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The role of social insurance schemes in addressing the risks faced by agricultural workers in the Middle East and North Africa

Lucas Sato and Nourjelha Mohamed, International Policy Centre for Inclusive Growth (IPC-IG)



Food and Agriculture
Organization of the
United Nations



International
Labour
Organization

Research Report No. 80

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By Lucas Sato and Nourjelha Mohamed

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This publication is one of the outputs of the UN-to-UN agreement between the International Policy Centre for Inclusive Growth (IPC-IG), the Food and Agriculture Organization Regional Office for the Near East and North Africa (FAO RNE) and the International Labour Organization for Arab States (ILO ROAS).

The International Policy Centre for Inclusive Growth (IPC-IG) is a partnership between the United Nations and the Government of Brazil to promote South–South learning on social policies. The IPC-IG is linked to the United Nations Development Programme (UNDP) in Brazil, the Ministry of Economy (ME) and the Institute for Applied Economic Research (Ipea) of the Government of Brazil.

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Suggested citation: Sato, Lucas; and Mohamed, Nourjelha. 2022. "The role of social insurance schemes in addressing the risks faced by agricultural workers in the Middle East and North Africa". *Research Report*, No. 80. Cairo, Beirut and Brasília: Food and Agriculture Organization of the United Nations, International Labour Organization Regional Office for Arab States, and International Policy Centre for Inclusive Growth.

ISSN: 2526-0499



**Food and Agriculture
Organization of the
United Nations**



**International
Labour
Organization**



ipea Institute for Applied
Economic Research

**THE ROLE OF SOCIAL INSURANCE
SCHEMES IN ADDRESSING THE RISKS
FACED BY AGRICULTURAL WORKERS IN
THE MIDDLE EAST AND NORTH AFRICA**

ACKNOWLEDGMENTS

This Research Report is the result of a partnership between the International Policy Centre for Inclusive Growth (IPC-IG), the Food and Agriculture Organization of the United Nations Regional Office for the Near East (FAO RNE) and the International Labour Organization for Arab States (ILO ROAS).

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The IPC-IG research team would like to thank Luca Pellerano, Lea Bou Khater (ILO ROAS), Dalia Abulfotuh, Walaa Talaat, Greta Campora, Omar Benammour (FAO), Shireen Al-Azzawi, Walid Merouani (UNDP), and Mira Bierbaum, Christina Behrendt and Kroum Markov (ILO) for their extensive review and valuable comments and suggestions throughout the elaboration of this work. The team also would like to thank all the participants of UN agencies, government institutions, and agricultural cooperatives that engaged in the interviews and discussions promoted under the scope of this research project.

ACRONYMS AND ABBREVIATIONS

AW	Agricultural worker
FAO	Food and Agriculture Organization of the United Nations
ILO	International Labour Organization
IPC-IG	International Policy Centre for Inclusive Growth
MENA	Middle East and North Africa
NRPS	New Rural Pension Scheme
OPT	Occupied Palestinian Territories
SI	Social insurance

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1. INTRODUCTION

The economic importance of the agriculture sector varies considerably across countries in the Middle East and North Africa (MENA) region.¹ According to the World Bank (2020), although the agriculture sector employed 18.7 per cent of the workforce in the Arab region² as a whole in 2019, in some low- and middle-income countries (MICs) the sector is responsible for at least a quarter of the occupied workforce: 52.7 per cent in Mauritania, 40.3 per cent in Sudan, 35.9 per cent in Morocco, 29.6 per cent in Yemen and 25 per cent in Egypt.

Estimates from the International Labour Organization (ILO 2018b) show that over 90 per cent of agricultural workers (AWs) in LMICs are in informal employment. These workers are usually not covered by social insurance (SI) schemes and benefits³ such as old-age pensions, work injury benefits, maternity benefits and health insurance.⁴ In the case of AWs in the MENA countries, there are several barriers preventing them from registering for and accessing SI schemes, including exclusion from legal frameworks; financial barriers; administrative and institutional barriers; and participation and informational challenges (Sato 2021a; ILO 2021a). At the same time, AWs are more likely to face health, economic, environmental and social risks (Allieu and Ocampo 2019). This means that one of the population groups most exposed to idiosyncratic and covariate risks is also one of the least protected by SI benefits. Many low- and middle-income countries have adopted various solutions to cover the needs of AWs with their SI schemes, such as expanding health insurance, offering work injury benefits and setting up unemployment benefits.

Against this background, **this research report aims to understand the main risks faced by AWs in the MENA region and the potential of different SI benefits to mitigate them.** It builds on the common approach outline developed by the Food and Agriculture Organization of the United Nations (FAO) and the ILO to extend social protection to rural populations (ILO and FAO 2021), a working paper produced by the International Policy Centre for Inclusive Growth (IPC-IG) and FAO on the state of SI for AWs in the MENA region (Sato 2021b), and the Ministerial Forum Declaration ‘The future of Social Protection in the Arab Region: Building a vision for a post-COVID-19 reality’⁵ On the latter, it is noteworthy to highlight the Ministries’ endorsement of the following topics:

- **“Reviewing efforts to extend social protection** to especially vulnerable groups such as children, older persons, persons with disabilities, women, **workers in the informal and in the rural economy, all migrant workers, refugees and people on the move”**; and
- **“Ensuring access to adequate social protection for workers in all types of employment—formal and informal—and making social protection systems more inclusive and effective as enablers of national formalization strategies”**

1. This paper considers the MENA region to comprise the following countries: Algeria, Libya, Mauritania; Morocco, Tunisia; Egypt, Iran, Iraq, Jordan, Lebanon, Sudan, Syria; Saudi Arabia, Kuwait, Bahrain, United Arab Emirates, Qatar, Oman, Yemen and the Occupied Palestinian Territories (OPT). See the Methodological Note <<https://t.ly/C2r>> for the definition of other key concepts.

2. The World Bank definition of ‘Arab States’ is closest to the definition of the MENA region adopted in this paper. The average for the Arab States includes all the countries in MENA, with the exception of Iran, in addition to Somalia, Comoros and Djibouti.

3. See the Methodological Note <<https://t.ly/C2r>> for a definition of social insurance.

4. The labour literature has analysed informal workers from different perspectives. Greater attention has been paid to their exclusion from state benefits due to factors such as burdensome regulations and excessive taxes that prevent enterprises from formalising employment relationships. Another view proposes the ‘exit hypothesis’, according to which employers, workers and their families make implicit cost–benefit analyses on the advantages of moving into formality, and often opt for informal labour arrangements. In this case, a high level of informality is associated with a perception that the protection provided by the State does not pay off and there is poor enforcement capability (Perry et al. 2007).

5. For the full declaration, see: <<https://socialprotection.org/discover/publications/ministerial-forum-declaration-future-social-protection-arab-region-building>>.

This report is the first in a series of three that resulted from this effort.⁶ The other reports explore the main financial and administrative barriers to extending SI schemes, respectively. This report aims to answer the following main research question: **What are the most appropriate SI benefits and design features to address the risks faced by AWs in the MENA region?** It also pays special attention to a series of secondary research questions related to key design features of SI schemes for AWs: What are the main risks faced by AWs in the MENA region? Which adaptations of SI schemes can respond to risks faced by AWs? What are the main trade-offs between different designs of SI schemes (parallel versus integrated schemes; voluntary versus mandatory coverage)?

The second section of this paper explores the main and specific risks faced by AWs, aiming to differentiate these risks from those faced by workers in other informal sectors, and links these risks with SI benefits that can help to address them, which are further explored in the third section. The fourth section discusses key design options that policymakers should consider when expanding SI schemes for AWs. The research report concludes by summarising the main takeaways of the research.

The methodology used to develop this report and the other two in this series is based on a desk review of relevant literature, workshops (focus group discussions), and semi-structured interviews with key informants from the MENA region. Two workshops were conducted in 2021 (August and December) with the participation of a total of 43 stakeholders, including representatives of relevant ministries and national social security institutions, researchers and academics, and experts from United Nations agencies. Another 15 semi-structured key informant interviews with representatives of AW unions and associations took place between September and November 2021 (online and via telephone). Stakeholders who participated in both the workshops and the interviews were mainly from Algeria, Egypt, Iraq, Lebanon, Morocco, the Occupied Palestinian Territories (OPT) and Sudan. They were invited to discuss the main risks faced by AWs in the region and the main barriers to extending SI schemes in the sector. Details on the methodology of the series can be found in the Methodological Note <<https://t.ly/C2r>>.

2. WHAT ARE THE MAIN RISKS FACED BY AGRICULTURAL WORKERS IN THE MENA REGION?

This section presents the risks faced by AWs in the MENA region according to the results of in-depth interviews and focus group discussions. Whenever possible, the report tries to differentiate between different groups of workers within the agriculture sector. The findings of the interviews and discussions are corroborated by literature review and available data. The SI benefits that can help to mitigate the risks presented in this section are discussed in the third part of this paper. The reader can click on the icon of each risk category presented below to be directed to the SI benefits related to it.



2.1 Health-related risks and health care coverage barriers

During the key informant interviews, representatives from **Iraq**, **Lebanon**, the **OPT** and **Sudan** pointed out that AWs are likely to face health problems due to **exposure to chemicals, toxic pesticides and water-borne diseases** (e.g. dysentery, schistosomiasis, malaria). Moreover, interviewees indicated that **AWs are usually not covered by health insurance schemes**. For example, an interviewee from the Moroccan National Federation of the Agriculture Sector (*Fédération Nationale du Secteur Agricole*—FNSA) indicated that only around 16 per cent of AWs are covered by the country's National Social Security Fund, which provides health insurance benefits.

6. See: <<https://t.ly/S360>> and <<https://t.ly/AlyL>>.

Global evidence confirms that rural communities are particularly vulnerable to both general and occupational diseases. The latter is discussed in the following section. General diseases among rural communities are associated with conditions such as inadequate housing and poor sanitation, and contact with transmissible animal and parasitic diseases. This makes epidemic and endemic diseases highly prevalent in rural areas, further aggravating the poor health and socio-economic status of rural communities (ILO 2000).

A report produced by the ILO in 2015 also provides comprehensive global evidence on inequalities between rural and urban areas in access to health care, based on data from 174 countries. The report concluded that **rural people are more often excluded from health care than their urban counterparts.** While 22 per cent of the urban population lacks health coverage, this figure increases to 56 per cent for the rural population (Scheil-Adlung 2015). In Ethiopia, for example, a study found that health-related shocks are a major cause of concern and income fluctuation for farmers (Dercon, Hoddinott, and Woldehanna 2005). In Sudan, another study found that use of routine antenatal health care services is almost five times higher among urban women than among women living in rural areas (Ibnouf, van den Borne, and Maarse 2007).

According to Kronfol (2012), in the Arab countries, some of the main factors leading to the exclusion of rural people from health care services include: (i) **inequalities between rural and urban areas**, as rural areas usually lack health facilities and concentrate people at risk of poverty and social exclusion; and (ii) **transportation barriers**, as people in rural areas face long distances to attend health facilities and often struggle with a lack of public transportation. In some MENA countries, women have to wait for a male guardian to provide transport or accompany them. Some people with disabilities also face further challenges due to a lack of adequate transport for their specific needs.



2.2 Occupational safety and work injuries

Occupational safety risks were the category of risk mentioned most frequently in the interviews with key informants. All representatives from **Algeria, Egypt, Iraq, Lebanon, Morocco, the OPT** and **Sudan** mentioned these risks.

Global evidence confirms that agriculture is one of the most dangerous sectors to work in, registering half of all on-the-job fatalities that occur every year in the world (ILO 2000). In particular, fishers often work in unsafe and unhealthy conditions due to unsuitable boats, water pollution, long periods at sea, a lack of accessible shelter, and the remoteness of health care facilities (FAO 2016). Farmers also experience increased rates of certain cancers, respiratory diseases, noise-induced hearing loss, heat-related illness, and chemical and ergonomic hazards that are associated with a lack of precautions and safe working conditions (ILO 2013).

Iraqi interviewees⁷ highlighted the **lack of safety guidelines and standards** to regulate work in the agriculture sector. Representatives from Iraq,⁸ Lebanon,⁹ Sudan¹⁰ and the OPT¹¹ pointed out that AWs are more likely to suffer from health problems due to the **lack of adequate protective equipment for working with chemicals and toxic pesticides.** Interviewees from all countries also mentioned that work in the sector is **highly hazardous** due to the demand to work outdoors in unfavourable weather conditions (e.g. intense heat or cold, bad weather at sea);

7. AW representative from the Union for Agricultural Engineers in Kurdistan (Iraq).

8. AW representatives from the General Federation of Iraqi Trade Unions and the Union for Agricultural Engineers in Kurdistan (Iraq).

9. AW representative from the Agricultural Workers' Union and the Committee of Employee Women Union, North of Lebanon (Lebanon).

10. AW representative from the Tayba Association for Agricultural Production (Sudan).

11. AW representative from the Union of Agricultural Work Committees (OPT).

long hours of work during harvesting seasons; and intense physical effort, particularly for small-scale producers who do not have access to labour-saving machinery. Due to these factors, AWs are more exposed to **work injuries** than other groups of workers.

Moreover, most AWs are **not covered by work injury SI benefits**, despite being more exposed to occupational risks. The Palestinian representative,¹² for instance, highlighted that work injury benefits are offered as **employer-liability** (EL) schemes, but the vast majority of AWs do not receive any compensation. The literature shows that the lack of compliance with benefits offered as EL is a common issue. EL also offers a limited level of compensation, rarely covers risks associated with long-term compensation and undermines the principle of solidarity (ILO 2021c).

Key informants from Iraq,¹³ Lebanon,¹⁴ Sudan,¹⁵ Morocco,¹⁶ Egypt¹⁷ and Algeria¹⁸ also highlighted that **women are particularly affected by the lack of occupational safety**. They usually work more hours than men and are also responsible for housework and childcare. Women on farms have **less access to productive assets** such as adequate machinery and are responsible for highly physically demanding tasks such as land tilling, weeding, seed preparation and processing crops. In fishing communities, women mostly support onshore activities such as gleaning, salting, drying and smoking fish, which also exposes them to inhaling fumes from drying fish (Bouzidi, El Nour, and Moumen 2011, OECD and ILO 2020; FAO 2019; FAO, CTA, and IFAD 2014; FAO 2021).

Informants from **Morocco**,¹⁹ **Algeria**²⁰ and **Tunisia**²¹ expressed their concerns about risks linked to **inadequate transportation**, particularly for women. Figures from the Tunisian Forum for Economic and Social Rights (FTDES) confirm the relevance of this issue. From 2016 to 2020, FTDES recorded 40 deaths and 530 injuries among women rural workers in the country due to dangerous transportation (CREDR 2021; FTDES 2020). In 2019, civil society and agricultural unions urged the Tunisian government to regulate transportation for AWs after an accident that led to the death of 13 women and injured another 20 AWs. As a result of this mobilisation, Law 51 of 2019²² was issued to regulate transportation for workers in the agriculture sector. Yet accidents continued to occur because of a lack of capacity and political will to enforce compliance with the law (FTDES 2020). Most women do not receive any compensation when they suffer accidents on the way to or from work, as only 10.5 per cent of rural women are covered by SI schemes in Tunisia (UN Women 2016). It is also noteworthy that national employment injury schemes—when they exist—often do not cover road accidents when workers are commuting, which indicates a gap in the design of these schemes.

12. Ibid.

13. AW representatives from the Union of Trade Councils and Associations for Workers (Kirkuk branch) and the General Federation of Iraqi Trade Unions.

14. AW representative from the Committee of Employee Women Union, North of Lebanon.

15. Small-scale farmer from Sudan.

16. AW representative from the Agricultural Workers Union (Morocco).

17. AW representative from *Edi fi Edk* (Egypt).

18. AW representative from the *Union Nationale des Agronomes* (Algeria).

19. AW representative from the Agricultural Workers Union (Morocco).

20. AW representative from the *Union Nationale des Agronomes* (Algeria).

21. Researcher from the *Centre de Recherches et d'Etudes Sociales* (Tunisia).

22. See: <<http://extwprlegs1.fao.org/docs/pdf/tun195580.pdf>>.

Occupational health and safety risks faced by Palestinian AWs were also highlighted by a report prepared by the Union of Agricultural Workers Committees (UAWC 2022).²³ According to this report, 85 per cent of the respondents said they are exposed to various risks resulting from their work environment, such as accidents, injuries or diseases from handling dangerous materials on a daily basis and harsh working conditions with a total absence of public prevention and safety measures. Moreover, 62 per cent of the respondents stated that they work more than 8 hours a day. These workers are exposed to the sun for long hours and cold in the South of the OPT, as well as pesticides which cause respiratory and skin diseases. Despite these risks, 80 per cent of the respondents stated that they do not receive any compensation in cases of work injuries (ibid.).

An ILO study conducted with workers in crop production in open fields, orchards and greenhouses at Akkar and Beqaa in Lebanon also reported the absence of occupational safety measures. Interviewees in these regions pointed out that exposure to pesticides is a significant work hazard. Some mix pesticides with their hands, and they wear regular clothing without any special protective equipment when mixing and applying pesticides, consequently exposing their families, including children, to toxic chemicals. In summer, those who work in the open fields mentioned frequent incidents of fainting. These incidents are even more common in the winter, as workers are exposed to cold and humidity, which cause respiratory illness. However, only a small proportion of workers interviewed by the ILO report these incidents as work-related diseases, probably because of the absence of a clear boundary between their living spaces (tents) and the workplace (farm) (ILO forthcoming).

Migrants and forcibly displaced populations are also particularly exposed to unsafe working conditions. A survey with Syrian AWs in Jordan found that 76 per cent of employers in the agriculture sector did not provide occupational health and safety training or equipment for AWs, and 83 per cent of Syrian AWs were not registered in SI schemes (Kattaa, Byrne, and Al-Arabiya 2018). A lack of work accident insurance for Syrian AWs was also observed in a recent survey conducted in Lebanon (Nuwayhid et al. forthcoming).



2.3 Work instability, unemployment and income losses

Representatives from **Egypt, Iraq, Morocco and Sudan** mentioned precarious employment and unemployment as risks of concern to AWs, particularly **wage workers in the informal sector**. The AW representative from Morocco²⁴ stated that **unemployment has been aggravated by the COVID-19 crisis**. Moreover, an AW informant from Sudan²⁵ highlighted that wage workers are hired according to the **seasonality of production** and can be fired or replaced without notice. Due to the casual or seasonal nature of employment contracts, most AWs, particularly informal AWs, do not have access to unemployment benefits. The literature shows that the uncertain nature of the work and the low income levels make casual workers less prone to invest in training or accumulate savings and invest in alternative employment, which makes them more likely to live in chronic poverty and work in unsafe conditions (ILO 2008).

Income-related risks were also frequently mentioned by AW key informants from **Algeria, Egypt, Iraq, Lebanon, Morocco, the OPT and Sudan**, as well as by experts from **Egypt, Jordan and Tunisia** during group discussions. There are two aspects to these risks. One of them is **income instability**, which is linked to the above-mentioned seasonality of work in the agriculture sector and the dependency on natural resources. The other aspect is **low income or salaries**, which is associated with the prevalence of workers in the **informal sector who receive**

23. Findings are based on the responses to a questionnaire provided by 885 randomly selected Palestinian AWs.

24. AW representative from the Agricultural Workers Union (Morocco).

25. AW representative from the Tayba Association for Agricultural Production (Sudan).

salaries below the legal minimum wage. An AW interviewee from Morocco²⁶ highlighted that, even for AWs in formal employment who receive a minimum wage, the pay is insufficient to guarantee a decent livelihood and is lower than the minimum wage for workers in other sectors, as set out in the national labour law. The results of the Union of Agricultural Workers Committees survey in the OPT reinforce this perception, finding that 90 per cent of farmers receive an average daily wage of ILS88 (USD27.79), while 82.8 per cent indicated that their income is not enough to meet their needs (UAWC 2022).

Key informants from Iraq²⁷ and Lebanon²⁸ also associated low income levels with the higher presence of **women workers** in the sector, who tend to receive less than their male counterparts and have less access to formal jobs. An assessment in Lebanon showed that men are twice as likely as women to have a job in the formal sector (Silva-Leander et al. 2021). Receiving less than men for their work, women are also at a higher risk of food insecurity. According to the experience of a member of the Committee of Employee Women Union of Lebanon,²⁹ the main needs expressed by women workers are food parcels and health coverage.

The literature points out that the substantial prevalence of **daily work** and the **absence of stable employment relationships**—or the disguised absence due to labour intermediation practices that are common in the agriculture sector—are major factors preventing AWs from accessing SI, as they are effectively not mandatorily covered or covered as self-employed in many countries' national legislation.³⁰ Moreover, the prevalence of **non-national** workers in agriculture further exacerbates this exclusion due to discriminatory SI regulations. A recent assessment in Lebanon,³¹ for example, showed that daily workers in the agriculture and construction sectors had the lowest rates of membership of SI schemes: only 1 in 10 workers in these sectors have access to employment-related SI, mainly due to the prevalence of non-standard forms of work and non-nationals in the sector. Moreover, according to the assessment, only 5 per cent of casual and self-employed workers had access to employment-related SI benefits, compared to 67.6 per cent of employees paid monthly (ibid.).

Employment in the agriculture sector also depends on the **seasonality of production**, moving between periods with high and low labour demand, contributing to aggravating the instability in the sector. Global evidence shows that when policies to restrict fishing during closed seasons are in place to ensure the conservation of fish stocks and productive breeding grounds, they can have negative impacts on the income and livelihoods of fishers and their communities. In general, fishers do not have alternative employment opportunities, which translates directly into income loss (Islam et al. 2021; FAO 2021b).

Interviewees from Sudan³² and Egypt³³ also associated the low salaries in their country with **the low productivity and low value-added of production** in the sector. This can make contributions unaffordable for both producers and employees, and particularly for self-employed small producers. The literature supports this perception, as the gross production per hectare of agricultural land in MENA is far below global averages, and the region has presented the

26. AW representative from the Agricultural Workers Union (Morocco).

27. AW representative from the Union of Trade Councils and Associations for Workers (Kirkuk branch) and the General Federation of Iraqi Trade Unions (Iraq).

28. AW representative from the Committee of Employee Women Union, North of Lebanon (Lebanon).

29. Ibid.

30. See ILO (2021b, Annex, Table A1) for an analysis of the availability of SI schemes for temporary, casual, seasonal and self-employed workers.

31. Based on the Labour Force and Household Living Conditions Survey 2018/2019.

32. AW representative from the Tayba Association for Agricultural Production (Sudan).

33. AW representative from the Fayoum Agro Organic Development Association (FAODA).

lowest agricultural productivity growth since the 1980s³⁴ when compared to other developing regions (OECD and FAO 2018). One of the main factors that can explain the low productivity growth in the agriculture sector in the region is the historic lack of public policies promoting agricultural transformation—i.e. a shift from traditional farming to commercial and diversified production systems (FAO 2019b).



2.4 Age-related risks

AW representatives from **Egypt, Lebanon, the OPT and Sudan** mentioned that many risks faced by AWs occur in old age, particularly related to income insecurity associated with the inability to perform agricultural work and the lack of other income sources such as contributory pensions. All interviewees highlighted that **AWs cannot benefit from old-age/retirement pensions, as most of them never contributed to SI schemes**. It makes many elderly AWs continue working, even if the activities are beyond their ability to carry them out safely. However, for some of them, continuing to work is not an option, due to physical limitations after years of performing hazardous work, being exposed to health and occupational risks, a high incidence of disability in old age, as well as other health problems. These factors contribute to push this population into income insecurity. According to the president of the Agricultural Workers' Union in Lebanon, it is essential to include AWs in SI schemes so that they can access the **long-term benefits** of social protection. An interviewee from Egypt³⁵ also raised concerns about the **adequacy** of the pensions offered, as elderly people tend to have higher health-related expenditures, and the value of pensions may not be enough to cover their needs.

Demographic data show that the rural population in the Arab States has been ageing, mainly driven by rural-to-urban migration and the reluctance of younger generations to work in agriculture (UNESCWA 2008). Projections from the United Nations Department of Economic and Social Affairs (UNDESA 2018) also show that the total rural population in the region is expected to fall to just over 30 per cent of the total population by 2050, compared to estimates of over 40 per cent in 2020. This phenomenon highlights not only the importance of policies to support elderly people in rural areas, such as pensions for AWs, but also to improve the working conditions and make work in the agriculture sector more attractive for youth. Rural ageing and the exodus to urban areas could affect labour supply in the sector and further increase the food dependency of a region that already imports 40 per cent of its agri-food demands (Mouël and Schmitt 2018).



2.5 Environment-related risks

Agricultural activities are inherently dependent on environmental factors of the local landscape and the availability of resources. In this paper, environment-related risks are considered social risks due to the capacity of environmental phenomena (e.g. droughts, floods) to influence production, labour demand and income for both workers and producers in the agriculture sector. SI schemes can have the potential to mitigate the socio-economic consequences of these phenomena, as discussed in the next section.

AW representatives from **Algeria, Egypt, Iraq, Morocco and Sudan** mentioned environmental factors as one of the main risks faced by AWs in their countries. **Water scarcity** was the main environment-related risk mentioned during

34. Considering the value of gross production per hectare of agricultural land.

35. AW representative from *Edi fi Edk* [Egypt].

the interviews. Interviewees from Iraq³⁶ mentioned that land deforestation, prolonged drought seasons and water pollution have been aggravating the scarcity of water in the country, reducing the production of fishers and farmers in the rain-fed sector. According to a representative from Morocco,³⁷ underground water is being used by big companies and is not available for small-scale farmers, affecting not only their production but also the availability of drinking water for themselves.

The literature shows that conditions related to the weather, water availability and the quality of soil and water affect the production of farmers, fishers, pastoralists and forest-dependent communities, particularly for producers who do not have access to technologies such as resistant seeds and greenhouses. For small-scale fishers and workers in the fisheries sector, weather events such as gales, storms and fog can cause accidents and losses of productive assets. In addition, the overexploitation of natural resources and the degradation of supporting habitats, such as water pollution, compounded by the effects of climate change, reduce their production (Ben-Yami 2000; Heck et al. 2020).

Other concerns identified by the stakeholders interviewed relate to the **extreme weather conditions** that are **aggravated by climate change** and make agriculture unsustainable in the region. An interviewee from Algeria,³⁸ for example, mentioned that climate change and drought in the country have resulted in increased prices of animal feed, which in turn have resulted in income instability for pastoralists. An Egyptian representative³⁹ mentioned that due to rising global temperatures, farmers cannot predict the timing of some plant diseases, which compromises plants' growth and farmers' income.

An extensive literature corroborates the concerns with environment-related risks and highlights the impacts of climate change on the region. Rain-fed agriculture in the MENA region represents around 70 per cent of the total agriculture sector (Selvaraju 2013). However, most territories already receive less than 300mm of annual rainfall, which represents the lower limit to develop rain-fed agriculture. **Climate change will further impact water availability in the region**, as estimates suggest that annual water discharge will drop by 15–45 per cent with global warming of 2°C, and by up to 75 per cent with global warming of 4°C.⁴⁰ Agricultural activity in MENA takes place in areas where water availability is predicted to decrease the most (semi-arid zones). In addition, **extreme heat** is expected to affect a third of the land area of the region, dramatically affecting food production (Waha et al. 2017).

Sea level rise could also be extremely disruptive for agriculture and fishing in the region, particularly in the Mediterranean and Red Sea areas. Djibouti, Iraq and Lebanon are some of the least prepared countries in the world to respond to climate impacts in the fisheries sector, mainly due to the lack of alternative marine livelihoods for fishers, but also due to the lack of mobility and technical capacity of fishers to respond to changes in marine ecosystems, and the lack of effective fishery management and governance. Moreover, fishers in the MENA region are more sensitive than those in other regions to **non-climate stressors** such as chemical releases, metallurgical wastewater discharges and plastic pollution (Heck et al. 2020; FAO 2019c).

The literature points out that climate change is expected to affect the agriculture sector in the MENA region by reducing crop productivity; increasing the process of salinisation, desertification, and exposure to flooding and water shortages; limiting the possibility of working outdoors; worsening working conditions in the sector; and forcing rural

36. AW representatives from the Union for Agricultural Engineers in Kurdistan, the General Federation of Iraqi Trade Unions and the Syndicate of Engineering Professions [Iraq].

37. AW representative from the Agricultural Workers Union [Morocco].

38. AW representative from the *Union Nationale des Agronomes* [Algeria].

39. AW representative from FAODA [Egypt].

40. Impacts of a '2°C global warming' refer to the impacts assigned to a 2°C warming category, which spans from 1.75°C to 2.25°C warming relative to pre-industrial temperatures in 1850–1900. Impacts of a '4°C global warming' refer to the impacts assigned to a 4°C warming category, which relates to warming above 3.5°C relative to pre-industrial temperatures [Waha et al. 2017, 2].

populations to move to marginal land around cities (Borghesi and Ticci 2019; Waha et al. 2017). Global estimates show that climate change could push an additional 100 million people into poverty if appropriate interventions, including social protection, are not put in place (Hallegatte et al. 2016). The MENA region is one of the most affected by the consequences of climate change, with particular impacts on AWs (Wehrey and Fawal 2022).

3. WHICH ADAPTATIONS OF SOCIAL INSURANCE SCHEMES CAN RESPOND TO THE RISKS FACED BY AGRICULTURAL WORKERS?

This section explores how adaptations of SI schemes can address the risks faced by AWs in the MENA region, as highlighted in the previous section, through some country examples. When asked which SI benefit would be the most needed, interviewees mentioned mostly **health insurance** (interviewees from **Algeria, Egypt, Iraq, Lebanon and Sudan**), followed by **unemployment benefits (Egypt, Iraq and Lebanon)**, **work injury (Egypt and Sudan)**, **agricultural insurance (Sudan and Lebanon)** and **pensions (Iraq and Lebanon)**.⁴¹ As highlighted across this section, many SI schemes have the potential to mitigate some of the main risks faced by AWs in MENA. The design and implementation of these schemes should be considered in tandem with policies to promote formalisation, increase productivity, enforce compliance with labour regulations, and increase efforts to ensure environmental sustainability, climate change adaptation and mitigation, among others, which are fundamental to improve livelihoods and working conditions in rural areas and the agriculture sector. Also, given the characteristics of AWs, the extension of social protection crucially depends on greater complementarity between contributory and non-contributory mechanisms.



3.1 Health insurance

In line with the ILO Social Protection Floors Recommendation No. 202 (2012), health protection should be available for all, including rural communities, and meet the criteria of: (i) **availability**: an adequate supply of health workers, health equipment and quality health services in rural areas; (ii) **affordability**: minimal out-of-pocket payments for health care; (iii) **accessibility and acceptability**: health care for rural populations based on the principles of dignity, non-discrimination and responsiveness to special needs of different groups in rural areas; and (iv) **quality**: guaranteeing quality and fiscally sustainable services, considering the contributory capacity of rural communities, as well as creating fiscal space to finance the provision of health services (Scheil-Adlung, 2015).

Countries worldwide have been extending health insurance schemes for rural people to achieve universal health care coverage (Allieu 2019), and typically this has happened with a mixed approach involving both social contributions from citizens or workers and general revenue financing from the government, such as through explicit or implicit contribution subsidies. Cross-country evidence shows that successful policies that increase health protection for rural populations feature aspects such as political commitment; national and social dialogue; technical expertise; equity-based strategies to extend health protection; coordination with other policy sectors; strategies to enhance income generation; and strategies to promote employment opportunities and decent working conditions for rural populations (Scheil-Adlung 2015).

In the MENA region, advancements to extend health protection to rural people and universal health care can both be observed. One noteworthy case is the *Assistance Medicale Gratuite* (AMG) in Tunisia, which provides free or highly subsidised health care to low-income households that are not covered by SI schemes. AMG is divided into two

41. See ILO (2021b, Annex, Table A1) for an analysis of the availability of SI schemes (old-age, survivors, invalidity/disability, employment injury, sickness, medical care, maternity, unemployment and family benefits) in the region for private-sector workers, including for categories that are prevalent in the agricultural sector (i.e. temporary, casual, seasonal and self-employed workers).

programmes: AMG1 provides free health care to poor households enrolled in the *Programme national d'aide aux familles nécessiteuses* (PNAFN)⁴² and covers around 7.4 per cent of the population;⁴³ AMG2 provides subsidised⁴⁴ health care to households that are close to the poverty line but do not meet the eligibility requirements of the PNAFN, and covers 20 per cent of the population. AMG, along with the contributory health insurance scheme, allowed Tunisia to cover 94 per cent of its population with health care as of 2013 (Ray 2016).

Other recent advances have been observed in countries such as Morocco and Egypt. In April 2021, Morocco established a framework convention to extend the coverage of the basic mandatory health insurance (*Assurance Maladie Obligatoire (AMO) de base*) for workers in informal sectors, including 1.6 million AWs and their families. The government committed, for example, to make institutional and legislative adaptations to include these workers and facilitate their contributions by establishing an appropriate mechanism (Government of Morocco 2021). Egypt is also a noteworthy case, as the country has committed to gradually achieve universal health coverage through a unified health insurance system financed through a mix of contributions and general revenue (see Box 1).

Box 1. Egypt: Moving towards universal health coverage

In July 2019, Egypt started the implementation of a universal health insurance scheme, following the Universal Health Insurance Law of 2018. The objective of this system is to guarantee that all Egyptians will be covered by health insurance up to 2032. The new universal health insurance merged the existing health financing schemes into one single pool and established a mandatory basis, increasing financial risk-pooling and the system's efficiency (Khalifa et al. n.d.). The premiums paid by citizens are based on a percentage of their income, and the state treasury will be responsible for premiums for the most vulnerable population who cannot pay. When it is fully implemented, the expected annual budget of this scheme will be EGP210 billion, which will finance access for low-income citizens and improve the efficiency of the system (Oxford Business Group 2020).

This universal health insurance can improve access to health care for poor Egyptians in rural areas who have been facing long-standing financial barriers to access health services (Ghannam 2020). A recent study by Abdel-Rahman et al. (2021) found that 68 per cent of all rural heads of households are not insured by health insurance schemes. Among the poorest rural households, only 15 per cent are insured. Furthermore, the coverage of male household heads (36 per cent) is three times that of their female counterparts (12 per cent). The high informality rates in rural areas are one factor explaining the low coverage.

During a dialogue organised by FAO, the ILO and the IPC-IG, a representative from the Ministry of Social Solidarity stated that low-income AWs are one of the groups that will benefit from the new universal health insurance, as it will provide subsidised access to health care for the most vulnerable.



3.2 Work injury benefits

International social security standards such as the ILO's Social Insurance (Agriculture) Recommendation, 1921 (No. 17), Employment Injury Benefits Recommendation, 1964 (No. 121), Employment Injury Benefits Convention, 1964 (No. 121), Social Security (Minimum Standards) Convention, 1952 (No. 102) and Convention on Safety and

42. The PNAFN is the largest social assistance programme in Tunisia in terms of coverage. It is a cash transfer programme that targets poor households living below the poverty line.

43. Coverage figures for the AMG refer to 2013.

44. AMG2 beneficiaries pay TND10 per year.

Health in Agriculture, 2001 (No. 184) set the necessary principles with regard to minimum standards for social security. The latter, for example, set the necessary preventive and protective measures to avoid work injuries in the agriculture sector. It claims that national authorities shall provide that employers adopt preventive measures based on risk assessments and offer adequate and appropriate training for their workers, including temporary and seasonal workers. Moreover, Article 21 establishes that, “In accordance with national law and practice, workers in agriculture shall be covered by an insurance or social security scheme against fatal and non-fatal occupational injuries and diseases, as well as against invalidity and other work-related health risks, providing coverage at least equivalent to that enjoyed by workers in other sectors.”

In the MENA region, most AWs lack work injury compensation, even though work accidents were frequently mentioned as a risk faced by AWs in the MENA region during interviews. Along with the necessary preventive measures, the establishment of work injury insurance can be a response to protect workers who have suffered work injuries or occupational diseases. According to the latest *World Social Protection Report 2020–2022* (ILO 2021c), most countries in the region provide a social insurance-based employment injury scheme (the only exceptions are Lebanon, Morocco, the OPT and Qatar). However only in a handful of counties (Jordan, Saudi Arabia and Tunisia) does coverage of such schemes extend to workers in non-standard employment (self-employed, temporary, seasonal, casual). Therefore, this benefit should be prioritised when policymakers are thinking about the ideal SI benefit package for AWs.

One typical challenge in extending work injury insurance has to do with coverage of irregular, daily, casual or seasonal workers on farms, due to the chain of intermediation in labour contracting. Box 2 provides an example of how India used workers' welfare funds to extend the coverage of work injury insurance schemes to casual and daily workers in the construction sector.

Box 2. India: Expanding access to SI and work injury insurance for construction workers

In 1996, India introduced the Building and Other Construction Workers' Welfare Cess Act, which establishes access to social protection for workers in the construction sector and their families through worker welfare funds. These funds are financed by workers' contributions (flat rate) and a levy of 1–2 per cent of the total value of construction projects, which is the main source of funding. In most states of India, this insurance scheme guarantees access to benefits such as assistance in case of accidents and coverage of medical expenses related to illness or injuries, which are essential for construction workers considering the hazardous nature of their work. The scheme also generally offers health insurance, maternity benefits and old-age pensions (ILO 2021a).

By linking the bulk of the funding for the scheme to the total value of the construction project, which is paid by the main contractor, rather than to the earnings of individual workers, this scheme covers all workers involved in the construction project, including those employed by subcontractors and with short-term contracts. In some states of India, it has achieved coverage rates of 70–99 per cent of construction workers (ILO 2021a).

This case is relevant to consider when thinking about expanding SI for AWs because it responds to some challenges that are common both to construction workers and AWs. Along with the mining sector, agriculture and construction are the most dangerous sectors to work in, registering higher rates of occupational injuries and in-work deaths, making work injury schemes so relevant (ILO 2000). The scheme shows one way to offer SI to workers who are subcontracted and have short or seasonal work contracts, which are some of the main reasons why waged AWs are ineligible for SI schemes (ILO, FAO, and IUF 2007).



3.3 Unemployment benefits

Unemployment insurance schemes are underdeveloped or even inexistent in most MENA countries, including for workers in the organised sector. Prior to COVID-19, estimates show that fewer than 10 per cent of the region's unemployed people had access to unemployment benefits, compared to 18.6 per cent worldwide. Iraq, Lebanon, Libya, the OPT, Qatar, Saudi Arabia, Sudan and the United Arab Emirates have no unemployment insurance schemes in place. The experience of inadequate unemployment protection during the pandemic led to considerable efforts to establish unemployment benefits in several countries in the region. This was the case in Oman, for example, where unemployment benefit was adopted in 2020. Yet AWs are not eligible for the Omani scheme. As other countries in the region are also considering adopting unemployment benefits, it is important to guarantee the inclusion of AWs from the outset of the scheme (ILO 2021b).

Box 3. Brazil: Unemployment benefit for small-scale fishers and 'specially insured workers'

Seguro Defeso is an unemployment insurance benefit for artisanal fishers during the fishing closed season aiming to preserve species. This scheme pays one minimum salary per month for fishers who comply with the following requirements (IPC-IG and FAO forthcoming).

- Fishers must be professional fishers (activity oriented towards commercialisation), registered with the General Fisheries Registry, for at least one year before the concession of the benefit.
- Fishing activities must be carried out on land or from small boats.
- Fishers must be self-employed or family workers, with their own means of production or a partnership contract, with no employment relationship/formal work contract with others.
- Fishers must have Brazilian nationality or be a resident of Brazil.
- Fishers must benefit from other social assistance or SI programmes (with some exceptions such as death and work injury benefits, among others).
- Fishers must have paid SI contributions based on their status as 'specially insured' workers.

Regarding the latter, the category of 'specially insured' workers used by the national SI agency includes rural producers, extractivists, artisanal fishers, indigenous peoples and family workers. Instead of paying monthly contributions to the national SI agency, these workers pay contributions based on the value of sales of their produce. Besides guaranteeing access to unemployment benefits through *Seguro Defeso*, they also have access to maternity cash benefits, death pension, sickness and accident insurance and an old-age pension (Government of Brazil 2021; n.d.).

An assessment conducted by the IPC-IG and FAO found that *Seguro Defeso* is fundamental to guarantee basic livelihood conditions for beneficiaries during the fishing closed season, as most fishers do not have other income source. This assessment also found that 60 per cent of the beneficiaries of *Seguro Defeso* are women, and 86 per cent have an income of a quarter of the minimum salary (IPC-IG and FAO forthcoming).

However, the introduction of unemployment insurance is not straightforward. In the majority of MENA countries where unemployment schemes exist, they exclude self-employed, seasonal, temporary and casual employees (ibid.), as their inclusion may pose challenges in terms of monitoring of unemployment status and moral hazard. AWs, in particular, usually face many restrictions, including the legal exclusion of the sector and not qualifying for minimal thresholds regarding the number of worked days, which is a major barrier for seasonal and casual workers.

Analysis found that only in Iran and Morocco are some AWs explicitly entitled by legislation to unemployment benefits. In Morocco, apprentices and salaried employees in the agriculture sector, as well as some categories of fishers and employees of cooperatives, are eligible for unemployment benefits. In Iran, farmers and citizens living in rural areas, as well as nomadic populations, can contribute on a voluntary basis to the Rural and Nomad Social Insurance Fund, which provides unemployment benefits (Sato 2021a). In the case of most AWs, the complexity is further exacerbated by the fact that spells of inactivity and low income are the norm during the seasonal cycle, but unemployment insurance schemes are typically designed (and insurance premiums determined) with workers' constant income streams in mind.

Unemployment benefits can help AWs to maintain a basic standard of living during the seasons of the year in which production and labour demand are less intense. Moreover, offering unemployment benefits in the package of SI schemes could make contributions more attractive to AWs, especially considering that individuals are likely to be interested in precautionary savings.⁴⁵ Yet, given the challenges related to setting up unemployment schemes, in some cases the modality through which these benefits are offered needs to be carefully considered—for example, by developing a mixture of benefits financed through taxation and contributions.⁴⁶ If the introduction of unemployment benefits is not possible, other solutions such as setting up subsidised agricultural insurance schemes and creating employment guarantee schemes (e.g. the Mahatma Gandhi National Rural Employment Guarantee Act) can be alternatives to protect small producers and AWs in case of shocks. Alternatively, Box 3 details an unemployment benefit offered to fishers in Brazil during closed seasons—i.e., when fishing is forbidden during the fishing reproduction seasons.



3.4 Pensions, including old-age pensions

Box 4. China: New Rural Pension Scheme

The NRPS, adopted in 2009, is based on two main pillars: a non-contributory basic social pension and a voluntarily funded defined contribution (FDC) component. The first component is available for rural people who reach 60 years old, including for those who have never made contributions, provided that their adult children were contributing to the voluntary FDC component—a 'family-binding' policy. The central government is responsible for financing social pensions in less affluent provinces, while in the more affluent ones this responsibility is shared by local and central governments (Williamson, Fang, and Calvo 2017).

Those who have contributed for at least 15 years to the voluntary FDC pillar and have reached retirement age are eligible to receive a pension benefit based on their contributions and the social pension component. Workers can choose whether they want to contribute or not and establish how much they want to contribute, ranging from ¥100 to ¥2,000 (USD15 to USD290) per year. Higher contributions lead to higher pensions (ibid.).

From 2009 to 2014, 77 per cent of rural residents in China were covered by the NRPS (ibid.). In 2014, the government decided to unify the basic pension schemes for rural and urban populations. Some of the main limitations of the schemes are related to low benefit values offered by the programme. One of the possible solutions to this challenge is to make a modest FDC contribution mandatory (see section 3.6.b).

45. 'Precautionary savings' are the savings made by individuals or families motivated by income uncertainty in the future. See Baiardi, Magnani, and Menegatti (2020) for a review of recent developments in the precautionary savings theory.

46. See the second research report in this series for a discussion on how to finance the extension of social insurance schemes for AWs <<https://t.ly/S360>>.

Contributory pension systems in the region have been designed to fit the needs of stable employees: they require a relatively long period of contributions, and benefits are calculated on the basis of the salary in the year immediately prior to retirement. These features can act as barriers for AWs with fragmented careers and whose earning potential tends to decline with age. In any case, AWs are often excluded by law from participation in mainstream contributory pension systems. Moreover, as for other benefits, contributory pension systems are often not designed—either by law or *de facto*—to cover workers in self-employed, casual, seasonal or temporary types of employment, which represent the majority of AWs.

To protect people from risks related to old age, countries have been expanding their contributory schemes to cover more people with SI, but also establishing non-contributory social pensions to guarantee basic income security for those who do not qualify to receive contributory benefits (ILO 2018a; 2021b).

Box 4 describes the case of the New Rural Pension Scheme (NRPS) in China.



3.5 Extending beyond social insurance: Agricultural insurance

To protect vulnerable small-scale producers from climate-related risks that affect their production, countries can develop public agricultural insurance schemes linked to social protection systems. Although agricultural insurance schemes are not traditionally considered under the umbrella of social protection, they can be aligned with these systems, designed following the principle of national solidarity between workers, employers and the government, and act as instruments of shock-responsiveness (FAO 2021a; ILO and FAO 2021). Crop insurance is typically based on private insurance, whereas SI is based on collective risk-pooling.

The development of risk management schemes based on insurance (such as crop insurance) for the management of environmental risks has been slower in the MENA region than in other regions. Also, the pace of development of regional conversations and frameworks to ensure a just transition in response to the social and economic impacts of climate change has been slow in the region.

Affordability is one of the main barriers preventing small-scale producers from accessing agricultural insurance schemes (ILO and FAO 2021), along with other possible socio-economic, demographic and behavioural determinants such as risk aversion, intertemporal choices, education and values (Merouani, Hammouda, and Moudden 2016). MENA countries such as Morocco and Iran have established subsidies in agricultural insurance schemes to address the affordability barrier for those in most need (Sato 2021a).

Box 5 highlights two different country cases that link social protection and agricultural insurance. The case of **Brazil** demonstrates a subsidised contributory programme that compensates family farmers for losses of production due to droughts or floods, while the case of **Turkey** describes how the government engaged in a public–private initiative to subsidise agricultural insurance schemes and expand their coverage. Common features promoting the linkage between agricultural insurance and social protection in these cases include:⁴⁷ (i) the schemes aim to improve the capacity of vulnerable agricultural producers to cope with covariate risks; (ii) the schemes promote a coverage extension of agricultural insurance schemes to small producers who otherwise would not be able or willing to afford the insurance; and (iii) the schemes are heavily supported by public finance (in both cases, subsidies).

47. Adapted from FAO (2021).

Box 5. Brazil and Turkey: Different approaches to agricultural insurance schemes

Brazil: *Garantia Safra*, public agricultural insurance for family farmers

A significant proportion of the Northeast region of Brazil has a semi-arid climate, under the risk of desertification, like many rural areas in the MENA region. To protect family farmers⁴⁸ in this region from periodic losses of production due to droughts, a subsidised index-based public agricultural insurance scheme named *Garantia Safra* ('Harvest Guarantee') was created in 2002. The programme targets low-income farmers (average gross monthly income in the 12 months before enrolment does not exceed one and a half minimum wages, excluding rural social security benefits) who own small properties (0.6–5 ha) located in municipalities systematically affected by droughts or floods, and cultivate traditional crops (maize, beans, cassava, cotton and rice).

To obtain this insurance, farmers in eligible municipalities pay an annual contribution of BRL17 (USD2.98) to the programme's fund. In municipalities where losses of production above 50 per cent are identified using satellite data, meteorological data and in locus visits by experts, insured beneficiaries receive compensation of BRL850 (USD149.22). This value is sufficient to cover the basic needs of beneficiaries for the season and provide a level of security for farmers to stay in their properties, thus preventing a rural exodus (Silva 2014). It also decreases food insecurity levels in municipalities covered by the programme, including among those farmers who are not direct beneficiaries (de Aquino, de Fátima Vidal, and Alves 2021).

The scheme is financed by farmers' contributions, subsidies from municipalities and states, and mainly by the Federal Government. The most recent data available show that in the 2020/2021 season, 708,863 families were insured, and for the 2019/2020 season, a total of 380,303 family farmers who had verified crop losses received the benefit (Government of Brazil forthcoming; Sato et al. 2022).

Turkey: TARISM, a public–private initiative to expand agricultural insurance coverage

As of 2005, only 0.5 per cent of the agricultural area of Turkey was insured by agricultural insurance schemes, which offered limited protection. To increase this coverage, improve the strategies of risk management for producers and encourage the private sector to participate in agricultural insurance, the Government of Turkey created the 'Agricultural Insurance Pool' (TARISM) scheme in 2005. TARISM works as a co-insurance pool under a public–private initiative with the 24 private insurance companies that participate in the pool. The companies issue agricultural insurance policies under their names and subsequently cede premiums and risks to TARISM, which centralises the design of insurance products, loss assessments, claims settlements and payments of reinsurance. Several agricultural insurance products are included under TARISM, protecting farmers from losses associated with hail, frost and droughts, but also providing livestock and aquaculture insurance, among others. The government participates in the scheme by subsidising 50–66 per cent of the premiums for all insurance policies under TARISM and by exempting premiums from sales tax. The scheme resulted in an extension of agricultural insurance coverage to 14 per cent of the agricultural lands in the country as of 2017 (FAO 2021a).

48. Brazilian law defines family farms as farms: (i) that cover no more than four fiscal modules; (ii) whose workforce consists mainly of family members; (iii) whose incomes are derived predominantly from activities on the farm; and (iv) that are managed by families [Kühne 2020].

4. WHAT ARE THE MAIN TRADE-OFFS BETWEEN DIFFERENT DESIGNS OF SOCIAL INSURANCE SCHEMES? A DISCUSSION ON PARALLEL VERSUS INTEGRATED SCHEMES; VOLUNTARY VERSUS MANDATORY COVERAGE

Solidarity and risk-pooling are key principles underpinning ILO Convention No. 102 on Social Security (Minimum Standards) and particularly relevant for contributory schemes. These principles mark the central differentiation between SI and commercial insurance schemes. While the latter calculates premiums based on individual risk, SI schemes should be available for all people, regardless of the risk they represent to the scheme. They are based on a principle of solidarity among all participants, in which each of them collaborates to risk-pooling collectively. SI schemes guarantee solidarity at different levels:⁴⁹

- between women and men (e.g. maternity insurance benefits), generations (e.g. the benefits paid to current beneficiaries of old-age pensions are raised from the contributions of the current working population) and, most importantly, between those affected and not by a specific risk (sick and healthy, employed and unemployed) through horizontal redistribution; and
- in some cases through vertical redistribution between rich and poor, vulnerable and less vulnerable workers (e.g. minimum pensions that are paid regardless of the amount that beneficiaries contributed or other mechanisms of cross-subsidisation) (ILO n.d.; Bierbaum and Schmitt 2022).

To ensure solidarity, a wide pooling of risks and collective financing, SI contributions (at least a minimum rate) are mandatory for all workers and employers, and all participants should be included under a single integrated scheme, regardless of their work status or sector (Winkler, Bulmer, and Mote 2017). However, establishing mandatory schemes for workers with unclear employment relationships and no long-term employment ties, such as in the case of a large proportion of AWs, construction workers, artists and others, can be particularly difficult. These workers are unable to make regular, consistent contributions to SI schemes, and it is practically impossible to track employers' obligations, particularly in LMICs with limited administrative capacities.

Subsection 4.1 briefly discusses the issues regarding parallel schemes and fragmentation of SI systems, while subsection 4.2 discusses how to set up effective voluntary schemes. These sections are also informed by the ILO's Good Practice Guide on extending social security coverage to workers in the informal economy (ILO 2021a).

4.1 Integrated versus parallel schemes

Integrated SI schemes are those in which different categories of workers and/or employment arrangements share the same fund and same scheme; or the same fund but different schemes; or the same package of benefits but different schemes etc. Integrating different work and income categories under a single SI scheme can have positive impacts to ensure the solidarity aspect of the contributory schemes, facilitate labour mobility, and contribute to the financial sustainability and cross-subsidisation of SI schemes (Winkler, Bulmer, and Mote 2017).

In contrast, the fragmentation of SI systems occurs when different population groups are covered by different contributory (parallel) schemes rather than one integrated national scheme. In addition to the traditional fragmentation between SI schemes for public and private workers and members of the military, some countries also establish

49. See also Bierbaum and Schmitt (2022, Box 6: Examples of social solidarity and solidarity in financing social protection).

further fragmentation by work sector (e.g. agriculture, construction etc.) and employment arrangement (regular wage workers, domestic workers, self-employed, casual workers etc.) (Jawad 2015).

When SI schemes are established, they generally do not cover all categories of workers. For example, AWs and self-employed workers are usually covered under different schemes or not covered at all (Chen and Turner 2014). The existence of these special SI funds is justified to adapt contributory schemes to the specific characteristics of these forms of non-standard employment, including irregular earnings and short-term contracts. However, one of the main problems of fragmented schemes is the lack of portability and transferability of entitlement and rights between different careers. This is a considerable challenge for workers in the agriculture sector, considering high labour market mobility and movements between self-employment and dependent employment (ILO and OECD 2020).

Fragmentation also limits cross-subsidisation and risk-pooling by segmenting the population. The health insurance schemes in Iran provide an example of these limitations. As a result of incremental expansion of health insurance for different population groups over time, the country has created four public health insurance organisations that cover different populations, including one for rural populations.⁵⁰ The fragmentation into these four categories prevents transfers or cross-subsidisation between the schemes, and segments population risk-pooling, thus limiting the redistribution of risks (Bazyar et al. 2016).

Countries can reduce fragmentation by merging separate SI schemes or starting schemes that are nearly universal in coverage. In Algeria, from independence up to 1983, the SI system was marked by a myriad of different schemes, with their own financial sources and supervised by different institutions (the Ministry of Health, Ministry of Agriculture and Ministry of Finance). In 1983, reform took place, unifying these schemes and increasing their coverage. Since 1983, the Algerian SI scheme has been marked by the unification of the regimes under the principles of solidarity and redistribution, as well as mandatory affiliation for different categories of workers and employment relationships, including non-salaried workers in a specific fund (Merouani, Hammouda, and Moudden 2014).

The case of SI and pensions reform in Egypt in 2019 is also a recent example of how to overcome fragmentation and include all workers in a single SI scheme while establishing adaptations to facilitate the inclusion of some categories. Before this reform, Egypt used to have six different SI schemes that covered different groups.⁵¹ Besides limiting the SI schemes' risk-pooling capacity, this segmented system offered very different benefit packages with different levels of generosity (Elsayed 2018). In 2019, the SI schemes were unified under a single scheme for public and private sector workers, including those in the informal economy (ILO n.d.). Temporary AWs, farmers and owners of small agricultural plots of land (less than 1 acre) are included in the category of workers in the informal sector. The Ministry of Labour and the National Social Insurance Agency stipulated that, for workers without an employer (i.e. those in the informal sector), the State would be responsible for paying the employer's contribution (12 per cent), while workers would pay 9 per cent (Noor 2020).

Box 6 explores the case of Tunisia, which shows some degree of integration, mainly regarding ways to facilitate cross-subsidisation and work mobility for workers in the private sector, including agricultural employees and self-employed workers in the agriculture sector.

50. These are: (i) the Social Security Organization, which covers all employees in the formal private sector and their dependents; (ii) the Iran Health Insurance Organization, which is divided into four subsidiary funds and covers rural residents, self-employed people, government employees and other sectors; (iii) the Armed Forces Medical Services Insurance Organization, which covers members of the military and their families; and (iv) the Imam Khomeini Relief Foundation Health Insurance, which covers poor people (Bazyar et al. 2016).

51. Namely, (i) for employees in the public and private sectors; (ii) for members of professional syndicates, employees in foreign and large national firms; (iii) for self-employed people, employers and migrant Egyptians; (iv) for employers and employees with high incomes; (v) for workers in the informal sector; and (vi) for military and top bureaucrats (Elsayed 2018).

Box 6. Tunisia: Integration as a way to facilitate cross-subsidisation and work mobility

In Tunisia, contributory benefits are implemented by the Caisse nationale de retraite et de prévoyance sociale (CNRPS), which covers the public sector, the Caisse nationale de sécurité sociale (CNSS), which covers the private sector, and the Caisse nationale d'assurance maladie (CNAM), which provides health insurance for both public and private sector workers (Ray 2016). During the 1980s and 1990s, CNSS coverage was expanded to previously uncovered groups, including specific schemes for AWs (1981), self-employed workers in the agriculture sector (1982)⁵² and groups with low revenues (2002). Although these groups have different levels of contribution and levels of access to SI benefits, by establishing these multiple variations under a single fund, Tunisia facilitated cross-subsidisation. Significant integration was also achieved by basing pension eligibility on the total number of years that workers have contributed to any of the schemes, facilitating labour mobility. Keeping different 'entry points' allowed the system to count on different contribution rates: when agricultural employees were included, for example, they paid much lower contribution rates than other non-agricultural employees (4.4 per cent for employees and 2.05 for employers in the agriculture sector, compared to 17.5 per cent and 6.25 per cent, respectively, in non-agricultural sectors). Nevertheless, these lower contribution rates also resulted in lower access to benefits, as AWs under this scheme did not have access to family or survivors' benefits (UNESCWA 2019).

In summary, it is recommended to integrate AWs into mainstream SI schemes, but with different benefit packages that are adapted to their specific needs and contributory capacity. This solution would prevent governments from taking the long road to setting up heavily subsidised and separate schemes for AWs that are inefficient, as they do not allow labour mobility (a key issue for the agriculture sector), are not financially sustainable and are characterised by limited levels of solidarity.

4.2 Mandatory versus voluntary coverage

Mandatory contributions are a fundamental aspect of SI schemes to ensure the principle of solidarity and guarantee the protection of all workers, regardless of the costs and risks they may represent for the insurance scheme (Borowski and Kingson 2019). However, even when guaranteed by law, ensuring mandatory contributions for workers in the informal sector can be very difficult for reasons such as the unaffordability of the schemes, irregularity of income, limited administrative and inspection capacity in remote areas, difficulties in tracing employers' responsibility for wage workers with high labour mobility, and a lack of formal contracts. These limitations, particularly the lack of affordability for self-employed and casual AWs who do not have regular employers to pay their co-contributions, have led countries to establish voluntary schemes for informal workers.

Voluntary schemes can be important to expand SI, but steps must be taken to ensure their effectiveness and participation incentives. Poorly designed voluntary SI schemes have many limitations. It is difficult to ensure that workers will contribute voluntarily due to time preferences for spending versus saving (Winkler, Bulmer, and Mote 2017). Moreover, voluntary schemes usually only involve workers' contributions, eliminating the employer's responsibility for co-financing insurance schemes; they can exclude the most marginalised workers who cannot afford SI schemes; they incentivise an adverse selection of members (people with higher risks have more incentive to join), potentially weakening the fiscal sustainability of the scheme; and they can create inferior regimes with lower levels of protection (Winkler, Bulmer, and Mote 2017; OECD 2018).




Many MENA countries are also shifting away from voluntary schemes due to the limited coverage that they have achieved. In Egypt, for example, voluntary enrolment for seasonal workers in a pension scheme was introduced but only saw 900,000 workers enrolled as of 2013 (Jawad et al. 2018). Since 2002, Lebanon has been offering a

52. Different schemes for self-employed workers in the agriculture sector and non-agricultural sectors were created in 1982 and then merged in 1995.

voluntary scheme for sickness and maternity benefits for some categories of workers,⁵³ which is not integrated with other SI funds. The lack of cross-subsidisation and adverse selection (i.e. a selection of people with higher risks in the insurance scheme) resulted in an unsustainable financial situation for the scheme, poor provision of benefits, and discrimination in hospitals for patients with this insurance scheme. These problems also led the National Social Security Fund to suspend enrolment of most beneficiaries in the scheme (ILO 2020). In Jordan, the Social Security Corporation designed a voluntary SI scheme initially for self-employed workers but then extended it to all Jordanians. Besides excluding all non-national self-employed workers and employers (around 60,000 people), this scheme covers fewer than 16 per cent of all eligible workers (Razzaz, Pellerano, and Byrne 2021).

Experience in MENA and other regions consistently highlights the inefficiency of voluntary schemes to promote adequate coverage. ILO estimates show that these schemes usually attract fewer than 10 per cent of all eligible people (ILO 2021a). The case of Viet Nam represents an unsuccessful approach outside MENA. Aiming to cover informal workers with SI, the country introduced a voluntary SI scheme in 2008. Since then, it has had two insurance schemes: a mandatory SI scheme that covers wage workers with labour contracts of at least one month's duration; and a voluntary SI scheme for workers not entitled to the mandatory scheme. However, the coverage of informal workers under this voluntary scheme remains low. As of 2017, only 1.9 per cent of workers without a formal labour contract were covered. Most rural workers were not covered by either scheme. Some of the reasons for this low coverage include low benefit values, and the unequal treatment between the formal and informal sectors, as the voluntary scheme does not offer the short-term benefits offered to those covered by the mandatory system (e.g. compensation for sickness, maternity, working injuries and occupational diseases) (Huong 2019).

Table 1. Mandatory versus voluntary schemes: Summary of main advantages and disadvantages

Dimension	Mandatory	Voluntary
Coverage and adequacy 	Reduce effects of adverse selection Guarantee broader coverage if adequate measures (e.g. subsidies for workers with low contributory capacity) are considered	In the absence of other mechanisms, allow people with contributory capacity to be covered by social protection Low-income individuals are usually not covered Increased risks of adverse selection
Financing and sustainability 	Greater risk-pooling Greater potential for solidarity and redistribution Higher potential for financial sustainability Governments can subsidise those with limited contributory capacity In contexts of limited contributory capacities, governments must actively engage to finance the scheme	Self-financing social protection mechanisms for workers in the informal sector Limited risk-pooling and solidarity Lead to the exclusion of the most vulnerable, if there are no possibilities to offer reduced contributions for them
Governance and administration 	Government can be the guarantor of the scheme Large-scale schemes potentially benefit from economies of scale	Potential to incentivise the organisation of workers in the informal economy Smaller schemes demand more governance and administration

Source: Adapted from ILO (2021).

53. Self-employed workers, liberal workers, retired employees, employers and relatives of employees are excluded from the mandatory scheme.

Evidence shows that universal voluntary systems for workers in the informal sector are not efficient. However, when attractive voluntary systems are available to special groups, they can increase their SI coverage (Hinz et al. 2013). The case of the NRPS in China discussed above (Box 4) is an example of how to incentivise participation in voluntary schemes. This scheme offers more generous benefits for those who have made more generous contributions over the years under its voluntary contributory pillar. Moreover, the ‘family-binding’ component of the policy incentivises young adults to contribute (Chen et al. 2021). Establishing voluntary insurance for old age, which is the most expensive benefit for public funds, while keeping other benefits under mandatory SI schemes can also be a possible approach to guarantee a gradual extension of a contributory system.

Table 1 compares mandatory and voluntary schemes, summarising the main advantages and disadvantages of each scheme in terms of coverage and adequacy, financial sustainability, and governance and administration.

5. MAIN TAKEAWAYS

This research report aimed to understand the potential of SI schemes to address some of the main risks faced by AWs in the MENA region. It is important to remember that this report considered a broader definition of AWs. The agriculture sector, however, consists of a range of subsectors with different forms of employment and particular needs. The specific needs of plantation workers, for example, might be different from individual farmers who are self-employed, their contributing family members or artisanal fishers. These specific characteristics should be taken into account by policymakers when developing strategies to expand contributory systems in their country. Table 2 summarises the main takeaways regarding the risks and possible SI responses to address them. Other broader takeaways include the following:

- MENA countries should consider broadening legal access to SI for workers in the agriculture sector working in different conditions/employment relationships, particularly wage workers and casual, seasonal, temporary and self-employed workers.
- However, it is important to note that legal expansion only is not sufficient to increase the coverage of SI schemes for AWs. Substantial adaptations in design, administration and financing are also required, as explored in the other two reports in this series.
- A significant proportion of workers in the agriculture sector in the MENA region are non-nationals. International social security standards stipulate the principle of equal treatment for nationals and non-nationals. This should be considered by countries when extending legal and effective coverage for the most vulnerable workers. The importance of bilateral or multilateral social security agreements to ensure the portability of entitlements and benefits should also be considered.
- Several approaches to expand SI and overall social protection for AWs are possible (e.g. extending the coverage of existing schemes, establishing special schemes with a shared SI fund, improving the integration between social assistance and SI schemes etc.), but these approaches should all be based on the principles of risk-pooling and solidarity in financing.
- Given low wages and affordability barriers, combining non-contributory and SI schemes is necessary to guarantee the provision of social protection floors and adequate benefits for all. Countries should consider the importance of integrated social protection systems by establishing a social protection floor that provides basic income security, complemented by contributory systems, which should be extended in the medium and long term.

Table 2. Main takeaways

Main risks	Possible SI responses
Health risks: exposure to pesticides, water-borne diseases, prevalence of epidemic and endemic diseases in rural areas, lack of access to health facilities	<p>Expand health insurance coverage, aiming for universal health systems based on the principles of availability, affordability, accessibility and acceptability of health services and through a mixture of financing from contributions and taxation.</p> <p>Country examples: Tunisia and Egypt</p>
Occupational safety: hazardous work, lack of safety guidelines, risks while travelling	<p>Increase inspections and offer work injury benefits: Increase inspection of the necessary preventive and protective measures in agricultural areas, and increase the coverage of mandatory work injury insurance for AWs, including while commuting.</p> <p>Include diseases to which AWs are prone in the list of occupational diseases covered by work injury benefits.</p> <p>Introduce an innovative mechanism for blanket coverage of all workers, including in subcontracting arrangements, according to the main contractor or work site [e.g. farm-based insurance].</p> <p>Country example: India</p>
Work instability, unemployment and income losses: seasonality, lack of stable jobs, high unemployment in rural areas, income instability and low income/wages	<p>As a primary step, it is necessary to establish unemployment benefits for workers in the region and guarantee by law that wage workers in the agriculture sector are eligible for those benefits.</p> <p>Adapt unemployment benefits to the specific characteristics of work arrangements in the agriculture sector—for example, self-employed or temporary workers—the seasonality of production and the effects of climate change.</p> <p>Country example: Brazil</p>
Age-related: incapacity to continue working and lack of retirement; insufficient pensions to cover the needs of elderly people	<p>Adapt national legislation to allow self-employed farmers and other categories of so far uncovered AWs to contribute to the national pension scheme.</p> <p>Offer social pensions through non-contributory schemes for those who do not have contributory capacity, as an instrument to guarantee minimum protection against poverty, offering contributory schemes as a possibility to increase pension benefits; and consider the adaptation of old-age pensions by adjusting the retirement age for AWs in light of shorter careers, considering an average career reference wage as opposed to last period wages and introducing contribution subsidy systems for low-wage and self-employed workers.</p> <p>Relinquish the requirement to stop work for independent farmers who receive retirement pensions.</p> <p>Country example: China</p>
Environment-related: overexploitation of natural resources, environmental degradation, water scarcity, climate change, production instability	<p>Establish stronger links between SI and public agricultural insurance schemes for small-scale producers to compensate for income losses due to environmental factors.</p> <p>Country examples: Brazil and Turkey</p>

Source: Authors' elaboration.

The report reinforced the importance of avoiding the fragmentation of SI schemes, to maintain the fundamental principles of public contributory schemes: risk-pooling and solidarity. The cases of Algeria, Egypt and Tunisia showed how some MENA countries are integrating their SI schemes using different approaches, and the advantages of doing so. Voluntary schemes have been showing their inefficiency to cover the most vulnerable in the MENA region. These schemes should be used as a last resort to cover self-employed workers, and designed with clear incentives (e.g. the case of China, see Box 4) to optimise coverage.

Two major challenges to extending SI coverage for AWs through either mandatory or voluntary schemes are the fiscal and administrative burdens on governments. The second and third research reports in this series focus on overcoming these challenges and ensuring effective, inclusive and financially sustainable SI.

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