the other hand. This is confirmed in the literature mentioned above.

Although the above-mentioned stakeholders are concerned about the impact of the pandemic, not everyone is. Regarding the production side of the agriculture, Schoors cannot see a decline in production because of the pandemic, even though this is stated by the literature. He is more concerned about the corruption in Mali than he is about the impact of the pandemic. He stated that the correlation between corruption and poverty is significant, while the correlation between the Covid-19 crisis and poverty cannot be proved (J. Schoors, personal communication, April 26, 2021). Even though there could be found evidence in the literature that farmers face an increasing cleaning cost, Schoors disproved this fact. He could not find evidence of any form of disinfecting materials such as alcoholic gels.

4.6.2. Processing

The second node is processing. Caubergs acknowledges that the processing for export in the cotton industry happens in factories where women rarely work. Even though there are factories in Africa, the most value added is brought to the product in factories in China or the European Union. On the contrary, processing for local markets is done mostly by women. In the cotton industry, women spin and knit the cotton for a very small remuneration. The weaving is done by men and special machines for a higher remuneration. The fact that men earn more than women in this case is because weaving is seen as a profession, while spinning is just a pastime or hobby (L. Caubergs, personal communication, May 5, 2021). Because it is not seen as a profession, women cannot sell their spun yarn for a high price. This causes women to still spin without any machines. Only if women join in a women association, they can combine their earnings and buy a machine for common use. According to Caubergs, the only way

to increase their price is to produce less and thus make wire scarcer. However, this can lead to dissatisfaction.

4.6.3. Trading

This is the interlinked node where the majority of the stakeholders expressed their concerns. The precautionary measures taken by the government such as travel bans, and the closure of borders and markets are at the heart of the problems.

4.6.3.1. Closure of markets

Regarding the trade, Schoors mentions that even though the government officially closed the markets, women often went there to sell their products. This is made possible because most of the markets, and even most of the whole economy according to Schoors, are informal and for most poor women, this is their only way of earning an income and thus their only way to survive. These women live from day to day, meaning that one day without selling on the market would have disastrous consequences. Also Halimatou confirms that ignoring the precautionary measures is sometimes necessary in order to survive. Some women live from day to day and to be able to buy the necessary supplies in order to survive, they need to sell their crops on the market. Halimatou agrees that women are very depending on the daily markets. This is mainly due to the food insecurity, which is reinforced by the Covid-19 crisis.

Even though Schoors and Halimatou agree on the continuing trade of women, she disagrees with Schoors and mentions that even though the situation of women has worsened a lot, it has also changed in itself. First of all, the informal sector has seen changes because the curfew has limited the women in their hours of selling. They could not sell early in the morning or late in the evening anymore and this has decreased their sales substantially. Moreover, she mentions the increase in violence against women because of the lockdown.

Furthermore, restaurants, bars, markets and schools were closed but they are reopened now. As stated by Tientega (personal communication, May 28, 2021), Burkina Faso has quickly abandoned some measures and reopened their markets mainly due to the protests by people working in the informal sector. As mentioned before, the agricultural trading mainly happens on informal markets. Tientega agrees with Schoors that people in rural areas live day by day and need to trade daily on the informal market in order to survive. This is mainly why there became a high pressure on the

government to reopen these markets. Another pressure on the government to reopen these markets was caused by the inequality that was created by opening the supermarkets in urban areas but closing the informal markets in rural areas.

The precautionary measures decreased the trade in agricultural products substantially. Vereecken mentions that not only markets are used to trade crops, but women often sell their food at schools or at local companies. Due to the pandemic, schools and businesses needed to close their doors temporary, meaning that women could not sell their crops anymore. Vereecken states that this can have a lot of negative impacts because most of the crops are perishable. Not only do farmers lose income because they cannot trade their goods on local markets, schools or businesses, but consumers also cannot buy their food anymore, leading to an increase in food insufficiency, which will be dealt with later.

4.6.3.2. Closure of borders and travel ban

Furthermore, there was a travel ban that separated the urban and rural area. This is particularly unfavourable for the local agricultural sector. In this sector, the production takes place in rural areas, but the majority of the consumption takes place in the urban region. This means that the rural area is affected twice. First on the trade node of agriculture, where the travel ban induces a decrease in sales for the local farmers because they cannot sell in the urban area nor on the local markets, that are closed. Second on the consumption side, where a decrease in food access for inhabitants of rural areas is noticed due to the closure of local markets (L. Tientega, personal communication, May 28, 2021).

Regarding the market gardening sector, a perishable good, ACNG belges (2021) mentions that there was a huge loss due to the dependency of intermediate goods that could not be reached due to the travel restrictions. Some of the products were recycled into cattle feed but this was only possible at a much lower price. Fortunately, some farmers adopted a home delivery system, which increased their sales enormously. Unfortunately, this delivery system is only possible within one town due to travel restrictions. With regard to the non-perishable goods such as cereals, ACNG belges (2021) mentions that storage units have been intensely used.

Also the textile sector suffers a lot due to the precautionary measures taken by the government. Mostly international tourists are the consumers of the textile commodities and because of the closure of borders and the lack of tourism, the sales of textile have decreased (L. Caubergs, personal communication, May 5, 2021). Western companies use e-commerce as an alternative to uplift their

sales. According to Caubergs, it could be possible for Mali to sell their products on the internet to international customers, but this is a slow process due to the lack of digitalisation in the country. It is difficult to find someone who can build a decent website and maintain it properly. The sales via internet are extremely important for the North of the country because agriculture is impossible there due to insecurity. The violence makes people extremely reliant on their hand-spun products. Fortunately, the obligation to wear masks has helped this sector to recover (L. Tientega, personal communication, May 28, 2021).

The precautionary measures, such as the closure of borders and the travel ban, makes farmers more isolated, which increases their risk and losses due to the Covid-19 crisis (ACNG belges, 2021). ACNG belges (2021) states that mostly women's groups who work at a local level had the least impact of the crisis. Furthermore, they state that other farmers who developed local solutions were less influenced. The precautionary measures only restricted the movement of people and not the movement of goods but because the latter mostly happens on an individual level, the movement of goods was indirectly limited. Another reason why the movement of goods was limited is because producers were misinformed about the regulations and did not fully understand what was allowed and what was not allowed (ACNG belges, 2021).

4.6.4. Consumption

Because of the limited trade, food insufficiency has risen in Mali. According to Schoors, and the literature about consumption, this is extremely harmful for women. This is due to the fact that they are the last person to eat, often only having a small leftover meal or even nothing to eat. Schoors insisted on the fact that this was already the case before the pandemic, but the Covid-19 crisis has worsened the situation of food scarcity. He mentions that even before the pandemic there was a limited access to high-quality food. Their diet includes many carbs and fat, but it lacks important vitamins. This scarcity has increased due to the pandemic, but the situation in itself has not changed.

This reduction in food access is less pronounced in the urban areas according to Tientega, because the supermarkets stay open, as mentioned before. This induces inequality because the rich can still buy and sell their necessary food supplies, while this has become impossible for people living in rural areas. This inequality also induces gender inequality because mostly men work in the formal economy, which is saved by the government, and mostly women who work in the informal markets, which are neglected by the government. This inequality is induced by the government, who often only think

about the rich urban areas (L. Tientega, personal communication, May 28, 2021). Moreover, this government does not help anyone to overcome the shocks due to the Covid-19 crisis. Most of the businesses and farms do not have a buffer that helps them survive these economic shocks without government intervention. This leads to many people that suffer economically from the pandemic. The only sector that was indirectly helped by the government is the textile industry. This industry has bloomed because of the obligatory wear of masks. Fortunately, the government has decided to not import the masks but to produce them locally (L. Tientega, personal communication, May 28, 2021).

In agreement with Schoors, Togo (personal communication, April 26, 2021) mentions that the Covid-19 crisis is not the most prominent now. He mentions that women were, already before the pandemic, infected with another disease, namely food insecurity. He states that Covid-19 has not changed the current situation of women but only worsened them. The most important worsening of the pandemic is the increase in food insufficiency because of the lack of access to seeds and other inputs due to travel bans and the closure of the borders. The only change that women face due to the pandemic is the fact that all members of the household do not eat from the same plate anymore, but everyone has his own cutlery and plates to eat individually. This is a significant cost, especially for the poorest women (P. Togo, personal communication, April 26, 2021).

4.6.5. Water usage and digital inequality

Our main focus is on women in agriculture, who are mainly focused on the countryside. Living in these rural areas during the pandemic can have disadvantages but also advantages. On the one hand there is a disadvantage regarding one of the most important aspects in this Covid-19 crisis according to Halimatou, namely the access to water. She mentions that not everyone has access to potable water, especially not in the rural areas, which can increase the spread of the virus. On the other hand, living in rural areas can have its advantages. Due to the bigger distances, social distancing is more possible and minimizes the spread of the virus.

Tientega states that people in rural areas barely wash their hands to prevent an infection with Covid-19 because of the belief that they will not get infected and due to the scarcity of water. Water is used for drinking or in the agriculture. The fact, stated in the literature, that water is more used for washing hands and less for crops is thus disproved by Tientega. Due to the belief that rural inhabitants will not get infected and their cultural beliefs, Tientega calls the pandemic a “disease in their culture” (L. Tientega, personal communication, May 28, 2021).

Moreover, Vereecken mentions that discrepancies regarding the digital platforms are limited. This is because the number of digital technologies is so scarce that discrimination is almost impossible. Everyone has a phone and/or a radio and these platforms can be used to spread information about agricultural parameters such as the weather or the price of goods. This information is mostly sent out by NGOs without any cooperation of the government. The fact that precautionary measures can be spread via these digital communication methods, as mentioned in part 3.1. about cases and precautions, is hereby confirmed because it can be spread out in the same way as the agricultural parameters.

4.7. Suggestions of the stakeholders

4.7.1. Women in agriculture

As stated before, Solidagro is promoting agro-ecological agriculture, which can be very beneficial for women. One aspect of agro-ecological agriculture is the use of manure of the own animals instead of chemical fertilizer. This is much cheaper hence also women with a lower income can fertilize their crops, which can increase their yield (W. Vereecken, personal communication, April 4, 2021).

Along with Solidagro, ACNG belges (2021) supports the implementation of agro-ecological agriculture to increase the self-sufficiency of the country. Additionally, the NGOs mention that the collection and spread of information needs to improve. This information can involve instructions about the crisis, agricultural training, market intelligence, contacts with other farmers, etc. The contact with other farmers could bring farmers out of their isolation and strengthen their own organization. This can only increase economies of scale (ACNG belges, 2021).

Furthermore, in-kind transfers targeted to women can help decrease gender discrepancies. As mentioned by Wim Vereecken in the reflection part, women are the ones owning the poultry so we should focus on this poultry to target women. One thing that can be done according to him is vaccinating these animals (W. Vereecken, personal communication, April 4, 2021). Another way to target these women, according to Vereecken, is educating them in commercially valuable crops. As mentioned before, mostly men work in this sector but if women are educated and men allow them to help or work together, women can increase their income and their right of say in the household.

Another way to target women in agriculture is by combining cash transfers and food aid with training and market access. Even though many authors are in favour of these cash transfers, Schoors disagrees.

As mentioned above, he states that men often steal the income and cash transfers received by women. However, this is contradicted by other stakeholders and because of the many advantages, this potential policy recommendation cannot be neglected.

All above stated recommendations can be done regardless the pandemic. ACNG belges (2021) recommends a changing policy during this pandemic. A policy recommendation that ACNG belges (2021) proposes, is the limitation of travel bans. By opening up certain roads, the trade of food can recover, leading to an increase in income of the farmers and an increase in food security for the whole society.

4.7.2. Gender discrepancies

According to Schoors (personal communication, April 26, 2021), the policy recommendations regarding the pandemic should only target gender discrepancies because the Covid-19 crisis only worsen these gender discrepancies and does not change the situation of women drastically. Because of the highlighted gender discrepancies due to the pandemic, it gives policy makers momentarily the excellent opportunity to focus on gender. According to Schoors, the need of targeted gender programs is high because in Mali there are only a few programs who are gender specific. Additionally, he supports the 'do-no-harm' principle. Some programs may target women too much, leading to dissatisfaction of the male population and worsening the situation of women. Programs based on respect while treating both sexes equally without targeting women too much works best (J. Schoors, personal communication, April 26, 2021). Furthermore, he adds that the extent to which you can target women depend on the indigenous culture. It is necessary to reevaluate the status of both men and women to get equal treatment between gender.

Gender based recommendations are also done by Tientega (personal communication, May 28, 2021). He argues that women are the backbone of society, meaning that many problems can be solved, and many shocks can be absorbed if women are more acknowledged in society. If inequality is reduced, resilience and autonomy is increased and if women get a voice in society, many problems, such as the pandemic, would have a lower impact on society.

Alice Kuczkiwicz, who is an expert gender strategy and inclusion at Enabel, states that concrete targeted actions need to be taken under gender marker 2, which implies female entrepreneurship and the encouragement of gender equality. Moreover, she opts for an improvement in efficiency of the

institutional bodies that monitor the implementation of the National Gender Policy. Next to the efficiency improvements, these bodies can be trained in gender budgeting and collection, analysis and processing of data that is gender specified (A. Kuczkiewicz, personal communication, April 30, 2021). A final recommendation that Kuczkiewicz provides is the multi actor synergy.

According to Caubergs, the most important help that women can receive is education. Now women only attend lower education and drop-out in high school because of the violence or because they need to help their parents. The higher women are educated, the more they earn and the higher the appreciation of their husband will be. Moreover, they cannot be misled if they can read their contracts regarding land access. By lowering the violence, plenty can be achieved (L. Caubergs, personal communication, May 5, 2021).

Another project that is already done but is very promising according to Caubergs, is the explanation and different interpretation of the Koran. If people interpret it different, male dominance can decrease, and women empowerment can increase so they can live on equal footing with mutual respect.

4.7.3. Other

For Halimatou, the synergy between macro and micro measurements is very important. On the one hand, there are the macro measures that can be taken in order to learn the West-African governments how to handle public debts after a crisis, like the Covid-19 crisis. This in order to strengthen the economic situation in Mali and Burkina Faso. On the other hand, micro measures cannot be forgotten. They consist out of measures taken to enforce and strengthen partner NGOs, who work in the field. Both macro and micro measures are complementary (B. Halimatou, personal communication, May 21, 2021). The importance of the macro measures is due to the fact that only governments can generate major changes and big projects, for example in the healthcare sector. Micro measures are more important to directly help the population but unfortunately, they cannot cause major changes in the society on their own (B. Halimatou, personal communication, May 21, 2021).

Finally, Caubergs mentions that nothing needs to be invented. The Belgian government can select the most promising and the most effective projects that are already implanted.

4.8. Beyond Covid

Not only the Covid-19 crisis needs to be combated but also the humanitarian and refugee crisis need special attention. Vereecken agrees with Vercruysse (2020) that the humanitarian crisis is still present today in both countries and that it only enlarges the effect of the pandemic because of the gatherings of refugees and people looking for food. Vereecken opts for a triple nexus, connecting the structural and humanitarian help with conflict management.

Furthermore, Caubergs agrees that the Covid-19 crisis is not the most worrying situation that both countries face. Violence and insecurity in both countries are more critical in the daily lives of people from Mali and Burkina Faso. Agricultural delays are mostly due to these insecurities. People are scared but not for the pandemic. Inhabitants of both countries think that the general younger population of their countries will be more resistant to the virus and are less likely to get seriously ill or die. Moreover, they pray together, even though this can be negative for the spread of the virus. This is an indication of the fact that they are not scared of the Covid-19 virus (Caubergs, personal communication, May 5, 2021).

Finally, Halimatou mentions that Covid-19 is very present in the daily lives of many people in Guinea and Mali but the other important crises, such as food insecurity, cannot be forgotten. According to Halimatou, this pandemic is just another crisis on top of the other, already existing crises, which worsens the standard of living for many African people.

5. POLICY RECOMMENDATIONS

There is a need of policy efforts regarding the pandemic. There is no doubt that in the first place the focus of the government on combatting this crisis must be on health measures. This pandemic is already going on for more than a year so the focus can be put on the long-term measures and on how to combat inequality and poverty increase in the aftermath of this crisis. Protecting the most vulnerable people is necessary both as part of the emergency response and in the longer term (World Bank Group, 2020c).

5.1. General recommendations

First of all, the national culture and gender norms need to be taken into account in order to make actions and interventions as efficient as possible (Regional thematic group for West and Central Africa, 2020). In Africa, the society is mainly dominated by men and that is why the Gender and Covid-19 working group (2020) advises to work together with women's rights organizations to raise awareness of the importance to let both genders work together.

Social protection programs, such as cash and food support, are the top measures already implemented in some countries (Ragasa et al., 2020). Zidouemba et al. (2020) agree by acknowledging some policy implications for Burkina Faso. They mention emergency responses in the short-term including more food assistance, rehabilitation of water points and cash transfers that are coupled to distribution of water, hygiene and sanitation kits. In the medium term, they opt for social safety nets. This can be done with the help of the international community. One option is to reduce the subsidies going to the fourth richest quintile and realign it to the social safety nets on the poorest quintile including the most vulnerable households. For restoring the national economy, these authors opt for financial support and economic stimulus. This can imply tax wavers and exemptions to companies that need it the most. United Nations Mali (2020) states that also in Mali, the safety nets need to improve. Until now, only 20% of the populations states that it can take advantage of a safety net and this number need to increase significantly. Schoors (personal communication, April 26, 2021) agrees with the low number of people relying on social safety nets because the only social safety net available in the rural areas of Mali is family. According to him, no governmental social safety net is available.

Wangchuk (2021) proposes a more diversified agricultural system as recommendation to local farmers in order to be less reliant on one fixed crop. In doing so, the farmers can cope better with future pandemics or other crises like a climate crisis. ACNG belges (2021) and Ragasa et al. (2020) are also supporting this diversification. Ragasa et al. (2020) propose to diversify products and to shift towards products with a higher demand. This can sometimes be done without drastic changes in the infrastructure. This diversification can be supported via grants, loans and directed policies (Ragasa et al., 2020).

Furthermore, Ragasa et al. (2020) mention that enterprises that keep on working must adopt precautionary measures to ensure the confidence in workers and product safety as a form of marketing. This also reduces illnesses and as a consequence, keeps productivity high.

5.2. Gender discrepancies before, during and after the pandemic

Regardless of the Covid-19 crisis, a lot needs to be done to decrease the already existing gender inequalities. This includes reforming law and gender norms but also the recognition of the informal sector, where women are mostly active. Patterson (2020) mentions that a CARE's research has shown the impact of targeting women despite the pandemic. This study shows that every dollar invested in a female farmer results in a 31-dollar benefit to herself but also her family and the community.

Moreover, there are policy recommendations to help the most vulnerable groups even without regarding Covid-19. There is the case of Nepal, where the land rights for women and other vulnerable groups are highly protected. This has proven to increase efficiency of production and can be adopted by other countries such as Burkina Faso or Mali (Ragasa et al., 2020). These authors also state that the digital literacy should be targeted since this can help women in agriculture, even in normal times, but it makes them also more resistant to other crises. By increasing the literacy of women, they are less likely to be misled when they trade or close a contract, they can receive digital information that can help them produce and they can receive more training, as mentioned before by several stakeholders. Additionally, this can help them gain more information about agriculture and the restrictions made by the government regarding the pandemic (Patterson, 2020). According to African Union (2020a), this digital literacy can be established by digital entrepreneurship training bootcamps. This can increase both their digital literacy and entrepreneurial activities.

Not only policy makers need to be convinced about the importance of women as market players but also the actors in the private sector. If they see women market players as important as their male counterparts, the women can be brought into connection with these actors in the private sector. According to Patterson (2020), this can lead to a faster recovery of women from different kinds of crises. In order to raise the awareness among different actors, FAO (2020b) opts for more sex- and age-disaggregated data in order to monitor different gender impacts. This data can include the impact of precautionary measures of the government to mitigate this crisis on both men and women, but also their access to social benefits from the government. With this data, the most vulnerable groups can be identified and targeted in policy responses.

5.2.1. Targeting women

As mentioned in the part 4.7. concerning the suggestions of the stakeholders, it is very important to tackle the gender discrepancies by targeting women in general. If not, women are highly unlikely to benefit from general social protection. As mentioned by FAO (2020b), women have less access to these programs. Furthermore, women are restricted to participate in leadership roles and decision-making committees, also those mitigating the Covid-19 crisis, due to gender norms and rules. This results in the fact that specific women priorities are less represented and considered. Ragasa et al. (2020) point out that we often do not see a gender diversified policy since decision-making committees are mainly men-based. This result in remaining gender discrepancies, such as the gender gap in wages. One way to address this problem, according to FAO (2020b), is a minimum quota on the participation of women. Additionally, the offer of flexible working hours, childcare, transportation and separate toilet facilities can give women an incentive to participate.

Ragasa et al. (2020) support the promotion of gender monitoring in policy response tracking. These authors state that the policy implications that are already implemented based on gender is child nutrition and reducing domestic violence, but there are no policies based on women's economic activities. Patterson (2020) supports this message by stating that gender-blind policies deepen the existing gender biases and hollow out women's rights. He mentions that policy makers should ask women what their needs are because they are different from the needs of their male counterparts. Understanding their needs will result in more female friendly policy choices. This can be done by working together with women's associations (Patterson, 2020).

Among others, Patterson (2020) opts for a policy that target women directly because they can be part of the solution. The World Bank Group (2020c) also mentions this as key. They are convinced that if gender dimensions are taken into account, the social protection responses will improve. As mentioned before, if women are not targeted, they will most likely miss out on these social protection programs. By targeting them explicitly, the response of the social protection programmes will improve. The main policy implications according to the World Bank Group (2020c) are cash transfer programs concentrated on the most vulnerable groups. One of these vulnerable groups are women only households including single mothers with children, widows, or women in agriculture. These cash transfers can be facilitated through cooperatives, farmers' association, women's organizations and self-help groups (FAO, 2002b). The specific programs that the World Bank Group (2020c) recommend are: "public works, access to training and credit and direct provision of productive inputs to female farmers" (World Bank Group, 2020c, p2). These programs will support women if they return to their economic activity.

Moreover, the World Bank Group (2020c) focusses on ensuring access to care if women return to their work. Because mostly women take care of their relatives in such a pandemic, it is necessary that care can still be provided even if women go back to their work. This can give women an incentive to enter the labour market again (World Bank Group, 2020b). The World Bank Group (2020b) does not only focus on targeting women explicitly, but also on creating a joint-action plan between husband and wife. This can help women to enter in higher-value agriculture activities and to promote market inclusion. Patterson (2020) mentions that men need to be encouraged to support women's rights and share the domestic and caregiving work with women. This in order to lower the responsibilities of the women and give them more time to work. By including community-based care in the public work programmes, women do not have to bear the burden of unpaid care for their relatives. They can hire someone else to provide the care and they can go to their own paid job (FAO, 2020b). Considering this cost for the household, the Gender and Covid-19 working group (2020) opts for a subsidy or for a compensation for the women staying at home to take care of their relatives.

5.2.2. Targeting women in agriculture

Not only is it important to target women in general, but it can also be very beneficial to target women working in agriculture. In this way one can target two of the most vulnerable groups in society, namely the women and the poorest.

Ragasa et al. (2020) also support the idea of targeting women-owned companies or companies with a large share of women and youth workers in order to protect the most vulnerable. FAO (2020b) agrees that it is important to target companies led by women and opts for the transition of these women-owned companies from informal sector to the formal economy. Ragasa et al. (2020) opt for targeting the markets with multiplier effects on rural development and women and youth employment. Another way to protect them is to support and stimulate demand and expanding markets across borders to protect livelihoods, although the latter is difficult to implement regarding this pandemic. Moreover, the provision of smaller packages of seeds and fertilizers have been effective in benefiting more women in agriculture. The World Bank Group (2020b) opts to target women by giving them their productive inputs directly. Researchers have shown that women in Mali used more complementary inputs when they received free fertilizer before the pandemic, which led to an increase in their output. (Beaman, Karlan, Thuysbaert, & Udry, 2013). The most important complementary inputs are herbicides and hired labour. However, due to the rearrangement of inputs, no conclusion can be made about the return of one input. Education of these farmers is needed to learn about the impact of an increase of different inputs, such as fertilizers (Beaman, Karlan, Thuysbaert, & Udry, 2013). Unfortunately, the increase in output, stated by the authors, does not imply an increase in income of these women farmers.

In-kind transfers are also part of a project of the Food and Agricultural organization of the United Nations (FAO, 2020a). They support over 1000 vulnerable households in Mali by giving them seeds and tools in order to diversify their crops. Additionally, the households get training and livestock breeding kits in order to improve their production and revenue. The goal of this project is to increase the income and food security of these households, which has declined due to the pandemic. The organization tries to target mainly women headed households. Furthermore, this project does not neglect other crises in Mali by focussing on displaced and host populations. The Belgian government already contributed 250 000 US dollars to this very promising project.

According to the World Bank Group (2020b), cash transfers can help households cope with consumption shocks that occur due to the pandemic. These cash transfers should be mainly given to women because they are in charge of the consumption of the household. The World Bank Group (2020c) mentions that women who own a business are more likely to start or restart it when they receive cash transfers.

These cash transfers can also be combined with the distribution of food packages. FAO (2020b) recommends the distribution of food packages with the correct quantity and quality of food according to the age and gender of the members of the household in order to reduce food insufficiency. This can be combined with education of women about food nutrition and diets, especially for illiterate women. Another policy recommendation can be the establishment of food production programmes at home. Together with the equipment of women with knowledge and resources about the production and consumption of high-quality food, this can decline food shortages (FAO, 2020b).

In order to maintain food security, Arouna, Soullier, Mendez del Villar, & Demont (2020) mentions that the free movement of food will increase efficient trade and thus food security. Patterson (2020) also opts for as much mobility as possible considering the travel bans. Even though quarantine and travel bans are very important measures to combat this virus, he states that women's mobility need to be guaranteed with the necessary social distancing measures and hand sanitizing facilities. This in order to let women cultivate the land they work on and to keep the markets open. Both are needed to increase food security (Patterson, 2020). By increasing market access of women, which was already a problem before the pandemic, food security can be maintained. Increasing the market access is especially important for informal and micro enterprises because this is where women are mainly active (FAO, 2020b).

The food security is very important because once food security is not an issue anymore, women can invest more in their own business, which decreases the women-led business closure rate stated in figure 1 in the introduction. The World Bank Group (2020b) opts for behavioural nudges associated to these cash transfers, which can promote more equitable shares of resources and labour. Moreover, the World Bank Group (2020b) mentions that loans with different, more flexible terms for businesses led by women can help to decrease the closure rate. FAO (2020b) supports these measures by proposing women targeted relief funds and credit lines. Women investment clubs or village savings can also help women to manage their money better. Access to credit can be facilitated by increasing the collateral regimes with crops, livestock or equipment (FAO, 2020b).

As mentioned before, women are extremely important in the informal sector, which is often forgotten by policy makers. However, this informal sector is extremely important to keep the economy working, which helps a quick recover from the pandemic (Patterson, 2020). Policy recommendations that Ragasa et al. (2020) provide regarding the female traders on (informal) markets are investments in

public handwashing facilities and greater sanitation. The government can easily facilitate these measures in order to keep the women at work. Fixed minimum prices are another measure that can help women in agriculture (Ragasa et al., 2020). Another policy recommendation that Ragasa et al. (2020) make is the concept of agri-ambulances. This is already implemented in Nepal. It coordinates the pick-up and delivery of vegetables, but it can also be implemented with other agricultural products.

6. DISCUSSION AND CONCLUSION

Covid-19 is a pandemic, meaning that everyone in the world is affected by it. However, some are hit more than others. There is not only the physical suffering from the virus but there are also negative socio-economic consequences linked to the Covid-19 crisis. The literature states that the latter is where women in Sub-Saharan Africa suffer the most, which is confirmed by the stakeholders. This is mainly because of the dominant position of men in their society. When offering policy recommendations, this needs to be taken into account (Regional thematic group for West and Central Africa, 2020).

The policy recommendations done in this paper are broad due to the time restrictions and limited research that is done by this time over the rather new Covid-19 crisis. Most of the authors in the literature and the majority of the stakeholders opt for women targeted policy recommendations. This in all four main interlinked nodes of agriculture, but because of other humanitarian crises in both Mali and Burkina Faso, food security in the consumption node is the most important aspect. Other limitations of this paper are the fact that no distinction is made between different sorts of agricultural production. Crops, livestock and fishery are the three main sectors in agriculture but none of them are studied separately. Moreover, no distinction is made between different regions in both countries. Yet this paper can give great insights in the current situation of women in agriculture in Mali and Burkina Faso and how they suffer from this pandemic. A further distinction can be made in further research. The stakeholders from the South who agreed on conducting an interview gave great insight in the daily lives of inhabitants of both countries. Even though the number of interviewees is rather small, they all largely agreed with the most important findings from the literature. Their main conclusion was that women are suppressed by their dominant male counterparts. Precautionary measures taken by the government and the limited access to inputs and markets make women suffer more from crises such as the Covid-19 pandemic.

The male dominance is mainly a consequence of customary and religious laws. The majority of the constitutional law rejects discrimination based on gender (OECD, 2019). Unfortunately, the literacy rate of women is incredibly low, leading to the fact that they rarely know their own rights. One of these rights are human rights. One of the most important human rights is gender equality that is stated in

almost every treaty, yet women suffer a lot and are not always aware of these rights (United Nations and the Rule of Law, n.d.).

Also digital literacy rate is low among African women (Ragasa et al., 2020). This can have negative consequences considering this pandemic. Social distancing and travel bans make people more isolated, which can be solved by digital technology (ACNG belges, 2021). The lack of tourism decreased trade tremendously, but e-commerce could offer a solution. Due to the low digital literacy rate of women, they cannot benefit from this digital solution but bootcamps, as recommended by African Union (2020a), can be helpful.

Male dominance amplifies the socio-economic suffering that women need to bear. Fortunately, the African continent is not the most affected region in the world, but the precautionary measures taken by the government induced economic shocks that are still visible today. Even though the region does not note a high number of cases, the impact cannot be ignored. Due to the already large inequalities in Mali and Burkina Faso, which are even more enlarged as a result of the Covid-19 crisis, women are made extremely vulnerable in both countries (Global Health, 2021). This happens in almost all sectors because of the overall dominance of men, but we focus on the agricultural sector.

The fact that women suffer more from the actions taken by the government to fight the virus is due to the fact that these measures are mainly based on men and the formal economy, forgetting the most important priorities for women in the society (Ragasa et al., 2020). This problem needs to be tackled by increasing female participation rate in decision-making bodies. Due to the long process of increasing women participation in these leading committees, many stakeholders, as well as many authors in the literature, state for short term female targeted policy responses to overcome the Covid-19 crisis in a male dominated world.

The most important consequences due to the pandemic that are highlighted by the interviewees are the enlarged gender inequalities and the increasing difficulties people face due to the precautionary measures taken by the government. Due to the low number of infected people, one can opt for relaxing these measures. Opening markets and schools could be very beneficial for women and children. The abandoning of travel bans and the opening of borders with neighbouring countries could increase the trade and thus the food security, which is favourable for people working in agriculture, especially women. Another way to help mitigating this crisis is to continue gender specific projects that target women working in agriculture, where the most gender inequalities are focussed.

Water scarcity is another major issue during this pandemic. Although literature states that the Covid-19 crisis, and the corresponding increasing hygienic and sanitary measures, can lead to water scarcity, some stakeholders disagree with this statement. More research, especially gender based, need to be done in this aspect because water is very important to survive, and it is mostly the job of women to collect this water (FAO, 2018).

This Covid-19 crisis cannot be approached too much from a Western point of view. First of all, the infection rate and death toll are smaller in Africa than in Western countries. Moreover, people in Sub-Saharan Africa need to fight other crises as well. Humanitarian crises and food insufficiency are daily combats. The pandemic is just another crisis that need to be dealt with and that does not make life easy, especially not for women. Many stakeholders mentioned the existence of other crises during this pandemic. On the one hand, Vercruyse (2020) mentions that Burkina Faso is suffering a humanitarian crisis, while on the other hand, Mali is suffering from the second coup in nine months (Belga, 2021). These crises cannot be ignored but neither can the Covid-19 crisis due to its many negative consequences, especially regarding the deepening of gender inequalities.

The situation in both countries is disastrous but we cannot just copy paste Western practices into their society. According to the do-no-harm-principle, we have to respect their culture, habits and religion if we want to help the most vulnerable people. Customary and religious laws are often not very beneficial for women but if we do not respect these laws, policy measures will cause more harm than good. Both countries are dominated by men and if we help women in a way that men will not agree with, women will suffer more from our actions than that they will benefit.

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