



Food and Agriculture
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United Nations



THE LINKAGES BETWEEN MIGRATION, AGRICULTURE, FOOD SECURITY AND RURAL DEVELOPMENT

Technical report

by the Food and Agriculture Organization of the United Nations,
the International Fund for Agricultural Development,
the International Organization for Migration and the World Food Programme



Cover photograph:

Turkey. Trainees learning to dry peppers in the field as part of agricultural training program provided by FAO. FAO in Turkey is helping job seekers training both Syrian refugees and Turkish workers with the skills that are needed, and helping to get them into highly-skilled jobs in agriculture.

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Abstract

Understanding contemporary migration, both international and internal, remains a challenge. The decision by people to migrate either within their own countries or across borders is influenced by an intricate set of factors. This report examines the complex interlinkages between migration, agriculture, food security and rural development and the factors that determine the decision of rural people to migrate; including economic factors, employment opportunities, conflict, poverty, hunger, environmental degradation and climate shocks.

The relationship between food security and migration can be direct, when people do not see viable options other than migrating to escape hunger. The linkages between agriculture, food security and migration can also be indirect as a strategy by households to cope with income uncertainties and food insecurity risks. Sending one or more family member to work in economic sectors other than agriculture can increase their capacities to cope in the event of adverse shocks.

Moreover, migration gives rise to both opportunities and challenges. The report assesses the impact of migration on the countries of origin and destination, with a focus on rural areas and the agricultural sector. It also discusses how agricultural and social policies can address these challenges and capitalize on the opportunities created by migration trends.

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Abbreviations and acronyms

CFS	Committee on World Food Security
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross domestic product
IDCs	Internally displaced persons
IFAD	International Fund for Agricultural Development
IOM	International Organization for Migration
LDCs	Least developed countries
NELM	New economics of labour migration
OECD	Organisation for Economic Co-operation and Development
PoU	Prevalence of Undernourishment
RAI	Principles for Responsible Investment in Agriculture and Food Systems
SAWS	Seasonal Agricultural Workers Scheme
UNHCR	United Nations Refugee Agency
USD	United States dollar
WFP	World Food Programme



Torit, South Sudan.

Mary's husband is in a refugee camp in Uganda, but she decided to return with their child, saying there are better opportunities in Torit.

©FAO\Stefanie Glinski

Introduction

Migration has contributed to form the societies we live in today, and as such, it is part of our shared history. Both the causes and consequences of migration are multifaceted and complicated. While many people leave their homes as a result of conflict or poverty, others move under conditions of peace, political stability and development. People may also leave to study, reunite with family members, or with the plan to find work and financially support their families back home.

A large share of international migrants originate from rural areas. Both international and internal migration (i.e., the movement from rural areas to cities) form an important part of the structural transformation of an economy, and bring opportunities and challenges for rural economies. Remittances received by families, for example, have significant positive impacts on poverty reduction. In some cases, however, the loss of the most dynamic members of rural societies can have a negative impact on agriculture, in particular.

Safe, orderly and regular migration contributes to sustainable development and economic growth. At the same time, large movements of people, both within and across borders, present complex challenges for the areas of origin, transit and destination. Examining the complex interlinkages of migration with agriculture, food security and rural development is necessary in order to address the diverse drivers of migration and work towards ensuring that people migrate out of choice and not necessity.

This report examines the existing literature and provides evidence from both developed and developing countries, focusing on why people from rural areas decide to migrate. It explores the drivers of migration, both international and internal, and aims to deepen our understanding of the interlinkages with agriculture, food security and rural development. The major contribution of this report is the analysis of the complicated interactions between agriculture, food security and migration drivers, such as economic factors, employment opportunities but also conflict, poverty, shocks and emergencies, environmental degradation and climate change. These interactions shape rural people's decision to migrate and often identify migration as a rural household strategy to cope with the risk of hunger and malnutrition.

Part I of the report discusses the patterns of migration, placing emphasis on both international and internal migration, but also on refugees and displaced persons. Part II provides evidence of the interrelationship between food security and other migration drivers. Part III examines the impact of migration on the countries of origin and destination by focusing on rural areas and the agricultural sector, and discusses how agricultural and social policies can address the challenges and capitalize on the opportunities created by contemporary migration trends.

Migration, through its relationship with food security, agriculture and rural development, is linked to the mandate of the international organizations that prepared this report. The Food and Agriculture Organization of the United Nations, the International Fund for Agricultural Development, the World Food Programme, and the International Organization for Migration work towards making the decision to migrate a choice, and not a necessity, strengthening the positive contribution that migrants, both internal and international, are bringing for economic growth, sustainable development, poverty reduction and food security, while ensuring that the essential needs of the forcefully displaced are being met.



Chiapas, Mexico.

Farmers going to work. Poverty and hardships have been pushing people in rural communities to migrate.

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PART I – Migration patterns

Migration takes many forms. Migrants may move within the countries of their birth, or travel across borders to other countries to work and live. Their journeys to the destination countries or regions can be complex and can take many steps. They may migrate either voluntarily, thus planning their move, or they may be forced to leave due to events that threaten their safety or livelihoods. Understanding the complex interlinkages between food security, agriculture, rural development and migration requires an examination of the many forms that migration can take, as well as its drivers (see Box 1 for definitions, Box 2 for recent migration trends, and Box 3 for remittances).

International and internal migration

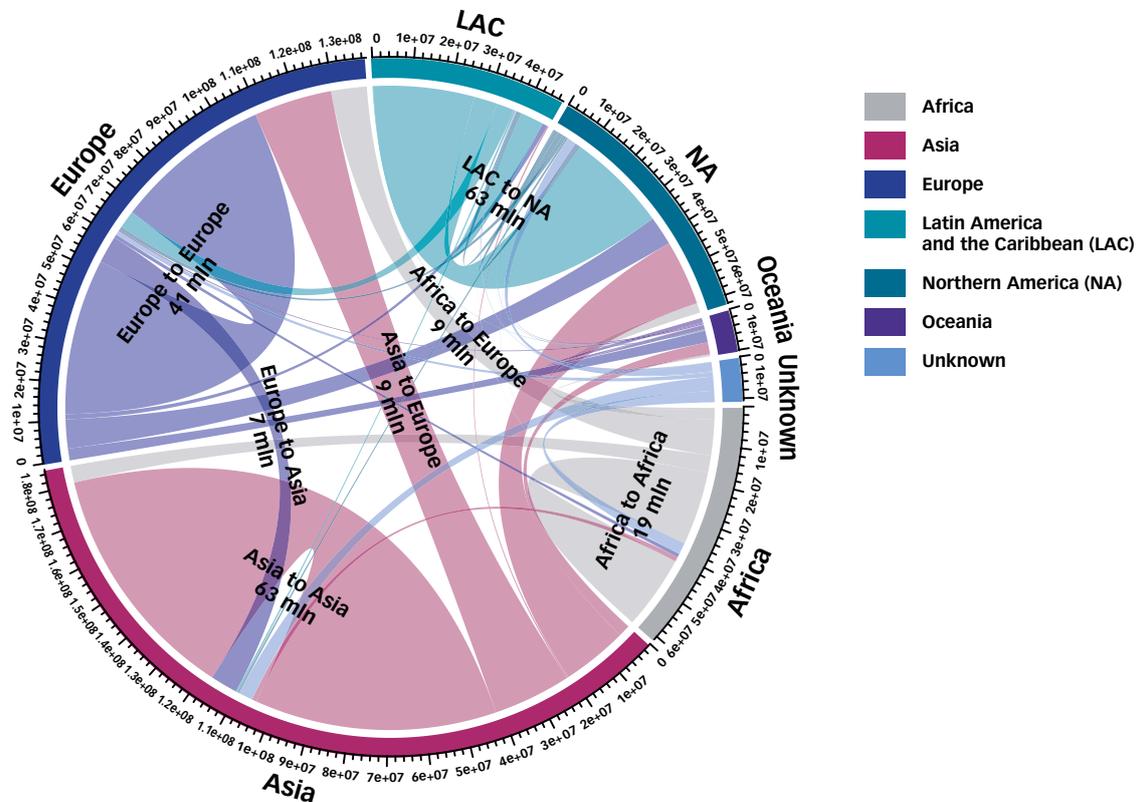
The vast majority of migrants move within their own countries. Nevertheless, there are scarce data to accurately measure internal migration. In 2009, the Human Development Report suggested that more than 10 percent of the world's population had migrated internally.¹ At the same time, international migrants – people who migrated away from their country of origin – amounted to approximately 3 percent of the world's population. Many people choose to migrate internally rather than internationally, as the costs of long-distance journeys are high and people tend to prefer to relocate to places where language and cultural aspects are closest to their own. For example, in 2015, in China alone, there were 247 million internal migrants, compared with 244 million international migrants worldwide.²

In 2017, a large number of the 258 million international migrants worldwide (about 64 percent) lived in high-income countries.³ However, in many parts of the world, the largest international migrant flows are within the same major area (see Figure 1).

Migrants' journeys are often complex and fragmented. Individuals or households may migrate to the nearest best location within their country of residence and attempt to establish a life there, prior to moving to another location and so on, until some eventually migrate internationally. This strategy, often referred to as stepwise migration, can take years. For example, most migrants from West and East Africa have moved from rural to urban areas within their own countries before undertaking their journey across African countries to reach the Libyan coast.⁴ In a recent study, African and Bangladeshi migrants explained how deteriorating conditions in Libya in recent times have forced them to finally pursue migration to Italy by boat, even if this was not part of their initial plan. This is also confirmed by data showing that although migrants arriving in Italy are from various countries, prior to their arrival, the majority lived in Libya for more than six months.⁵

In different contexts, migration is more straightforward and does not involve so many difficulties. For example, migration from South America to the United States is typically characterized by relatively lower transportation costs compared to those moving from Africa to Europe. The availability of social networks that reduce assimilation costs and lower legal barriers is also important. Both transport costs and social networks are important in shaping migration patterns. This is also reflected in the much higher migration rates of less educated workers from South America to countries of the Organisation for Economic Co-operation and Development (OECD) than those from Africa to OECD countries in 1990 and 2000.⁶

Figure 1. Number of international migrants by major areas of origin, cross-classified by major area of destination in 2017.



Source: UNDESA (2017)⁷

Rural-to-urban and rural-to-rural migration

As economies undergo structural transformation along their development path, people move from agriculture to other sectors of the economy, such as manufacturing and services. During this process, labour moves from rural areas to urban areas, and agriculture becomes increasingly less important in terms of its share in a country's gross domestic product (GDP) and total employment (see Box 4 for more details on structural transformation). Structural transformation and urbanization patterns, however, differ among countries. Some countries foster labour movements out of agriculture and into rural, non-farm sectors in small towns (many of which were previously rural settlements that have expanded). Other countries have experienced a rapid agglomeration in megacities.⁸

In 2014, approximately 54 percent of the global population lived in urban areas, compared with 43 percent in 2000. Close to half of the world's urban dwellers reside in relatively small cities of less than 500 000 inhabitants, while only around one in eight live in the 28 megacities around the world (i.e., those with more than 10 million inhabitants).⁹

North and Latin America are now the world's most urbanized regions, with 82 percent and 80 percent of the population living in urban areas, respectively. In Africa and Asia about 60 percent and 52 percent of the population still live in rural areas, respectively, with economic growth fueling migration from rural to urban areas in many countries.¹⁰ In China, for instance, rapid structural transformation has been associated with a drop in the rural population from 80 percent to 55 percent in a period of 20 years.¹¹ By the end of 2012, it was estimated that there were more than 260 million internal labour migrants in China (19 percent of the population) in spite of measures that often discouraged movements of people.¹² Similar shifts from rural to urban areas are observed in the Republic of Korea, Viet Nam and Thailand. Rapid urbanization trends are also prevalent in many African countries. In South Africa, approximately half of all internal migrants are absorbed by only 5 out of 52 metropolitan districts.¹³ In other countries, such as Niger, the vast majority of the population is still living in rural areas, reflecting a slow structural transformation process (see Box 4). By 2050, it is expected that 66 percent of the world's population will live in cities. Asia and Africa will urbanize rapidly, with shares of their urban population reaching 56 and 64 percent, respectively.¹⁴

Rural-to-urban migration is a vital part of the development process, as people move to cities to benefit from agglomeration economies. In spite of urbanization trends, rural-to-rural migration is very common in some developing countries because it is less costly and requires less investment in new skills. In India, for instance, rural-to-rural migration accounted for approximately 62 percent of all people's movements from 1999 to 2000.¹⁵ This has also been the case for several sub-Saharan African countries in the 1990s.¹⁶ The development of transportation and communication infrastructures has allowed rural migrants to become more mobile than they were in the past, and to live at the interface between rural and urban areas, as rural-urban distances have shrunk.

Often, rural-to-urban and rural-to-rural migration does not entail a one-way or a one-time move. Most first-generation migrants retain strong links with their homelands, and frequently tend to engage in *circular migration*, traditionally associated with the seasonal calendars of agriculture.¹⁷ For example, researchers often describe African households as fluid entities, spatially distributed between rural and urban areas, and occupied by different members at different times.¹⁸ Such circular migration, linked to labour needs in both rural and urban areas, is the prevalent form of migration in South Africa.¹⁹ *Seasonal*, *circular* and *short-term* movements are typical forms of migration in Africa, and may recur over the years both within and across countries.

The continuum of migration decisions: From voluntary to forced migration

Voluntary migration refers to a proactive and typically planned movement with the purpose of improving livelihoods. For example, people migrate to study abroad, reunite with their families, or find a better paying job elsewhere. Conversely, *forced migration* indicates a reactive move of last resort to survive an event or situation that severely challenges safety, security or livelihoods in the place of origin. Displacement may occur due to war or civil conflict, in response of extreme environmental events and natural hazards (e.g., floods, hurricanes and earthquakes), or may be the result of policies or projects implemented to, ostensibly, promote investments (e.g., mining, large-scale agricultural production, deforestation, or the construction of dams, ports and airports).²⁰

Movements of displaced persons often take place in a stepwise manner. A recent study documented – through interviews of migrants in Italy, Greece, Turkey, Lebanon and Jordan – how migration routes to Europe often involve several steps. Overall, nearly eight in ten interviewed migrants from the Syrian Arab Republic were internally displaced inside the Syrian Arab Republic at least once, and 65 percent at least twice or more before crossing international borders.²¹ The majority of the Syrian refugees interviewed prefer to stay closer to their places of origin in culturally and socially familiar environments. Most are not inclined towards undertaking long arduous journeys with uncertain endings.

Although the distinction between voluntary and forced migration is critical in terms of policy formulation, the two types of migration flows are increasingly overlapping. Voluntary and forced migration may be considered as two ends of a continuum of migration decisions, where the extent to which a decision to migrate is voluntary or forced also depends on many determining factors.²² For example, climate change may stress living conditions and economic outcomes for farmers. In principle, farmers may be able to cope with, or prevent, the negative impacts of such a slow-onset process by adopting strategies, other than migration, to cope with and prevent the negative impacts of climate change. However, many poor people, especially those in the rural areas of least-developed countries (LDCs), may lack the capacity and resources to adapt to adverse climatic changes. In such cases, migration may not be perceived as voluntary by the individual or migrant, but as the only viable livelihood option to escape from poverty and hunger.²³ Such *survival migration*²⁴ is particularly acute among rural youth where a lack of economic and employment opportunities make migration the only perceived option for improving their life prospects and meeting their aspirations.²⁵

Internally displaced persons, asylum seekers and refugees

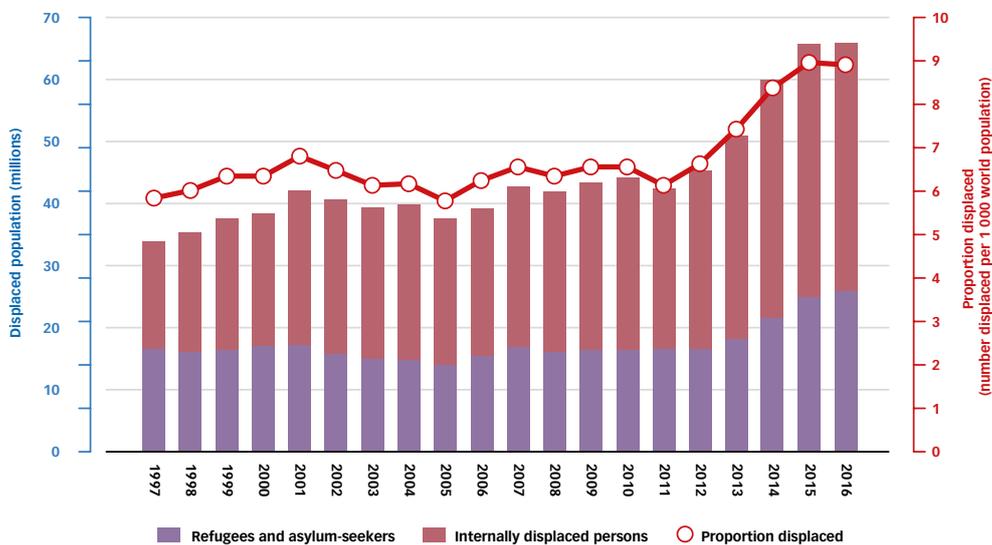
By the end of 2016, 65.6 million individuals were forcibly displaced worldwide as a result of persecution, conflict, generalized violence and human rights violations. This number includes 40.3 million people who were internally displaced, 22.5 million refugees, and 2.8 million asylum seekers.²⁶ The proportion of displaced persons has increased considerably since the beginning of the Arab Spring and the Syrian conflict in 2011. In 2016, more than 9 people for every 1 000 persons in the world were forcibly displaced within their countries or abroad (Figure 2).

Internally displaced persons (IDPs) are forced to leave their home because of armed conflict, persecution, and natural or human-made disasters, and remain within the borders of their country, while *refugees* search for protection abroad. IDPs may not claim any right additional to those shared by their co-citizens, but refugees enjoy a legal status, entitling them to specific rights and international protection.²⁷ Refugees and asylum seekers make up 10 percent of the world's international migrants.²⁸

People that are forced to move abroad due to natural hazards and abrupt environmental and climatic events are not considered refugees. The term, defined in the 1951 Geneva Convention Relating to the Status of Refugees, refers to a person leaving his/her country of residence because of a "well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion".²⁹

In 2016, more than 55 percent of world’s refugees originated from just three countries: Syrian Arab Republic (5.5 million), Afghanistan (2.5 million) and South Sudan (1.4 million).³⁰ During 2015, more than one million people arrived in Europe by sea, most of them originating from the Syrian Arab Republic, Afghanistan, Iraq, Pakistan and Nigeria. Thousands of people died or were reported missing while crossing the Mediterranean.³¹ A study based on interviews of migrants from ten different countries in Greece, Italy, Jordan, Turkey and Lebanon, documented that most of them were aware of the routes and modalities of travel by word of mouth from previous migrants. Some migrants declared they were victims of traffickers, and accepted to travel unsafely, irregularly and at disproportionate costs³²

Figure 2. Trend of global displacement and proportion displaced (1996–2016)



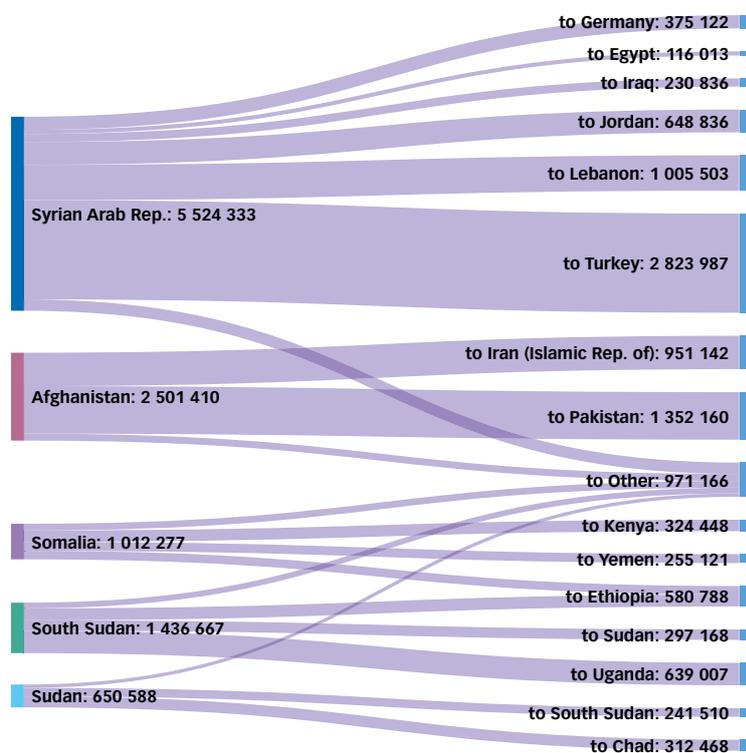
Source: UNHCR (2017)³³

By the end of 2016, Europe hosted approximately 2.3 million refugees. In Africa (excluding North Africa), the number of refugees amounted to 5.1 million, with refugees mostly coming from Burundi, Eritrea, Somalia, South Sudan, the Democratic Republic of the Congo, Sudan and the Central African Republic. Globally, approximately 84 percent of all refugees are hosted by developing countries. Turkey, with 2.9 million refugees, is the top host country, followed by Pakistan (1.4 million), Lebanon (1.0 million), Islamic Republic of Iran (979 400), Uganda (940 800) and Ethiopia (791 600) (Figure 3).³⁴

The Internal Displacement Monitoring Centre (IDMC) estimates that in 2017 there were 30.6 million new cases of internal displacements worldwide. About 11.8 million of the new displacements were associated with violence and conflict, while 18.8 million were induced by sudden onset hazard events. Of the total number of IDPs due to conflict globally, more than half live in the Syrian Arab Republic, Democratic Republic of the Congo and Iraq.³⁵

Displacement induced by sudden onset hazard events occurred predominantly in South and East Asia. In China and the Philippines, about 4.5 million and 2.5 million people, respectively, were displaced due to natural hazards.³⁶ Often new displacements took place in developing countries with relatively little capacity to invest in measures for both disaster risk reduction and assistance. It is estimated that the likelihood of being displaced by a natural disaster has increased by 60 percent between 1970 and 2014 worldwide, and is expected to continue growing as a consequence of climate change.³⁷

Figure 3. Number of refugees by country of origin and country of asylum in 2016



Source: Authors' elaboration of UNHCR (2017)³⁸

Data issues

Fully understanding contemporary migration patterns remains challenging. Information on internal migration patterns, such as rural–urban movements, or circular and seasonal migration, is scarce, especially for developing countries.³⁹ In most countries, there is no single repository of data capturing people’s mobility within their borders.

Currently, available data sources on both internal and international migration include censuses or national representative household-level surveys, which differ across countries in terms of how migration is defined. For example, there are differences in how seasonal, circular or permanent migrants are termed, or on the time intervals over which migration is measured (e.g., one year, five years, since birth, latest move).⁴⁰ Definitions of rural and urban areas are also contextual, and may change over time. Longitudinal data, which would allow the tracking of individual migration patterns over time, are also scarce.⁴¹ Special attention must also be devoted to monitoring individuals caught in long-lasting or chronic displacement.⁴²

The Sustainable Development Goal Global Monitoring Indicator 17.18 highlights the commitment of governments to enhance capacity building support to developing countries to significantly increase the availability of high-quality, timely and reliable data, including data on migratory status. In this context, the IOM's Global Migration Data Analysis Centre (GMDAC) was established with the aim of contributing to IOM's overall effort to compile, analyze and share data on international migration.⁴³ Furthermore, high-quality data on refugees, IDPs and host communities will soon be available thanks to efforts of the World Bank Group and the United Nations Refugee Agency (UNHCR), which established a joint data center on forced displacement (expected to be ready in mid to late 2018).⁴⁴

Better quality, accurate and consistent data on migration are crucial for a number of reasons. First, they are fundamental for analysis aiming at establishing causal links between migration and other demographic, political, economic and environmental factors (e.g., poverty, conflicts, natural hazards, agricultural outcomes, food security). Second, they are necessary for adequately evaluating any possible effect of migration on origin and destination areas and on migrants themselves. Third, good data are necessary for projecting plausible scenarios of future internal and international migration flows. This is all essential for policy-makers in order to prioritize resources, target responses to where they are most needed, and design effective policies to cope with the challenges of current and future migration patterns.

Box 1. Glossary of migration terms

- ▶ **Circular migration:** fluid movement of people between areas, often linked to labour needs in areas of origin and destination (IOM, 2011).
- ▶ **Forced migration or displacement:** comprises a migratory movement in which an element of coercion exists. It includes “threats to life and livelihood, whether arising from natural or man-made causes (e.g., movements of refugees and internally displaced persons as well as people displaced by natural or environmental disasters, chemical or nuclear disasters, famine, or development projects)” (IOM, 2011: 39).
- ▶ **Internal migration:** the act of moving within the country of origin (e.g., from a rural to an urban area) (IOM, 2011).
- ▶ **Internally displaced persons (IDPs):** IDPs are “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border” (IOM, 2011:52).
- ▶ **International migration:** the act of moving from the country of origin (or of habitual residence) across internationally recognized State borders (IOM, 2011).
- ▶ **Long-term migration:** migration for at least one year, irrespective of the causes or the means (IOM, 2011).
- ▶ **Migrant:** according to the International Organization for Migration (IOM), a migrant is “any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person’s legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is” (iom.int/who-is-a-migrant).
- ▶ **Migration:** the act of moving, as an individual or a member of a group, within a country or across an international border. It is independent from the causes driving the movement and the length of stay (IOM, 2011).
- ▶ **Refugee:** According to the Convention and Protocol Relating to the Status of Refugees, a refugee is someone who “owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it” (UNHCR, 2010:14).
- ▶ **Remittances:** cross-border, person-to-person payments of relatively low value. These are typically recurrent payments by migrant workers to their relatives in their home countries to cover a substantial part of their daily expenses (IFAD, 2015).
- ▶ **Return migration:** the act or process of going back to the point of departure, which could be within the boundaries of the origin country or between host and origin countries. This could be forced or voluntary, assisted or spontaneous (IOM, 2011).
- ▶ **Seasonal migration:** migration that is traditionally linked to the seasonal calendars of agriculture, such as when labour is in higher demand during planting or harvesting (IOM, 2011). See also circular or short-term migration.
- ▶ **Short-term migration:** migration for at least three months but less than a year, irrespective of the causes or the means (IOM, 2011).

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Box 2. Patterns of movement

Forced Migration

At the end of 2016, 65.6 million people forcibly displaced worldwide, of which:

- ▶ 40.3 million internally displaced
- ▶ 22.5 million refugees and 2.8 million asylum seekers

The newly displaced are 10.3 million as a consequence of conflict, violence, persecution and human rights violation.ⁱ Of the new displacements in 2016, approximately three quarters are due to disasters and one quarter due to violence and conflicts.ⁱⁱ

The arrivals in Europe by sea were more than 1 million in 2015, most of them originated by Syria, Afghanistan, Iraq, Pakistan and Nigeria. In addition, thousands of people died or were reported missing while crossing the Mediterranean.ⁱⁱⁱ

258 million international migrants in 2017, up from 220 million in 2010 and 173 million in 2000^{iv}

The number of international migrants continues to grow and is expected to reach 321 million people by 2050, if the share of international migrants to the global population remains constant at around 3%.^v

In 2017, women comprised 48.4 percent of the world's international migrants (compared with 49.3 percent in 2000). The median age of migrants is 39 years: 77 percent of women and 80 percent of male migrants in 2015 were of working age (15–64 years of age). About 13 percent were children (0–14 years of age).^{iv}

Most migrants move within their region of birth, with the oldest migrants living in Europe, Oceania and Northern America (respectively, 42.6, 43.9 and 44.7 average years of age), followed by those living in Latin America and the Caribbean (35.8 years of age), and in Asia (35.1 years of age). The youngest migrants live in Africa (30.9 years of age).^{iv}

In 2017, over 60 percent of all international migrants lived in Asia (80 million) or Europe (78 million), followed by North America (58 million), Africa (25 million), Latin America and the Caribbean (10 million) and Oceania (8 million).^{iv} The top four destination countries are: the United States (49.8 million), Germany and Saudi Arabia (12.2 million each) and the Russian Federation (11.7 million).^{iv}

Approximately 41 percent of international migrants in 2017 were born in Asia (106 million), followed by Europe (61 million or 24 percent), Latin America and the Caribbean (38 million or 15 percent) and Africa (36 million or 14 percent). India had the largest diaspora with 17 million international migrants, followed by Mexico (13 million), the Russian Federation (11 million) and China (10 million).^{iv}

A large part of the migrants originating from middle-income countries live in a high-income country. However, in many parts of the world, the largest international migrant flows are within the same major area (see Figure 1). The size of South-South migration is around 38 percent of the total migrant stock, higher than the 34 percent of South-North migration.^{vi}

High skilled migrants^{vii}

Data from the Global Skilled Migration database show that the share of tertiary-educated workers in the total stock of migrants exceeded the share of tertiary-educated workers in the domestic labour force in every developing region of the world, between 1990 and 2000.

In South Asia, for example, tertiary-educated workers accounted for 5 percent of the labour force and 51 percent of all migrants. Similarly, in Sub-Saharan Africa, tertiary-educated workers accounted for less than 3 percent of the labour force but more than 35 percent of all migrants. In 2000, one out of every eight tertiary-educated Africans lived in an OECD country, the highest rate among developing regions except the Caribbean and Central America and Mexico. However, in Africa, only 3 percent of the labor force had a tertiary education in 2000—a far lower figure than in the Caribbean (11 percent) or Central America and Mexico (9 percent).

There are many reasons why educated workers are more likely to migrate than less educated workers: Wage gaps between origin and destination countries increase with education; highly educated migrants are more likely to possess skills, such as language, that enable them to better adapt at their destination. Also, the destination country's migration policies tend to favour skilled migrants.

i UNHCR. 2017. *Global Trends Forced Displacement in 2016*. Geneva, UNHCR.

ii IDMC. 2017. *Grid 2017: Global Report on Internal Displacement*.

iii UNHCR. 2016. *Global Trends Forced Displacement in 2015*.

iv United Nations, Department of Economic and Social Affairs, Population Division. 2017. *International Migration Report 2017: Highlights* (ST/ESA/SER.A/404).

v United Nations. 2016. *Report of the Secretary-General to the General Assembly: In Safety and Dignity: addressing large movement of refugees and migrants* (A/70/59).

vi The World Bank. 2016. *Migration and Remittances: Factbook 2016*. Washington DC, World Bank.

vii Docquier, F., and Marfouk, A. 2006. *International migration by educational attainment, 1990–2000*. In: Ozden, Caglar, Schiff, Maurice (eds.), *International Migration, Remittances, and the Brain Drain*. The World Bank and Palgrave MacMillan, Washington, DC. pp. 151–200.

Box 3. Worldwide remittances

25 developing countries constitute more than 10 percent of GDPⁱ

Estimations of remittance flows to developing countries show an increase over the past decade at a rate averaging 4.2 percent annually, from USD 296 billion in 2007 to USD 445 billion in 2016,ⁱⁱ and reaching an estimate of USD 466 billion in 2017.ⁱⁱⁱ

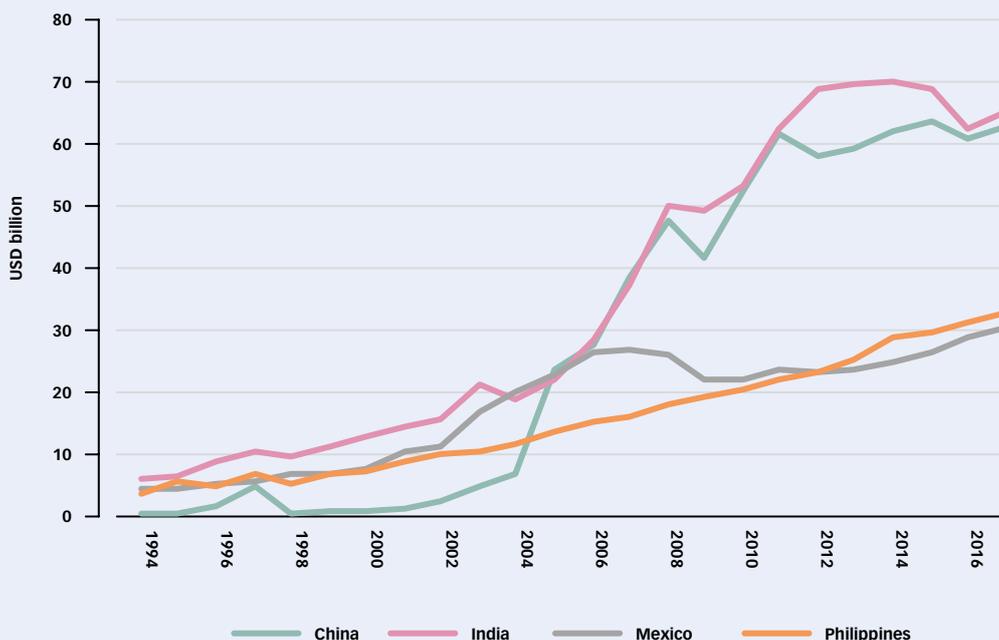
However, these values may underestimate the true size of remittances, because they do not include unrecorded flows from informal channels. According to the World Bank (2018), the top recipient countries are India with USD 69 billion, followed by China (USD64 billion), the Philippines (USD33 billion), Mexico (USD31 billion), Nigeria (USD22 billion), and Egypt (USD20 billion). As a share of GDP, instead, Tajikistan is the largest recipient (42 percent), followed by Kyrgyz Republic (30 percent), Nepal (29 percent), Tonga (28 percent) and the Republic of Moldova (26 percent).

The main source countries of remittances are high-income countries: United States is the largest, followed by Saudi Arabia, the Russian Federation, Switzerland, Germany, United Arab Emirates and Kuwait.

The average cost of sending remittances is now at 6.99%, with considerable differences across regions: the lowest transfer costs (less than 2 percent) are from the Russian Federation to Central Asian States, the highest are both to and within the African continent, particularly from South Africa (around 14.6 percent).

The target for average transaction costs set in the Sustainable Development Goals is 3 percent by 2030, with no remittances corridors with costs higher than 5 percent.

Trend of remittances (1994–2017) of top recipient countries



Source: World Bank (2017)

(<http://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data>, version updated October 2017)

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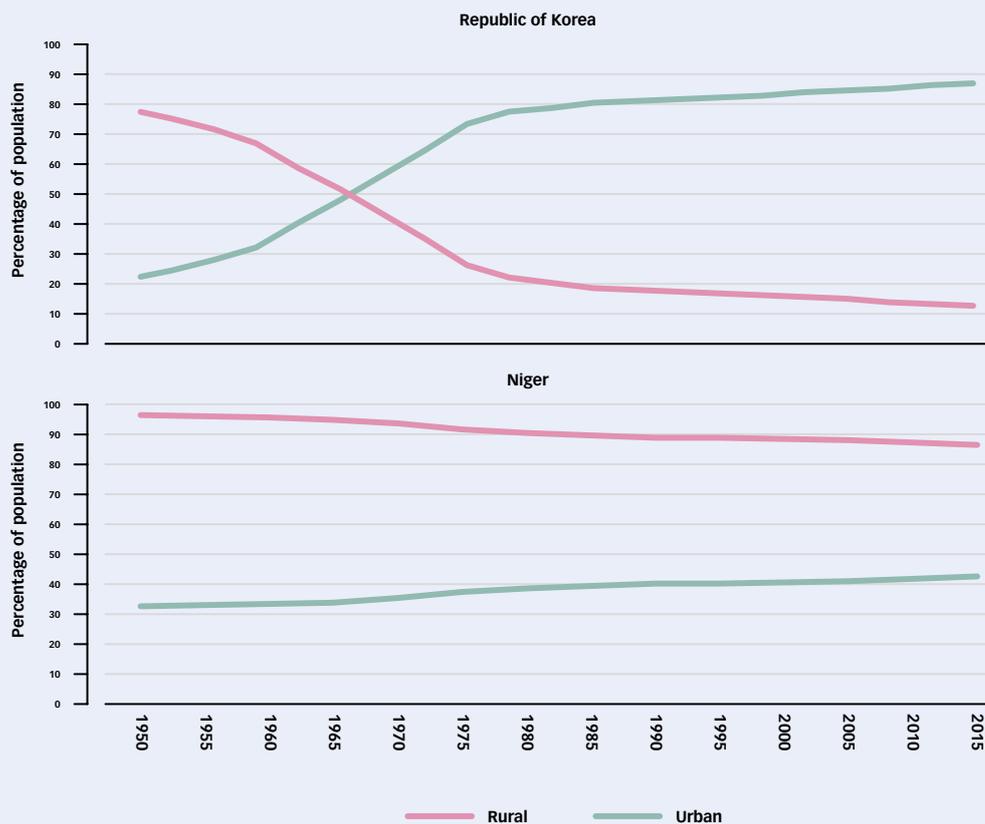
- i World Bank. 2016. *Migration and Remittances: Factbook 2016*. Washington DC, World Bank.
- ii IFAD. 2017. *Sending money home: Contributing to the SDGs, one family at a time*. Rome, International Fund for Agricultural Development.
- iii World Bank, 2018. *Migration and Development Brief 29*. Washington DC, World Bank.

Box 4. Structural transformation in Asia and Africaⁱ

In East and Southeast Asia, the transformation from an agriculture-based economy to an industry- and service-based economy led to large-scale, rural–urban migration. Since the 1960s, in line with considerable improvements in agricultural productivity, rural out-migration has caused a fall in the share of rural population from 70 percent to about 50 percent, or even more for some countries (for example, in the Republic of Korea, the share of the rural population dropped from more than 75 percent in 1950 to less than 15 percent in 2015). The main drivers of this out-migration have been faster growth and increasing incomes in manufacturing and associated services. Productivity increases across all sectors have generated a positive dynamic for rural and structural transformation and led to major reductions in overall poverty.

The speed of structural transformations in many African and South Asian countries is insufficient to keep pace with population growth and the society’s needs. The trends of rural population in Niger, for example, reflect that the large majority of the people tend to remain in the rural sector, although agriculture has lower returns compared with other sectors. In other countries, rural–urban movements are significant, even though people are leaving rural areas and agriculture before they can really be absorbed into the urban economy. Therefore, instead of finding a pathway out of poverty, poor rural people who migrate to cities may be more likely to join the already large numbers of urban poor.

Trend of the share of rural and urban population (1950–2015)



Source: UNDESA (2014)ⁱⁱ

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- ii United Nations, Department of Economic and Social Affairs, Population Division. 2014. *World Urbanization Prospects: The 2014 Revision*. CD-ROM edition.



Djibo, Burkina Faso.

Picture showing a field with excavated Mid-moon dams ready to save water in the coming rainy season.

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PART II– The drivers of migration

Migration is a complex and multifaceted reality. People who migrate are motivated by a complex set of reasons: economic and social incentives, and conflict and political instability play an important role. Family reunification, seeking a better education, and the effects of climate change and natural hazards are also significant drivers of migration. People may also migrate because they have no other viable option to sustain their livelihoods in their place of origin.

Exploring the linkages between migration, agriculture, food security, and rural development requires a deep understanding of migration's drivers, and of the many interactions they have with each other. Migration is the result of a decision process involving factors specific to origin and/or destination areas (*macrofactors*), but also individual and household-related determinants (*microfactors*). Macrofactors include economic growth, employment prospects, poverty and inequality, persecution and conflict. Significant microdeterminants include the age, education, income, employment status and preferences of the individual

potential migrant, as well as the composition of his or her household at origin, its sources of income, and the power relationships within it. Some factors push individuals out of the place of origin (*push factors*), such as a lack of employment opportunities, famine, food insecurity, political uncertainty, violence, crime rates, conflicts and natural hazards. Other factors attract individuals towards destination areas (*pull factors*), as for example perceptions of the availability of decent jobs, better schools, security and safety, and gender equality. Migration decisions are crucially affected by the family context because it is often the household that finances its cost, and because the benefits of migration may also accrue to the household in the form of remittances.

Interactions between these multiple drivers of migration may occur in a step-by-step manner. For example, individuals that have migrated and have achieved better economic and living conditions may have been initially incentivized to move by adverse environmental conditions. Also, a single driver such as a drought, is likely to give rise to completely different migration responses. Migration decisions are highly dependent on the socioeconomic and political context, in addition to the technological and organizational capacities that a household, a region, or a country has to cope with adverse shocks.⁴⁵

The decision of whether to migrate is also subject to a number of facilitating factors, as well as barriers or obstacles. Facilitating factors include the existence of a transportation network, the presence of recruitment agencies, the presence of diaspora networks, open immigration policies in the destination, as well as cultural, religious and linguistic affinity. On the opposite side, the presence of legal and administrative barriers, the cost of migration or the lack of financial sources to cover it, are constraints that potential migrants have to overcome.⁴⁶

The cost of migration, in economic, social and psychological terms, is a major constraint. Geographical distance between a potential migrant's place of origin and destination is important. The greater the distance, the higher the travel costs, and the higher the costs of acquiring information about destinations (although the diffusion of ICT at least partially facilitates access to information on destinations).⁴⁷ Thus, international migration involves individuals or households that are, in general, better off, or is based on step-wise journeys and a strategy to accumulate the necessary funds.

Theories of migration

Over the past decades, many scholars from various disciplines have contributed towards establishing a number of paradigms on the determinants of migration – mostly focusing on economic determinants – and have developed methodologies to empirically test these theoretical models.

One of the earliest theoretical models of migration is the *neoclassical* paradigm, which identifies the key driver as the difference in returns to labour between the origin and destination countries or regions.⁴⁸ Migration is thought of as the result of the maximization of a utility function, subject to budget constraints. According to the neoclassical theory, rural-to-urban migration is driven by income differentials between rural and urban areas and, given full employment in the economy, it ceases when income differentials are equal to the costs of the movement, both pecuniary and psychological.

This theoretical model has been extended by relaxing the assumption of full employment and introducing the probability of finding employment at the destination, making migration a function of expected income rather than actual income differentials.⁴⁹ The *human capital* theory⁵⁰ enriches the neoclassical paradigm by introducing a set of individual preferences in migration decisions. Given the same average income differentials between origin and destination countries, different people may show different propensities to migration depending on education, skills, experience and occupation. The *expectancy value* approach⁵¹ and the theory of *planned behaviour*⁵² provide models in which migration is the outcome of a decision process based on an individual's evaluation of alternative locations subject to expectations, values and rules.

This broader neoclassical framework for migration has been subject to criticisms and adjustments. Empirical analysis suggests that the relationship between income and migration is not linear, and that both per capita income differentials and the level of a country's income matter. More generally, the neoclassical paradigm is thought of as being too simplistic to capture the diverse realities of the interactions between migration, development and growth, ignoring market imperfections, presenting migration always as a voluntary choice to maximize gains, and underestimating the importance of policies.⁵³

The *new economics of labour migration* (NELM) approach differs substantially from the neoclassical paradigm.⁵⁴ Rather than considering migration as the result of an individual utility maximization, NELM shifts the focus of the analysis to the household level. This approach introduces migration as a household strategy to cope with economic uncertainties by diversifying income sources and to respond to market failures in labour, credit, insurance or other markets.⁵⁵ Remittances are explicitly considered because they support the concept of household interconnectedness and are a direct link between the causes and consequences of migration.⁵⁶

NELM has been criticized for a number of reasons. First, this approach considers the household as a rigid unit, taking unanimous decisions to the advantage of the whole family.⁵⁷ Intra-household inequalities in age and gender and differences in preferences and aspirations are ignored, as it is the possibility that individual members disagree with the collective will of the household or that of the household head.⁵⁸

Second, NELM does not consider that migration behaviour and strategies may change over time. For instance, the intention to migrate in order to remit money back home may subsequently change with the migrant returning earlier than expected, or using the money to buy a house in the destination, among other options. It may also be that a refugee escaping from conflict and persecution ends up remitting money back home or becoming a transnational entrepreneur.⁵⁹ These changes in behavior underline that conventional classifications of migrants as economic migrants, refugees, asylum seekers or students, are primarily bureaucratic or legal, and often hide the complex, mixed and shifting motivations of migrants.⁶⁰

Within NELM, the *relative deprivation* approach is based on the concept that the decision to migrate occurs not to maximize the expected income, but rather to minimize the feeling of deprivation in terms of income relative to the community where the individual resides.⁶¹ Although this finding emphasizes the role of inequality as a driver of migration, more recent research suggests that both absolute and relative deprivation need to be considered.⁶²

Historical-structural approaches introduce different elements into the concept of migration. The *world system* theory explains migration as a part of the globalization process, which leads to an increasing interdependency of economies.⁶³ The *dual labour market* theoretical model relates migration to structural change, suggesting that it is the conditions of the demand for labour rather than supply that drive migration.⁶⁴ Developed economies generate demand for low-skilled jobs that are not attractive to domestic workers but are met by migrants, and policies are in place to facilitate foreign workers' recruitment. This framework describes migration as a natural consequence of capitalist development and a structural transformation that brings in global political and economic inequalities. However, it denies that individuals may have their own reasons for migrating, independent of the pressures of the development and structural transformation processes.⁶⁵

The *network* theory highlights the key role of diaspora or networks in the place of destination in maintaining and facilitating migration flows rather than in initiating the process.⁶⁶ As the network size increases (relatives, friends, people from the same communities or speaking the same language), migrants are more likely to receive better information and assistance in job- and house-searches, thus offsetting part of the costs of migration and the risks associated with it.⁶⁷ Network theory is closely linked to *migration systems*, according to which migration alters the social, cultural, economic, and institutional conditions at both the sending and receiving ends, and restructures the entire society.⁶⁸ The paradigm also suggests that migration flows are boosted by the presence of prior links between the origin and destination countries, such as colonial ties, trade or investment flows.⁶⁹

Finally, the *human development* and *human security* frameworks go beyond traditional measurements of development (such as income levels) and conventional sources of insecurity (such as violence and war). Approaching migration through the concept of human development focuses on a broad range of circumstances, including education levels, health and distribution of resources, which impact on peoples' capabilities, choices, and options. Human security pays attention to non-conventional sources of insecurity, such as environmental degradation, food scarcity, population displacement and institutionalized forms of gender violence. Both frameworks look at diverse, situation-specific, interacting threats and how these affect migration decisions, especially by the most vulnerable.⁷⁰

Empirical evidence on migration drivers

This section examines the main drivers of migration through a rural lens and discusses their interplay with poverty, food security and agriculture.⁷¹ In line with the theoretical models discussed above, the section distinguishes among the following migration drivers: 1) income differences, poverty and food security; 2) education, family reunification and social networks; 3) demographic asymmetries, rural youth and gender inequalities; 4) environmental factors; and 5) conflicts, political instability and protracted crises.

Income differences, poverty and food security

Economic factors are key causes of migration. Income differentials between the origin and potential destination and income variability play important roles in driving migration.⁷²

A global analysis of the determinants of international migration flows between 1995 and 2015 suggests that an increase of 10 percent in the income differential between two countries increases the number of migrants between the two by 3.1 percent, on average.⁷³ Drawing from quantitative and qualitative research, a recent study concluded that food insecurity can be a cause, as well as a consequence of migration. Food insecurity is a critical push factor driving international migration, along with economic factors, population growth and the existence of established networks for migrants. Further, the act of migration itself can cause food insecurity, given the high costs involved, as well as lack of income opportunities and adverse travel conditions along the journey.⁷⁴

Differences in income between countries determine international migration flows

Income differentials have been and continue to be significant determinants of international migration. Evidence of migration from Mexico to the United States shows that between 2002 and 2006 an increase of 100 percentage points in the average wage differential, increased the probability of migrating by 2.5 percentage points.⁷⁵ In Ecuador, between 1999 and 2005, a 10 percent increase in expected earnings in the United States was estimated to increase the probability of Ecuadorians migrating to the United States by 20 percent. A similar increase in expected earnings in Spain, was estimated to bring about a 10 percent increase in the probability of migrants coming from Ecuador to Spain.⁷⁶

The relationship between international migration and income tends to be “humped-shaped”. Migration rates from a community increase as per capita incomes rise beyond subsistence levels, and decrease when the gap between incomes at the place of origin and destination closes.⁷⁷ This shape arises because at low income levels, people are not able to cover the costs of migrating internationally. As income increases, migration is possible, only to slow down when incomes between the origin and destination countries converge.

But more generally, the debate of whether development reduces the need to migrate for economic reasons, or it actually drives more migration by providing individuals with more resources to move, is still open.⁷⁸ Anecdotal evidence from IFAD projects show that when given opportunities and the perspective of a better future at home, people tend to stay.⁷⁹ Migration, especially cross-border migration, is costly. The costs are both monetary (such as the cost of travelling to and settling in another country) and non-monetary (such as the cost of navigating cultural differences and establishing new social networks). Lack of information, risk and uncertainty, and the social and psychological costs of quitting the home country and leaving family behind also affect the decision to migrate.

Rural–urban migration forms part of structural transformation and the development process

Internal migration from rural to urban areas is also driven by economic reasons within the broader process of structural transformation with the costs of movement being relatively low. Productivity differences that correspond to income gaps between agriculture and other sectors of the economy, such as manufacturing and services, give rise to rural-to-urban migration that stimulates the process of urbanization and results in a decline in the share of agriculture in both GDP and employment.⁸⁰

Historically, economic growth characterized by fast growth rates in non-agricultural sectors results in fast structural transformation and robust rural-to-urban migration flows. Evidence from China shows that during the period of 2008–2014 an increase of 10 percent in real wages earned by construction workers in the urban sector, spurred migration from rural areas and brought about a decrease in the rural-to-urban population ratio by 1.8 percent. Similarly, a 10 percent increase in employment opportunities in construction, brought about a decrease in the rural-to-urban population ratio by 0.5 percent.⁸¹

There are large differences in the returns to labour between sectors, and the returns to agriculture are, across countries, consistently lower.⁸² With rapid economic growth, it is the gap in returns between rural and urban areas that tends to be the most powerful incentive for internal migration. In Asia, growth in agricultural productivity due to the Green Revolution, followed by the development of industrialized urban areas, instigated large movements of people from rural areas into cities in the late 1970s.⁸³ In Africa, in spite of substantial monetary returns to mobility from rural to urban areas, rural-to-urban migration has actually been relatively slow during the 1990s, mainly due to rigidities in the functioning of labour markets and not well-defined property rights.⁸⁴

In Indonesia, the economic primacy of the capital, Jakarta, has a strong effect on the direction and size of migration flows: a study on internal migration flows for five survey years between 1930 and 2000 shows that since Indonesia's independence in 1940, migration flows into Jakarta have been between 57 percent and 93 percent higher than those into other destinations. This is because the island of Java, where Jakarta is located, is Indonesia's economic core region, and Jakarta is the centre of this core.⁸⁵

Structural transformation and rural-to-urban movements are essential for poverty reduction, propel development and the rise of a modern economy. But this is not always the case, if growth in sectors other than agriculture is not sufficient to keep pace with population growth and society's needs. People leave rural areas and agriculture due to poverty and lack of opportunities to seek employment in both formal and informal sectors in urban areas. In general, jobs in rural areas are often associated with low and insecure incomes, limited access to education, healthcare and social services, and gender inequalities in salaries and opportunities.

Evidence from Africa indicates that rural-to-urban migration patterns among young people reflect their reluctance to engage in agricultural labour and to address the constraints associated with rural lifestyle. Between 2000 and 2007, in sub-Saharan Africa, urban wages exceeded rural wages in both the formal and informal sectors. In six countries (Ethiopia, Gabon, Kenya, Togo, Uganda and Zambia) urban informal wages were more than double compared with rural informal ones. Indeed, poverty rates are consistently higher in the rural areas of sub-Saharan Africa.⁸⁶

In Bangladesh, approximately 75 percent of internal migration is rural-to-urban. With 80 percent of the unemployed or underemployed people of working-age living in rural areas,⁸⁷ employment prospects and income aspirations are major drivers to move to urban areas.⁸⁸ Evidence from Thailand also suggests that rural households with lower resource endowments are the most likely to send younger family members away for work in the Greater Bangkok area.⁸⁹

Individuals in developed countries also continue to leave agriculture and rural areas. In western Europe, the abandonment of land has been most common in isolated and poorer areas, particularly in the mountains, that face productivity challenges.⁹⁰

Migration is also a strategy to manage the risks of poverty and hunger

It is not only income differentials that drive migration from rural to urban areas. Internal migration is also an important risk management strategy, often used by farm households to diversify income sources and hedge against income uncertainty and food insecurity risks. Agriculture is subject to fluctuations in production, income and employment due to climatic factors and its seasonal nature, and typically in rural areas non-farm employment opportunities are limited.⁹¹

Especially for poor rural households, sending one or more family members into cities to work in sectors other than agriculture is important in order to reduce the risks of hunger and extreme poverty, and to cope with the possible adverse shocks the household might face. For example, evidence from the Sidama District in southern Ethiopia shows that households of which members were anxious about food supply, decreasing quality and quantity of food and missed meals, were more likely to decide that an adult should migrate in search of employment to support better lives for themselves and the family.⁹² Additional evidence from the same country confirmed these results: for a household without a migrant member, the inability to feed the family relative to neighbouring households with migrants, increased households' propensity to send a migrant by four times.⁹³

Migration from a rural location to another better developed or more productive rural area is also very frequent in many developing countries, as it is often less costly and requires less investment in education and skills.⁹⁴ In Ghana, migration (mainly seasonal) to the Brong Ahafo region from the north of the country is a well-established strategy to increase access to fertile land and promote food security. In a survey among 203 migrants from the Dagara region in the north, most respondents stated that they left their homes because of the scarcity of fertile land, low crop yields and food security problems. The survey underlines the high level of distress and urgency as 48 out of the 203 respondents stressed hunger and food scarcity as the main causes of migration.⁹⁵

In addition, subsistence farmers and pastoralists from the northern part of the country use seasonal migration to urban areas or to rural areas where coffee and cocoa are produced for export, to mitigate the risks associated with living in the marginal lands in Sahel.⁹⁶ Seasonal or circular migration patterns have been identified as a coping strategy at the end of the growing season in Mali, Senegal, Ethiopia, Argentina and India.⁹⁷ In Bangladesh, analysis indicates that a proportion of the extreme poor (about 36 percent) resorts to seasonal migration to cope with seasonal hunger. Migration forms an important strategy to smooth out income and food consumption. Households from villages with a higher proportion of seasonal migrants are less likely to skip meals during the hunger season.⁹⁸ In some circumstances, such seasonal movements may lead to permanent migration as a survival strategy.⁹⁹

Evidence suggests that a household's decision to send a migrant is based on its relative position in the local community, with regards to well-being and inequality. A recent study on the United Republic of Tanzania, Ethiopia, Malawi, Nigeria and Uganda shows that a household's relative position of deprivation in the community (in terms of wealth and consumption) affects migration.¹⁰⁰ Similar results are found in Nepal and Mexico.¹⁰¹

Migration costs may prevent the poorest individuals from migrating internationally. They, instead, may opt to migrate within their own country in search of employment and better livelihood. But the poorest individuals may lack adequate economic resources to migrate even internally, being at risk of becoming even poorer and more vulnerable.¹⁰² Indeed, this inability to migrate should represent a policy concern as relevant as that of migration, especially in the context of rural development.¹⁰³

For many, overcoming the constraint posed by migration costs is central to escaping poverty and hunger traps. At the same time, for people in extreme poverty, migration can be very costly if it fails. People are not willing to migrate if the perceived risks are high due to a low probability of urban employment.

An experimental study in northwestern Bangladesh, a region that experiences seasonal hunger (known locally as *monga*), suggested that as little as USD 8.50 (an amount covering the roundtrip travel cost to a nearby urban centre) provided an incentive to 22 percent of the households participating in the study to send a migrant. Remittances resulted in increases in food and non-food expenditures of migrants' family members remaining at the origin area by 30–35 percent, and improved their caloric intake by 550–700 calories per person per day. For these households, this single seasonal movement addressed food insecurity concerns, but also lowered the costs associated with migration. Once the incentive was removed, these households had a member that was more likely to re-migrate to the city, having reduced the initial risks of migration by acquiring information on the labour market and employers.¹⁰⁴

Famines and migration

Famines force people to move in search of food and to escape disease. In the 1972–74 famine in Ethiopia, tenants and small family farmers had to gradually divest by selling livestock in order to escape starvation, before resorting to migration in search of employment.¹⁰⁵ Again, internal migration was highest during the 1984 famine and declined substantially thereafter during 1987–91.¹⁰⁶ Similar large movements of people in search of food and employment took place during the drought and famine in Sahel (1973), the famine in Bangladesh (1974), and the Bengal famine (1943).¹⁰⁷

Migration due to famine tends to be short term and temporary, but it is the last option left to people at the risk of starvation. In 1984–85 in Nigeria, households resorted to several coping strategies, including minimizing food consumption, selling near-liquid assets, and divesting in productive assets, such as livestock, before destitution and forced migration.¹⁰⁸

A unique case of permanent international migration due to famine was that following the 1845–59 Irish famine. The famine played a crucial role in stimulating mass migration from Ireland, while the United States' policy to welcome migrants due to the strong demand for unskilled labour resulted in these famine-induced movements to the United States becoming permanent.¹⁰⁹

After decades of decline in the frequency and lethality of famines, in 2017 famine returned to be an international concern with the United Nations declaration of famine in South Sudan, probable famine in northern Nigeria and imminent famines in Yemen and Somalia. At the end of 2016, the four countries together were the origin of 10.5 million forcibly displaced people (or 16 percent of the global total), including IDPs, refugees and asylum seekers.¹¹⁰

Education, family reunification and social networks

Individuals may migrate seeking better education in cities or abroad. In 2007, approximately 2.8 million students were enrolled in educational institutions outside of their country of origin – a figure that has increased by around 5.5 percent per year since 1999.¹¹¹ In rural areas, the persistent scarcity of quality education institutions is one of the drivers of migration, as documented in studies in Egypt and Ghana.¹¹² In some cultures, migration is seen as part of the social and cultural development, as in Cape Verde and Mexico.¹¹³

Family reunification and marriage also constitute important motives for migrating

For example, in Ghana, according to the 1998 Living Standards Measurement Survey, approximately 60 percent of rural-to-urban migration occurred for family-related reasons, with this proportion including dependents of those who initially migrated for economic reasons.¹¹⁴

Migration due to marriage is very frequent among rural women. In India, two-thirds of all women have migrated for marriage, amounting to approximately 20 million women moving each year.¹¹⁵ In Burkina Faso, between 1970 and 1998, almost 80 percent of women moved for family reasons (65 percent for marriage), and only 14 percent for economic motives.¹¹⁶ Similar shares occur in Senegal.¹¹⁷ There are marked interactions between migration for marriage and poverty. In rural Mali, the evidence suggests that marriage can be a strategy to reduce household size and, hence, household food consumption.¹¹⁸

Social networks – both in the countries of origin and destination – play a significant role in migration

In poor rural areas, where formal credit institutions are scarce or absent, kinship and extended family networks provide a source of informal insurance that allows people to share the risks associated with moving away. Such informal networks may also provide labour exchange arrangements, transfers, and loans to finance the cost of migration.

Evidence from rural Mexico suggests that households that are part of family networks exhibit higher migration rates: while on average 3 percent (19 percent) of households report at least one permanent (seasonal) migrant, these percentages rise to 16 percent (44 percent) of households with extended family networks.¹¹⁹ Diaspora networks lower the costs and address the uncertainties of employment at the destination by helping migrants to connect with local people, providing information about possible places where to live or to work, and sharing their knowledge on culture, traditions and customs at destination.

The importance of networks is underlined by research indicating that past migration in a city or country is indeed a good predictor of future migration flows.¹²⁰ A recent study on international migration suggests that the network elasticity lies between 0.36 and 0.48, meaning that 100 additional migrants in the existing diaspora attract, on average, between 36 and 48 additional new migrants over the next 10 years.¹²¹ A study from Kenya showed that kinship-networks are used by migrants and their families to solidify future remittance receipts through the migrant's marriage at destination: marriage increases remittances, as a fraction of annual income, by 7 percentage points.¹²²

Today, globalization and increased Internet connectivity grant migrants extraordinary access to information on routes and means of travel, even though information remains imperfect and asymmetric. Evidence from interviews with migrants from the Syrian Arab Republic suggests that many were aware of the means of travels and routes of migration. This information was reportedly acquired through connections (acquaintances, friends, migrant networks, and/or family) that have succeeded in the journey, as well as social and traditional media.¹²³

Demographic asymmetries, rural youth and gender inequalities

Demographic characteristics of a region, such as high population density and fast population growth, can induce migration mainly through their interaction with other drivers, especially economic ones. It is not a large population at the origin on its own that triggers out-migration, but rather the presence of large numbers in conjunction with lack of employment or economic opportunities.¹²⁴

Sub-Saharan African countries, for example, in order to accommodate the rapid population growth and demographic transition will need to generate, on average, 18 million new jobs every year between 2010 and 2035.¹²⁵ It has been suggested that the demographic asymmetries between Europe's aging and declining population and Africa's young and growing population could represent an incentive for migration, and create opportunities for mutual benefits.¹²⁶

In rural economies, youth are those most likely to migrate to urban areas in response to the lack of gainful employment and entrepreneurial opportunities in the agricultural sector

In Africa, for instance, the share of rural youth in vulnerable employment (i.e., own-account work or contributing family work) ranges from 68.1 percent in Zambia to 93.7 percent in Benin.¹²⁷ Scarcity of farmland is another contributive factor to youth migration.¹²⁸ The prospect of inheriting land may, however, dissuade young people from migrating away from rural areas and incentivize them to work in agriculture. Evidence from rural Ethiopia suggests that expectations on land inheritance significantly lower the likelihood of internal and international youth migration.¹²⁹ The outflow of a younger workforce creates imbalances in the age and potential skillsets in the remaining rural labour force, potentially threatening the capacity of the agrifood sector to sustain not only the rural economy but also urban communities.

Strong gender differences still exist in migration decisions

Women are more likely than men to migrate for family reasons. Evidence from Burkina Faso shows that the likelihood of women leaving their village before the age of 18 years – the age at which most women marry in the country – is significantly higher than for men. Beyond that age, women are more likely to stay in their villages as compared with men. A migrant's gender can also determine the destination. Almost two-thirds of males in Burkina Faso migrate internationally, while only 15 percent of females move to another country.¹³⁰

Nevertheless, often the disadvantaged positions of women in traditional rural societies act as a strong incentive to migrate. In agriculture, women typically face significant constraints in accessing productive resources and opportunities. Gender gaps exist in accessing capital assets, such as land and livestock, markets; employment, education and financial services.¹³¹ Women's desire to escape gender-specific discrimination (including early marriage, female genital mutilation, or fear or even experiences of gender-based violence) within their community or family structures also drives them to migrate.¹³²

Evidence from the United Republic of Tanzania shows that gender inequalities in accessing household resources, in particular land, are pushing young women into the cities to look for better employment opportunities. In contrast, young men – as a result of their land rights – tend to migrate shorter distances and for a shorter time compared with women. The impacts of these gender imbalances on migration patterns are likely to have notable social and economic implications for rural communities in the coming decades.¹³³

In the Republic of Korea, better prospects in manufacturing and services have led young women to migrate from rural areas to cities to seek better employment and livelihoods (see Box 4 on structural transformation). Their brothers have stayed back to work on the family farm and take care of the elderly. As a result, in 2010, half of all middle-aged men were single, a fivefold increase since 1995, with the majority of them living in rural areas. The birth rate fell to 1.6 children per childbearing age woman from 6.0 in 1960s. With Korean women unwilling to settle in rural areas, migration worked to balance the demographic gap. In the last 10 to 15 years, there has been considerable immigration from Central and Southeast Asian countries – most of them women who move to the Republic of Korea to start new livelihoods.¹³⁴

Today, women account for an increasing proportion of migrants.¹³⁵ In Africa, there are 101 female migrants under the age of 20 for every 100 male migrants.¹³⁶ This figure is confirmed by case studies conducted in Ethiopia, Nigeria and Mali, where an increasing number of women migrate for work-related reasons.¹³⁷

Social protection can have differing impacts on the decision to migrate

In rural areas of developing countries, the lack of social services is a further incentive to leave. Transportation, education and health services, as well as processing and storage facilities are inadequate, and rural communities are often disconnected from markets. The availability of good-quality infrastructure, such as roads, schools and hospitals, is low. In Thailand, for example, poor access to social and physical infrastructures at the district and provincial levels are identified as strong push factors of migration.¹³⁸

Financial services are also scarce, and do not take into account the needs and capacities of rural youth, nor the risk factors inherent in agriculture.¹³⁹ Furthermore, less than 20 percent of agricultural workers are covered by social protection systems (e.g., public cash transfer programmes to the vulnerable).¹⁴⁰

Social protection plays an important role in development because it helps to reduce vulnerability of low-income households with regard to basic consumption and services. Social protection can either induce or reduce migration, depending on many factors. For example, in Mexico, cash provided to poor rural households by Oportunidades – the main social protection mechanism in the country – resulted in increasing migration to the United States. The evidence suggests that although the cash transferred to the household is used for improving consumption (with food consumption amounting to 75% of total expenditure), some households utilize the entitlement to this guaranteed income stream as a collateral to borrow and finance migration.¹⁴¹ On the contrary, research in a high out-migration area in rural India indicates that public work programmes (under the National Rural Employment Guarantee Act) significantly reduce seasonal migration. In this case, workers prefer to participate in public works rather than migrate to urban areas where the cost of living is higher, and the variability of migration earnings is greater.¹⁴²

The need for social protection can emerge at all stages of the migration process, as different vulnerabilities characterize the migrants before departure, during the trip, at the arrival and the return. However, despite high levels of vulnerability and the need for social protection, evidence suggests that many migrants are at high risk of exclusion from social protection programmes because access to social assistance programmes is often on condition of the physical presence of beneficiaries.¹⁴³

Environmental factors, agricultural incomes and food security

In the past century, the Earth has experienced significant environmental changes, including changes in climatic conditions, land degradation and the degradation of coastal and marine ecosystems. Climate is changing and the impact is realized at multiple dimensions: sea level rise, changes in tropical storm and cyclone frequency or intensity, changes in rainfall patterns, causing droughts and floods, and increases in average temperature regimes. The Intergovernmental Panel for Climate Change projects that these impacts will become more frequent and more intense as the twenty-first century progresses.¹⁴⁴

Climate change is affecting multiple aspects of livelihoods. Its effect on food production in low latitude countries will be negative and significant. Higher temperatures will result in yield reductions, water scarcity will affect livestock production, and rising temperatures will impact fisheries, which are a major source of protein for many.

Such productivity declines would have serious implications for poverty and food security, both in terms of availability and access. Increased climate variability and extreme weather events would also increase food price volatility and affect stability. Climatic events can result in significant increases in the price of food, which will affect millions of poor.¹⁴⁵ As the adverse impacts of climate change are increasingly felt across the world and population growth strengthens the demand for food and exacerbates competition for natural resources, migration prompted by environmental distress may increase.

The impacts of past climate trends on agriculture are already evident in several parts of the world. Patterns of migration and displacement may also be affected, with a study in 2018 projecting more than 143 million internal migrants by 2050 across sub-Saharan Africa, South Asia and Latin America, due to the effects of climate change.¹⁴⁶ These numbers suggest that migration and displacement are critical issues in the context of climate change and require immediate global and national action.¹⁴⁷

Addressing the environmental drivers of migration is all the more urgent in poor regions, where climate change plays a significant and increasingly determinant role in economic activities and livelihoods, especially in agriculture.¹⁴⁸ An analysis of climate risks for crops in food-insecure regions, based on statistical crop models and climate projections for 2030, indicates that South Asia and Southern Africa – both home to poor and highly vulnerable population groups – without sufficient adaptation measures, will likely suffer negative impacts on the production of crops that are important to large food-insecure populations.¹⁴⁹

Natural hazards such as earthquakes, volcanic eruptions and landslides, may induce displacement, as well as migration (due to risk mitigating strategies), particularly in poor countries, which lack sufficient measures to prevent and cope with the possible effects that such phenomena may have on the population.

Environmental and climatic factors have a direct effect on displacement in the case of sudden catastrophic events

Storms, droughts or earthquakes result in an immediate destruction of livelihoods and displacement of millions of people, as in the Philippines due to Typhoon Haiyan in 2013, and in Nepal due to the earthquake in 2015. People were displaced from Somalia to Kenya due to drought in the Horn of Africa in 2011 and the famine that followed, and from Haiti to the Dominican Republic following the earthquake in 2010.

Most displacements induced by such rapid-onset events are usually of short distances and involve temporary movements.¹⁵⁰ However, where there are recurrent climate change events, patterns of movement can become cyclical, pre-emptive and permanent as a result of perceived future risk. For example, evidence from Bangladesh suggests that approximately 22 percent of rural households are affected by tidal-surge floods, and 16 percent of those affected by riverbank erosion, migrated to urban areas.¹⁵¹

In contrast, slow-onset events, such as changes in temperature and precipitation patterns and environmental degradation, affect migration indirectly through economic and social impacts, as for example lower farm incomes.¹⁵² As there is less urgency to leave, the pace of migration induced by such events is slower.

Gradual changes in climate will affect the migration of those individuals and households whose income is directly or indirectly related to agriculture

Evidence from sub-Saharan Africa shows that, over the period 1960–2000, nearly 50 percent of net migration¹⁵³ (estimated at 5 million people) was due to changes in temperature and rainfall, which affected agricultural production and brought about a reduction in farm incomes and rural wages, thus spurring rural-to-urban movements.

The increased supply of labour in the cities exerted downward pressure on urban wages, and in turn induced mobile workers to migrate internationally.¹⁵⁴

Another study on international migration but at the global level, suggests there is no direct impact of environmental factors on migration globally. Nevertheless, within the developing world, the results suggested that a decrease in average rainfall of 1mm over the period 1990–2000 is associated with a decrease in international migration of 1.27 percent. However, an indirect effect of changes in rainfall and temperature has been identified through a widening earning gap between origin and destination.¹⁵⁵

More recently, research suggests that each 1 °C increase in temperature implies a 5 percent increase in the number of international migrants from countries of which the economies depend on agriculture. A similar increase in temperature was estimated to result in only a 0.4 percent increase in migrants from countries in which agriculture does not form such an important part of their economy.¹⁵⁶

Additional evidence on the linkages among climate change, agriculture and migration from Mexico to the United States suggests that a 10 percent decrease in maize yields increases the proportion of the population migrating by approximately 2 percentage points.¹⁵⁷ Similar results are found in India, where a 1 percent decline in rice yields leads to approximately a 2 percent increase in the rate of internal migration between states in the country, while a 1 percent decline in wheat yields leads to a 1 percent increase in migration.¹⁵⁸ A study on South Africa indicates that climate variability tends to reduce the share of people employed in agriculture, which in turn boosts interdistrict migration.¹⁵⁹

In developing countries, migration is an effective form of adaptation to climate change.¹⁶⁰ Rural households resort to family members migrating in order to diversify the family's income sources across sectors, and smooth income in the face of the uncertainty associated with climate variability and shocks.¹⁶¹ In the Dominican Republic, Haiti, Kenya, the Republic of Mauritius, Papua New Guinea and Viet Nam, migration serves as an adaptation strategy to environmental and climate change, as it often helps migrant households to diversify income and increase their preparedness for future hazards.¹⁶² Evidence from Viet Nam shows that migration from rural to urban areas helped rural households to cope with the effect of Typhoon Ketsana in 2009. Households with migrants that were already settled in districts not affected by the typhoon received additional remittances of around USD 120 per capita, which helped them adjust to the shock. Since then, the experience of this catastrophic event has contributed to shaping household behavior towards migration. In 2010, two years after Typhoon Ketsana struck, households that had no migrants at that time were more likely to have at least one migrant.¹⁶³

Similar evidence has been found in Nigeria, where rural households engage in internal migration to cope with both *ex ante* and *ex post* agricultural risk induced by global warming.¹⁶⁴ In Kenya, poor soil quality has affected internal migration. In 2004–05, temporary labour migration from households farming land with high-quality soils was 67 percent lower than in those with poor soils.¹⁶⁵

At the household level, analyses point to strong linkages between food security, climate and migration

A recent study on eight developing countries (Guatemala, Peru, Ghana, the United Republic of Tanzania, Bangladesh, India, Thailand, and Viet Nam) suggests that climatic factors can trigger migration through impacts on agricultural productivity and food security at the household level. The extent to which climatic stressors affect migration decisions depends on a households' assets (such as land quality), skills, and the capacity to offset climate risks through income diversification, changing food consumption patterns, and access to social safety nets. For resilient households, migration is one of a variety of adaptation measures. But the most vulnerable households that have few or no livelihood diversification opportunities, have no access to assets such as land, and are characterized by low skillsets, use migration as a survival strategy.¹⁶⁶

Evidence from rural Savannah communities in northern Ghana suggests that adverse changes in climate induced seasonal migration to areas with more fertile land or to mining sites due to declines in crop yields and livestock production, and subsequent high food prices. Migration during the dry season is a typical livelihood strategy used by these households to cope with food insecurity.¹⁶⁷

Similarly, the impact of climate change on food insecurity and malnutrition plays a central role in migration patterns of youth and children from El Salvador, Guatemala and Honduras to the United States. The evidence suggests that inadequate rainfall in rural areas and its impact on food production increases the likelihood of hunger, and results in migration as households perceive that they may not meet food consumption needs in overall quantity throughout the year. Informal credit markets may provide loans to poor individuals to meet the costs of migration, using future payments at the country of destination as collateral (often with high interest rates, due to the increased risks involved with travel and finding employment).¹⁶⁸

Another qualitative study confirms a clear link between food insecurity, adverse climatic events and migration from El Salvador, Guatemala and Honduras. Poverty and unemployment are the general causes of emigration, followed by reduced agricultural productivity, adverse climatic events such as droughts, pests that result in crop losses, and the widespread occurrence of violence. Nearly half (47 percent) of all households interviewed in 2016 were food insecure (38 percent moderately food insecure and 9 percent severely food insecure). These levels of food insecurity have not been previously seen in the region, including in the results of various assessments over the past three years that focused on drought and the effects of El Niño in the most vulnerable parts of these countries known as the Dry Corridor.¹⁶⁹

Migration as a risk management strategy is not an option for all

The poorest are the most vulnerable to catastrophic events and climate change impacts, and also less likely to move due to financial and other constraints.¹⁷⁰ For example, in Mali during the severe drought of 1983–85, migration from rural areas declined alongside a rise in rural poverty.¹⁷¹ Such decreasing migration flows may signal that population groups that face severe liquidity constraints are unable to meet migration costs and, thus, find themselves in a poverty trap.

At the macrolevel, recent findings confirm the binding constraints faced by the poor in the context of climate change: in middle-income countries, higher temperatures are estimated to result in increased international and internal migration, while in low-income countries, higher temperatures may reduce the probability of emigration to cities or to other countries.¹⁷² It is possible that in the decades to come, millions of people will be unable to move away from the very locations that are most vulnerable to climate change.¹⁷³

Conflicts, political instability and protracted crises

Conflicts between countries, civil wars, genocides, communal violence, and crime are root causes of forced displacement. The conflict in the Syrian Arab Republic, which entered its eighth year in 2018, garnered significant attention worldwide due to the large flows of IDPs and refugees, and the humanitarian needs these generated. Yet, other new or reignited conflicts also contribute to the increase in global forced displacement. These include conflicts in Burundi, Iraq, Libya, Niger and Nigeria, together with older or unresolved protracted crises in Afghanistan, the Central African Republic, the Democratic Republic of the Congo, Somalia, Sudan, South Sudan and Yemen.

As a consequence of conflicts and persecutions, 2016 saw 10.3 million newly displaced people. This number includes 6.9 million individuals displaced within the borders of their own countries and 3.4 million new refugees and asylum seekers.¹⁷⁴ In other contexts, weak governance and political instability contribute to endemic insecurity and poverty, leading to waves of displacement, as in Uganda, Somalia and Sudan.¹⁷⁵ In other cases, crime and violence are the major reasons of migration, as in El Salvador, Guatemala and Honduras.¹⁷⁶

Conflicts negatively affect almost every dimension of food security and every aspect of agriculture and food systems, from production, processing and transport to input supply, financing and marketing. In 2016, 489 million hungry people – 60 percent out of a total of 815 million chronically undernourished people in the world – and 122 million out of 155 million stunted children, lived in countries affected by conflict.¹⁷⁷

Climate change will intensify the competition for access to natural resources adding to the onset and deepening of conflicts and forced displacement

About 56 percent of the population in countries affected by conflict live in rural areas and are highly dependent on agriculture. In these countries, institutional responses to environmental challenges are weak and unequal across population groups.¹⁷⁸ At the same time, food insecurity itself can become a trigger for violence and conflicts, especially in the context of political instability and fragile institutions. For example, in the Syrian Arab Republic, during the commodity price surge in 2007–08, increasing food prices added further pressure on an already difficult political and socioeconomic situation and fueled demands for reform.¹⁷⁹ Further evidence underlines food insecurity as one of the potential triggers of conflicts in the Arab world, at both the macrolevel and microlevel.¹⁸⁰ Often, it is countries with the highest level of food insecurity, coupled with armed conflict, which have the highest outward migration of refugees. Estimates suggest that refugee outflows increase by 0.4 percent for each additional year of conflict, and by 1.9 percent for each percentage increase in food insecurity.¹⁸¹

Evidence from Somalia shows a causal link between drought and local violent conflicts, with one standard deviation increase in drought intensity and length raising the likelihood of conflict by 62 percent.¹⁸² Additional evidence suggests a strong empirical relationship between civil war and temperature increases in Africa, and projects a 54 percent increase in civil war incidence by 2030.¹⁸³ Further evidence from Africa, however, does not support these findings and suggests that climate variability is only a poor predictor of armed conflict.¹⁸⁴

The interlinkages between climate change, food security and conflict are complex, and isolating their separate effects on migration is difficult. For example, in pastoral areas of the Sahel and the Horn of Africa, poorly defined land rights, environmental degradation, extreme weather events, rising population and increasing livestock numbers add up to increase the likelihood of conflict. With pastoralists relying on mobility to make the best use of scarce resources, blocked migration corridors and denied access to grazing land or water points can create tensions and foster conflict. Such escalating tensions and conflict over increasingly scarce natural resources and the associated loss of livelihoods increase migration pressures.¹⁸⁵

Protracted crises severely affect the vulnerability of a population to death, hunger and disease, and may prompt or accelerate population movement out of a country

In Afghanistan, the complex interactions between political conflict, economic collapse, the potential economic gain from mineral resources or the illicit trade in opium associated with climate change, drought and the drawing down of water resources has significantly affected population displacement.¹⁸⁶ In Zimbabwe, the political and economic crisis, amplified in rural areas by drought, has contributed to the migration of between 1.5 million and 2.0 million Zimbabweans to South Africa since 2000. In 2008, attacks against these migrants resulted in the further displacement of 150 000 people.¹⁸⁷

Currently, approximately half a billion people live in 19 countries with protracted crises, of whom about 129 million suffer from chronic hunger.¹⁸⁸ Food insecurity is one of the most common manifestations of protracted crises, and migration is a means to mitigate such vulnerabilities or diversify livelihoods. Protracted crises lead to vulnerable people losing access to the range of assets and resources necessary for food production, which impels them to relocate. In such situations, migration is rarely an informed choice; it is a necessity to escape conflict or extreme poverty and livelihood deterioration.¹⁸⁹

Today in the Syrian Arab Republic, 85 percent of the population lives in poverty, of which 69 percent live in extreme poverty. In 2016, about 6.7 million people in the country were acutely food insecure and in need of urgent humanitarian assistance. Years of conflict have not only had a cumulative destructive effect on the economy, infrastructure, agricultural production, food systems and social institutions, but also on people's ability to cope.¹⁹⁰ Interviews with Syrian refugees documented that food security was one of the triggers for leaving their homes. In fact, many food markets were controlled by powerful groups, which led to disproportionate increases in food prices. People were forced to sell belongings such as furniture and jewelry in order to buy food, but eventually had to leave due to the lack of livelihood and food.¹⁹¹

In Yemen – homeland of millions of IDPs and thousands of refugees located abroad – conflict, economic collapse and the consequent disruption of rural and urban livelihoods have had devastating effects on food security and nutrition. An estimated 17 million people in Yemen are still experiencing severe food insecurity.¹⁹² Similarly, in South Sudan, armed conflict destroyed rural livelihoods, decimated assets, deepened poverty and increased the vulnerability of millions of people. Agricultural production and food systems have been disrupted, livestock production has declined significantly, and the spread of violence to cereal surplus-producing areas in Equatoria in South Sudan has severely affected crop production. Food access has been hampered by sharp increases in prices, with inflation driven by shortages, currency devaluation and high transport costs owing to insecurity along major trading routes. A lack of protection of civilians against violence and food insecurity has led to about 1.9 million internally displaced persons and 1.4 million refugees at the end of 2016.¹⁹³

Migration and food security: Empirical evidence from Ethiopia, Uganda and Nigeria

Empirical models of migration aim at quantifying the impact of key drivers such as economic incentives and cultural, demographic and environmental factors. Since the 1970s, empirical work on migration has been following the development of theoretical paradigms (discussed earlier in Part II), addressing questions such as who migrates, why people migrate, and where they go.

The availability of data has been central in shaping the empirical work. Since the 1970s, econometric models have been applied to aggregate data of bilateral migration flows. In their basic specification, models hypothesize that migration flows depend on per capita income differentials between origin and destination economies and are inversely related to the distance between them. In addition to these variables that reflect economic incentives and migration costs, researchers introduce pull and push factors that are related to cultural proximity, immigration policies, networks and demographic or environmental pressures.¹⁹⁴

The choice between aggregate or microlevel data is important in assessing the determinants of migration

While models applied to aggregate data (e.g., migration flows from one country to another, GDP per capita, unemployment rates) provide useful insights on the drivers of migration, especially across countries, they may discount the inherent complexities of the underlying decision to migrate, as for example the interplay between different drivers. Also, by measuring differences across countries, these aggregate models provide a reduced form of the underlying process that could overlook important individual and household level aspects. For example, although differences in income (GDP per capita) between countries do affect the decision to migrate, there are other factors that shape the behaviour of potential migrants, such as job opportunities, income uncertainties and other risks, and their capacity to cope with shocks at the origin, which cannot be easily measured and analyzed at that aggregated level.

The development of micro-datasets, such as household surveys, that include a migration module deepens empirical work on migration issues. Migration decisions are often

taken within the family context, especially in developing countries, as the benefits of migration often return to the household in the form of remittances. Microlevel data allows the analysis of relationships between migration and various household and personal characteristics that cannot be explored otherwise, as for example the increasing (decreasing) migration propensity due to education (age).¹⁹⁵ Exploring the linkages between food security and migration would also necessitate analysis of microdata, as migration can be an important strategy to cope with hunger risks at the household level. Nevertheless, the availability of surveys that include information of migration is limited to a number of countries.

Recent attempts to assess the impact of food security on international migration applying econometric techniques on aggregate panel data, highlight the difficulties in unravelling the linkages between hunger and migration.¹⁹⁶ For example, the use of the Prevalence of Undernourishment (PoU) in such models to reflect food insecurity may not be suitable for analyzing migration.¹⁹⁷ Although, data on the PoU is available over a long time period and for a large number of countries, this indicator reflects chronic hunger, which creates a trap from which individuals cannot escape through their own means. People who suffer from chronic hunger are poor and have very few or no assets, with the exception of their labour. They would migrate to find work, but being chronically hungry means that they have no energy, are less productive and prone to disease. Thus, most of the chronically hungry may be unable to move or earn enough income that would be sufficient to meet the costs associated with migration.

The relationship between food security and migration cannot be easily captured by the PoU measure. For example, migration can be an important strategy for households to cope with the risk of hunger. Research suggests that households with members missing meals and anxious about access to food, decreasing quality and quantity of food, were more likely to decide that an adult migrates in search of employment to support better lives for themselves and the family (see discussion on migration as a strategy to manage risks of poverty and hunger). The linkages between food security and migration can also be indirect through, for example, climate change. In rural areas, expectations of inadequate rainfall and its impact on rain-fed agricultural production increase the risk of hunger and can drive migration (see discussion on environmental factors, agricultural incomes and migration).

Information collected by multiple rounds of household surveys can support analysis of the relationship between migration and food security

As migration can be an important strategy to cope with risks at the household level, analysis should also reflect people's experiences associated with increasing difficulties in accessing adequate food, measured by the Food Insecurity Experience Scale (FIES), reduced coping strategies (rCSI), or Household Hunger Score (HHS). Proxy indicators for consumption such as the Food Consumption Score and the Minimum Dietary Diversity for Women are also recognized indicators for household and individual level food access.

Recent research analyzes the linkages between migration and food security, exploiting the richness of information contained in Living Standards Measurement Studies – Integrated Surveys on Agriculture (LSMS-ISA) in Uganda, Ethiopia and Nigeria.¹⁹⁸ Although these surveys focus on agriculture and poverty, they provide information of family members that left the household to work elsewhere, either in their country of origin or internationally.

The relationship between migration and food security in Uganda, Ethiopia and Nigeria was analyzed by applying a simple logit model to panel household survey data.¹⁹⁹ This specification focuses on the choice of a household to send a migrant or not in a given year, and relates this decision to a series of variables including past food security status, income, capital, shocks experienced by the household, and the related shock coping strategies.

These data, collected through multiple rounds and structured interviews and questionnaires, provide a rich description of households' socioeconomic characteristics, assets and activities over a period of time. For example, information on food security is collected through questions on whether the household head was faced with a situation where (s)he did not have enough food to feed household members during the last 12 months. As such, the characterization of a household as food insecure is purely subjective and may reflect chronic hunger (as does the PoU), or transitory situations of lack of availability of, and/or access to, food such as seasonal food insecurity.

For the purposes of the analysis, information on household production and commercial activities, as well as labour wages, remittances and other sources, were processed to calculate household income and define the position of the household according to a poverty line of USD 1.90 per day per capita. Information on shocks experienced by the household included both idiosyncratic (e.g., illness or death of a family member) and covariate situations (e.g., environmental shocks such as flooding or drought). Shock coping strategies include divestment from assets, credit and employment off-farm.²⁰⁰

Empirical evidence from Uganda and Nigeria supports that food security is a determinant of migration

In Uganda, the results suggest that poor and food-insecure households have about 20 percent higher probability of having a migrant (either internal or international) relative to households that are neither poor nor food insecure (see Table 1). Ugandan households that are assessed as food insecure (by the household head) but are non-poor (according to the USD 1.90 poverty line) are estimated to have a 29 percent higher probability of having a household member migrate compared with food secure and non-poor households.

In Ethiopia, the estimates suggest that neither food insecurity nor poverty increase the probability that a household will send a migrant. On the contrary, the estimates suggest that poor and food-insecure households are less likely to have either an internal and international migrant (by 22 percent and 31 percent, respectively, compared with non-poor and food secure households). This result may be the outcome of the land tenure laws in the country that may constrain labour mobility and migration.²⁰¹

In Nigeria, the evidence indicates that food insecurity is an important driver of internal migration. A poor and food-insecure household is characterized by a 51 percent higher probability of sending an internal migrant. As international migration incurs high costs, poor and food-insecure households have a significantly lower probability (by about 77 percent) of having an international migrant, as compared with non-poor and food-secure households.

In both Uganda and Nigeria, agricultural households have a higher chance of having a migrant compared with non-agricultural ones (39 percent and 29 percent, respectively), while the results for Ethiopia are not significant. Environmental shocks have an important and significant effect on household behaviour in the context of migration. In Uganda and Ethiopia, droughts, irregular rains, floods and other weather shocks increase the probability of a household sending a migrant by 34 percent and 13 percent, respectively. Idiosyncratic shocks have differing impacts on household behaviour. Although in Uganda the death, disability or illness of an income earner in the household reduces the probability of sending a migrant (probably due to labour requirements in the household), in Nigeria, similar shocks increase the probability for migration by 28 percent (to alleviate income risks).

The use of household surveys to explore the linkages between migration and food security allows a stronger focus on internal migration. Since the early 2000s, internal migrants have accounted for over 10 percent of the global population (as opposed to 3 percent for international migrants). The literature also suggests that the poorest individuals – those most likely to suffer food insecurity – tend to make short-distance movements (if they move at all), due to the many constraints they face. These individuals are likely to move between rural areas, or to the closest town, prior to moving to another location, and so on until eventually some could migrate internationally (stepwise migration). It is extremely challenging to track these internal movements, and only a fraction of these migrants may eventually migrate internationally.

Expanding the quantity and quality of datasets on migration will significantly improve analysis and our understanding, and promote good policy interventions

In addition to aggregate data and household surveys, several other data sources are available, such as population censuses, population registrations, individual surveys, demographic surveillances and, more recently, information collected through mobile technologies, which can support real-time or close-to real time data collection, analysis and dissemination. Population censuses are usually drawn from the correspondent national statistical offices and from IPUMS International – a project dedicated to collecting and distributing harmonized census data from around the world. The Living Standard Measurement Surveys for a number of countries provide detailed information about household migration, besides a wide range of other information related to demographics, education and employment, housing and services. Examples of other nationally representative surveys include the National Income Dynamic Study for South Africa, which is the first national panel study of individuals in South Africa, and the Mexican Family Life Survey, which is the first longitudinal survey in Mexico that follows individuals across rounds, including those who migrate within Mexico or emigrate to the United States.

Demographic and Health Surveys have been a very interesting data source, but recently the migration module has been removed from their questionnaires, despite the strong reaction of migration scholars. More recently, the use of mobile phone data has been tested to follow mobile phone users to capture migration flows. Nevertheless, several limitations remain: transaction costs with mobile operators, the management of Big Data, and the fact that these databases only include movements but no other characteristics of migrants.

The data sources that are most suitable for analyzing migration determinants generally satisfy the following requirements: 1) the ability to track over the longest time interval either individual migration events (in order to build individual migration histories) or migration flows from and to geographical areas, or both; 2) a sufficiently rich number of demographic and socioeconomic individual and household-level variables, such as age, ethnicity, marital status, education, employment and income; and 3) the existence of information on the origin and destination of individual and/or household migratory events at a sufficiently fine level of geographical disaggregation, as well as their timing.

Table 1. Food security and migration: Empirical results

ETHIOPIA	(1) All migrants	(2) Internal	(3) International
Poor and subjectively food insecure	0.74** (-45.24)	0.78** (-113.01)	0.69** (-25.30)
Poor but subjectively food secure	0.93** (-41.28)	0.91** (-10.35)	0.78** (-6.37)
Subjectively food insecure but non-poor	0.82** (-12.30)	0.76** (-9.38)	0.72** (-29.92)
Agricultural household	1.01 (0.61)	1.02 (1.23)	0.94* (-2.28)
Drought, flood, landslides, erosion	1.13** (9.01)	1.10+ (1.91)	1.20** (5.96)
Illness or death of household member	0.91** (-5.03)	1.09** (5.75)	0.58** (-11.80)
Observations	4 874	3 999	4 584

UGANDA	(1) All migrants	(2) Internal	(3) International
Poor and subjectively food insecure	1.20** (6.40)	–	–
Poor but subjectively food secure	1.22** (11.14)	–	–
Subjectively food insecure but non-poor	1.29** (8.17)	–	–
Agricultural household	1.39** (12.47)	–	–
Drought, irregular rains, floods, landslides or erosion	1.34** (89.15)	–	–
Serious illness, accident or death of income earner or other members	0.82** (-2.72)	–	–
Observations	2 396		

NIGERIA	(1) All migrants	(2) Internal	(3) International
Poor and subjectively food insecure	1.49** (44.75)	1.51** (41.46)	0.23** (-9.52)
Poor but subjectively food secure	1.48** (302.19)	1.47** (405.03)	0.76** (-26.06)
Subjectively food insecure but non-poor	0.98 (-0.27)	0.98 (-0.19)	1.18** (2.78)
Agricultural household	1.29** (29.04)	1.32** (16.48)	1.43** (59.02)
Poor rain or flood that caused harvest failure	0.81** (-5.36)	0.82** (-4.73)	1.00 (.)
Death, disability or illness of income earner or adult household member working	1.28** (4.64)	1.26** (3.98)	0.99 (-0.15)
Observations	2 177	2 187	1 567

Note: Exponentiated coefficients; t statistics in parentheses; time effects included + p < 0.10, * p < 0.05, ** p < 0.01



Maban, South Sudan.
Seeds distribution in Yusuf Batil refugee camp.
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PART III – Impacts of migration and policy implications

Migration, both internal and international, gives rise to both opportunities and challenges in both the community of origin and the host community. In the case of international migration, the origin country may benefit substantially through remittances, but may also experience a reduction in labour and human capital. At the destination country, for some people, migrants may intensify competition for jobs and scarce fiscal resources and may constitute a potential threat to social cohesion. Nevertheless, the contribution of immigrants to GDP and to innovation and skills upgrade is considerable.

The migrants themselves are those who face the most important consequences of migration. They can improve their quality of life and enjoy better-remunerated jobs, but they can also face a number of challenges, both economic and social.

Policy-makers should not be merely reactive. In the case of international migration, it is fundamental to design policies that maximize benefits and minimize the risks associated with them. A recent study suggests that facilitating immigrants' integration into destination countries – not only in terms of employment but also in regards to education, housing, health, and community engagement – could add USD 800 billion to USD 1 trillion to the global economy annually.²⁰²

Migration, especially from rural areas to cities but also abroad, is an important part of the development process. Policies that promote rural development must incorporate migration measures to ensure safe, orderly and regular movements for all. At the same time, policies need to take into account how rural development affects migration decisions. Migration has to be a choice, and should not be the only option to cope with poverty, food insecurity and climate-related risks.

Migration impacts at the origin: the role of remittances

Remittances lift millions of families out of poverty across the world.²⁰³ Taken together, remittances are believed to directly touch the lives of 1 billion people on earth.²⁰⁴

For example, in about 25 developing countries, remittances constitute more than 10 percent of GDP, contributing to the improvement of food security and nutrition, education, health, well-being and housing for millions of families.²⁰⁵ Remittances also consist of an important safety net in times of crisis and function as a risk management tool, improving poor people's resilience to shocks.

In most cases, remittances are a substantial additional source of income for recipients, representing on average about 60 per cent of the receiving households total annual income, and in terms of financial inclusion trends, surveys show that remittances-receiving households tend to have higher propensity to save.²⁰⁶ Moreover, it is estimated that between 20 and 30 percent of remittances are used by the receiving households for savings and investments that, in turn, increase productivity, promote employment and generate income, thus acting as an engine for local development.²⁰⁷

Around 40 percent of international remittances are sent to rural areas, reflecting the rural origins of a large share of international migrants.²⁰⁸ Half of what migrants remit to rural communities is spent on agriculture-related expenses.²⁰⁹ A number of case studies from India, Mexico and Burkina Faso, highlight the central role of remittances as a source of on-farm investments that promote adaptation to climate change and sustainable agricultural productivity increases.²¹⁰ Also, evidence from rural Pakistan indicates a higher propensity to invest in agricultural land in households that receive international remittances.²¹¹

In 2009, surveys undertaken in the context of the World Bank's Africa Migration Project in Burkina Faso, Kenya, Nigeria, Senegal and Uganda suggested that a significant portion of international remittances were being spent on land purchases, agricultural equipment improvements, house building, setting up businesses and other investments (as a share of total remittances, these investments represented 36.4 percent in Burkina Faso, 55.3 percent in Kenya, 57.0 percent in Nigeria, 15.5 percent in Senegal, and 20.2 percent in Uganda).²¹²

The impact of remittances on local communities is considerable, bringing in large amounts of funds that help sustain millions of families

Because most rural migrants move within their own countries and internal money transfers are usually not reported, the total amount of remittances to rural areas and their impact are difficult to assess. Nevertheless, evidence from household data from six countries in Africa and Asia (Nigeria, Rwanda, South Africa, Uganda, Bangladesh and Viet Nam) suggests that between 2006 and 2011, internal remittances mainly flowed to relatively poorer rural areas, implying a significant poverty-reducing impact.²¹³

Household surveys conducted in 2005–06 by the Southern African Migration Programme in Botswana, Lesotho, Mozambique, Eswatini and Zimbabwe, pointed out that remittances were the most important source of income. Over 80 percent of recipient households used remittances to cover, on average, half of their expenditures on food.²¹⁴ The crucial role of remittances in promoting food security was also underlined by the World Bank's Africa Migration Project, which found that a large proportion of remittances received in sub-Saharan Africa was spent on food, health and education.²¹⁵ Further evidence underlines the significant role of remittances in improving access to private treatment for fever and diarrhoea, in lowering child mortality, and in reducing child labour in developing countries characterized by weak financial systems and income instability.²¹⁶

Numerous studies have shown a positive impact of remittances on education in both rural and urban areas. In Guatemala, households receiving remittances spent twice as much on education compared with what they would have spent without remittances.²¹⁷ In El Salvador, the impact of remittances on the likelihood of children remaining in school was 10 times higher than that of other sources of income in urban areas and 3 times higher in rural areas.²¹⁸ Remittances increased school enrollment for the poor in Ecuador and improved schooling in Nepal.²¹⁹ Many factors, other than remittances, influence education in households with migrants. Sometimes, it is the very prospect of migration to be the highest incentive to invest in education. For example, in rural Pakistan, school enrollment rates for girls in households with migrants were 54 percent higher than those in other households.²²⁰ In other cases, however, migration has a negative impact on educational outcomes. For instance, evidence from Mexico shows that children living in households from which family members had migrated were 13–15 percent less likely to complete high school. This may be because a large share of Mexican migrants to the United States moves for unskilled work, and the opportunity cost of an additional year of schooling is high when there are few domestic employment options after school.²²¹

Remittances act as insurance against adverse shocks,²²² and can contribute significantly in recovery and reconstruction following natural disasters, as for example in the Aceh region of Indonesia after the 2004 tsunami, in Pakistan after the 2005 earthquake, and in Haiti after Cyclone Jeanne in 2000, and after the devastating earthquake in 2010.²²³ In the Philippines, remittances help compensate for the loss in income caused by adverse rainfall shocks.²²⁴ In Ethiopia, households use remittances to cope with food shortages instead of divesting their productive assets, such as livestock.²²⁵

Currently, the average cost of sending remittances amounts to 6.99 percent²²⁶ of the total amount of money sent. This is an important decrease from 9.8 percent in 2008, but transaction costs have remained essentially flat over the past few years and are unacceptably high in many low-volume corridors. The highest average cost for a region worldwide is still in sub-Saharan Africa, at 9.07 percent in the second quarter of 2018. Remittance costs include operating expenses, commission fees, differentials in exchange rates and market features. Remittance service providers build into their pricing the cost of commissions to agents (around 50%), financial crime insurance premia, location-related costs, settlement charges, the cost of call centres and other costs.²²⁷

If remittance service providers shift from cash-based models to electronic-based transactions there is the potential to substantially reduce costs. Sustainable Development Goal 10.c aims at reducing the transaction costs of migrant remittances to less than 3 percent by 2030, and eliminating remittance corridors with costs higher than 5 percent. Such a reduction would save migrants USD 20 billion per year in transfer costs.

Initiatives aiming at leveraging remittances and diaspora investment opportunities, in particular in agriculture, are often policy orphans, scattered among different ministries and/or implemented as stand-alone projects without real coordination or integration with mainstream policies. By leveraging the contribution that remittances and migrants' investments bring to development, governments have the opportunity to substantially increase their impact in the poorest (rural) areas, mitigating the negative effects of migration, and enabling poor remittance-receiving households to advance on the road to financial independence (see the discussion on the role of diasporas and returnees).²²⁸

Implications on labour markets and rural development

Migration's effects on the areas of origin can be complex. For example, although in general, remittances contribute towards better schooling, the absence of some household members may negatively affect the education and health of the children left behind, especially if those who migrate are their parents.²²⁹ In a family, the migration of some members implies a change in the household structure, which may have various consequences for the members who stay behind.

For rural families, migration may impact intrahousehold labour substitution patterns, and for the agricultural sector as a whole, migration can affect the supply of labour

In some cases, the migration of men out of rural areas may increase women's agricultural workload and responsibilities.²³⁰ A 2014 study in Guatemala concluded that in rural households where the male head migrates, women face greater responsibilities in decision-making as well as in labour. These households were also found to be characterized by the highest levels of food security and better diets, implying that remittances controlled by women are allocated at greater rates towards family nutrition compared with those controlled by men.²³¹

Nevertheless, women have unequal access to financial, technical and social resources and within the context of migration, gender equality and women's empowerment are crucial. If rural women in developing countries had the same access to productive resources as men in terms of labour, technology and knowledge, they could increase yields on their farms by 20–30 percent. This could raise the total agricultural output in developing countries by 2.5–4.0 percent, which could in turn reduce the number of the hungry in the world by 12–17 percent.²³² Enhancing women's access to markets, finance, capital and training will significantly strengthen their position. Social protection mechanisms can also target women and children through health and education services, as well as psychosocial counseling.²³³

In other cases, family members who stay behind reduce their labour input on the farm, as they receive a higher income from remittances. This is suggested by studies on the Kayes area in Mali and in Albania, where members of households with migrants abroad worked significantly fewer hours in agriculture while they increased their leisure time.²³⁴

In cases of unemployment or underemployment in the areas of origin, migration of working-age people may result in more employment opportunities for those who remain. Similarly, by reducing competition for natural resources, such as water and land, migration increases their availability for those who stay, and reduces the risk of over-fragmentation of the farm structure.²³⁵

Migration from rural to urban areas can significantly affect rural returns to labour at the microlevel

A recent experimental study provided transport subsidies to people in 133 villages in Bangladesh as incentives to seasonally migrate to cities, and analyzed both direct and indirect effects of this movement on labour markets and incomes. As the subsidy recipients migrated, better employment opportunities in the city resulted in increasing their incomes. At the same time, they enhanced the flow of information on urban labour markets, which in turn resulted in an additional increase in the village emigration rate from 35 percent to 65 percent.

As a consequence of the reduced supply of labour in the villages, the agricultural wage rate increased by 4.5–6.6 percent, while employment opportunities also strengthened, as reflected by an increase in available work hours by 11–14 percent. Higher agricultural wage rates and more jobs combined to increase village incomes. Facilitating seasonal migration may generate significant benefits, both directly to the migrants and indirectly through the place-of-origin labour market.²³⁶

Rural-to-urban migration is an important part of the structural transformation process

At the macro level, migration from rural areas to cities has been associated with increases in rural wages in many developing countries. In Asia, this has been particularly noticeable as economies moved rapidly along their structural transformation path with the trend becoming more marked in the past decade. The process of structural transformation is initiated by increases in the productivity of labour in sectors of the economy, such as manufacturing, services or agriculture. Increasing agricultural labour productivity,

especially in countries with large small-scale agricultural sectors and growing populations, is crucial in this transformation process.

Farmers become more competitive and their income increases. Such a process is sustained by overall economic development, including growth in other economic sectors. With well-functioning labour markets, productivity growth allows wages to rise, and rural household members diversify their income sources by obtaining better-paid, off-farm work. As people leave agriculture for other economic opportunities, the share of agriculture in GDP and employment declines, together with poverty.

In China, for example, rural wages increased by 92 percent between 2003 and 2007. In Viet Nam, the median rural wage tripled between 1992 and 2008; and in India, rural wages increased by 35 percent between 2005 and 2012 – all increases were in real terms. Available data show that labour mobility has resulted in wage gaps having narrowed between females and males.²³⁷

Promoting rural-to-urban migration within the context of structural transformation is important. Investing in education and health will increase the capacity of the rural poor to cope with change and participate in economic growth by facilitating their move towards jobs in manufacturing and services. Investments in rural health, education and skills upgrading increase productivity and promote mobility, but typically require significant public sector resources and policy support.²³⁸

An economy-wide analysis for Ethiopia and Uganda suggests that while urban agglomeration is an important source of long-term growth and structural transformation, the short-term imperative of reducing poverty necessitates further agricultural investment.²³⁹ Where rural-to-urban migration and urbanization advance without agricultural and rural development, there are specific implications with respect to food security and poverty. Agricultural growth is crucial in alleviating poverty, and contributes to a more equal distribution of income, while it underpins a dynamic non-farm rural sector.

In the countries with limited prospects of industrialization, the agro-industry may be an important source of income for those exiting agriculture. As labour exits agriculture, countries will need to create jobs in off-farm, agriculture-related activities, such as food processing and trading. The development of midstream and downstream segments of the food system expands off-farm employment, and provides opportunities for inclusive transformation of rural territories linked to the small urban areas servicing them.²⁴⁰ Indeed, the urbanization rural areas through small cities and towns can lead to more inclusive growth compared with growth in very large cities. Policies linking agriculture and other rural sectors with such urban areas and improved transport infrastructure provide further opportunities for rural income growth, and increase the availability of affordable food and other key rural goods into the cities.²⁴¹

Migration from rural areas may have negative outcomes in labour markets and equality

In spite of the many benefits migration might have on the communities of origin, there are concerns that rural areas might lose a significant share of their young and educated labour force, especially because this group is the most likely to migrate. The departure of a significant part of the workforce may have implications on absolute and relative wage levels, as well as other labour market outcomes, especially if migrants are concentrated in certain skills, occupations and age categories.²⁴²

In western Kenya, for instance, many rural households expressed concerns that their young and dynamic members had migrated, leaving behind only children and elderly people who could not engage in labour-intensive farm work.²⁴³ Similar trends have been observed in western and northern Africa, and Central America.²⁴⁴

The 2014 Malabo Declaration on Accelerated Growth and Transformation for Shared Prosperity and Improved Livelihoods is a recent governmental initiative, framed around a number of key commitments to improving agriculture across Africa over the next decade. Among others endeavours, the Malabo Declaration vows to create job opportunities for at least 30 percent of youth in agricultural value chains, and to support and facilitate preferential entry and participation for women and youth in gainful and attractive agri-business opportunities.²⁴⁵

Promoting innovative pathways for youth employment and entrepreneurship in rural areas is key for rural development so that rural youth may consider profitable alternatives to migration. A project on youth mobility, rural poverty reduction and food security in Ethiopia was launched in 2015 by FAO in collaboration with the government. Its impact in terms of rural development and reduction in survival migration is already being felt by local communities.²⁴⁶

Multi-sector policies that promote complementary actions, including education, skills development and seasonal employment schemes can engage the rural youth and promote safe, orderly and regular migration. Often, isolated rural areas do not offer adequate education facilities and, in urban centers, schools and training opportunities are more easily reachable. Skills development schemes and training in new technologies can enrich the skillsets of people in rural areas and promote entrepreneurial initiatives that foster rural development. One example of rural occupational training and social promotion activities for workers in rural areas is Brazil's National Service for Rural Apprenticeship, which started in 1993 and is managed by the employers' association, Confederação Nacional da Agricultura.²⁴⁷

Under traditional norms in many rural societies, differences in access to land have key implications for employment and migration decisions among youth.²⁴⁸ In many developing countries, the decreasing size of farms contributes to rural youth migration. The prospect of land as an inheritance also determines the decision of young people to migrate.

Property rights, tenure security and land markets play an important role in agricultural and rural development. Tenure security promotes investment and land productivity, thus improving rural incomes. In addition, well-defined property rights and tenure security can also function as institutional adjustments to growing rural population, especially as far as

marginalized and vulnerable groups are concerned, thus promoting safe, orderly and regular migration. Tenure security and property rights can facilitate the re-integration of returnees and prevent disputes over resources. Youth are often particularly penalized by precarious access to land and land-holding fragmentation, lack of targeted and accessible rural financial products and services, and conflict and post-conflict transition processes. Young women are often at the greatest disadvantage in all of these areas.

Mechanisms and instruments that promote responsible investment in agriculture and food systems are indispensable to achieving higher productivity, inclusive growth, poverty reduction and improved food security and nutrition. They help ensure widespread access to investment opportunities and benefits, as well as the sustainability of social, economic and environmental impacts over time, including contributing towards safe, orderly, and regular migration from the rural areas of developing countries.

The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security were endorsed by the Committee on World Food Security (CFS) in 2012. They address all relevant issues with respect to land tenure and contain a chapter on investment. The Principles for Responsible Investment in Agriculture and Food Systems (CFS-RAI) were approved by the CFS in 2014. The CFS-RAI principles address all types of investment in agriculture and food systems – public, private, large, small – in both the production and processing spheres. Although such principles are voluntary and non-binding, they provide a framework that all stakeholders can use when developing individual agreements and contracts.

Without social protection, migration could increase inequality in rural areas

Data from a household survey conducted in 2003 in four villages in Burkina Faso suggests that half of households with no migrant members lived under the extreme poverty threshold. At the same time, extreme poverty was much less prevalent among rural households with international migrants. With the already better-off households being at the receiving end of remittances from migrant members, migration may also result in increasing inequality in the country of origin, other than contributing to poverty reduction.²⁴⁹

Similarly, evidence from Thailand shows that rural migration towards the Greater Bangkok area offers the benefit of income growth for rural households, but is less effective in reducing inequality and relative poverty as migrants from poorer households are less likely to find highly qualified employment at destination. This result underlines the importance of good-quality education in rural areas, and the need for social protection mechanisms.²⁵⁰

Social insurance and protection programmes targeting the poorest, can address such inequalities. Well-implemented social programmes should offer a dependable income source to poor households in areas of origin, including unemployment insurance, funds for investments, disability pay, free medical care, children's day-care, and old-age pensions. Programmes such as training courses to upgrade skills, and scholarships to study abroad, which prioritize the poorest, are also needed.²⁵¹ By relaxing the constraints that affect the decision to migrate, especially in terms of skills, social protection programmes could also provide the poorest with more opportunities and empowerment.

The role of diasporas and returnees

The contributions of diasporas and returnees to the development of the origin area ranges from remittances, capital investments and assistance, to technology and knowledge transfers, increased trade links, philanthropy and social networks. Migrants make donations for charitable causes; they invest, both singularly and collectively, into micro, small and medium enterprises (MSMEs) both in their countries of origin as well as in the countries of destination; and build assets and create international trade relationships. These funds are vital in lifting millions of families out of poverty, contributing to income-generating activities and thus overcoming financial exclusion, and, in some cases, providing the basis for a potential return home.²⁵²

Migration may trigger bilateral trade between origin and host countries through at least two channels: the *preference* channel, by demanding domestically produced products; and, the *information* channel, by reducing trade transaction costs.²⁵³ This is because migrants have knowledge about available products in both origin and host countries, but also about local laws and regulations that govern the markets and the institutions that oversee their functioning.

Furthermore, migrants' business contacts and social networks may promote trust in contractual arrangements, and help overcome information asymmetries and other market imperfections or informal trade barriers.²⁵⁴ A study on the impact of migrant networks on bilateral trade suggested that both the preference and information channels contribute evenly towards the trade-creating effect of migration for differentiated goods. However, for homogeneous goods, the relative importance of the information channel is greatest.²⁵⁵

Another analysis on the trade–migration nexus for the period 1960–2000 showed that (only) exports from developed economies to developing countries are affected by migrants from either region. This is plausible because developed countries usually export more differentiated products, and information barriers between these regions are greatest.²⁵⁶

A recent study estimated that the trade of agricultural commodities produced in migrants' countries of origin, and imported and consumed in the United States may amount to over USD 20 billion.²⁵⁷ Measures that support migrants' entrepreneurship by facilitating trade opportunities between the host country and country of origin can generate job opportunities and positive development effects in both countries.

Facilitating the trade of agricultural goods from countries of origin could encourage markets to provide incentives and drive investments, contributing to strengthening the attractiveness of rural areas of developing countries. Diasporas can increase investment flows between origin and host countries, as they have better access to information related to investment opportunities and regulatory requirements. Migrants may use this information to facilitate foreign direct investment, as suggested in a number of studies,²⁵⁸ or to invest directly. For a number of reasons, including sense of duty, contacts, and visits to the origin countries, diasporas groups are usually more willing than other investors to take the risk to invest in their own country.²⁵⁹

Migrants from rural households can shape the transformation of agriculture from subsistence to commercial not only through remittances but also by transferring knowledge back home.²⁶⁰ Evidence from Bangladesh shows that households with international migrants are more likely than other households to invest in new farming technologies to improve agricultural productivity.²⁶¹ Empirical work from Latin America suggests that migrants and their households have a higher tendency to invest in agriculture and other private enterprises than other households.²⁶²

Nevertheless, surveys on high-skilled emigrants from Ghana, Micronesia, New Zealand, Papua New Guinea and Tonga show relatively little involvement in trade and foreign direct investment. In Ghana, for example, in 2009 approximately 19 percent of migrants invested in Ghanaian businesses, with a mean investment of USD 3 700 per migrant, and only 5 percent of migrants helped a Ghanaian firm make a trade deal or to export goods from their home country.²⁶³

There is evidence that (planned) returnees use savings accumulated while abroad to invest in small businesses.²⁶⁴ Based on surveys conducted in 2006, approximately one-third of returnees to Algeria, Morocco and Tunisia invested in businesses.²⁶⁵ A survey of Ghanaian and Ivorian returnees, conducted in 2001, indicated that more than 50 percent of Ghanaians and 23 percent of Ivoirians returned with more than USD 5 000 in savings, which they invested in business activities. Returnee international migrants reported that maintaining communication with friends and family while abroad has helped them to start a business upon their return.²⁶⁶

Several developing countries have implemented initiatives dedicated to the diaspora or made specific provisions for citizens abroad in investment and agricultural support programs. In Senegal for instance, based on an agreement between the Ministry of Foreign Affairs, the Senegalese Abroad and the National Agency for Inclusion and Agricultural Development, part of land reserves have been set aside for Senegalese citizens abroad who intend to return and/or invest in agriculture and food-related businesses in their country of origin.²⁶⁷

The integration of successful food security programmes with migrant capital investment schemes is an innovative approach to strengthen entrepreneurship in agriculture and agri-businesses. This approach is based on partnering migrant investors with local entrepreneurs, and increasing access to capital and technical expertise. Targeting particular communities, such partnerships between entrepreneurs and migrant investors can result in improvements in food production and rural employment, thus promoting the rural economy and contributing to regular migration.

For example, the Somali AgriFood fund in Somalia²⁶⁸ – a seed capital matching fund set up by IFAD and focused on driving diaspora investment into Somali agriculture and rural business – leveraged over USD 2 million in investment benefitting more than 15 enterprises on fishing, agriculture, food processing and livestock, and creating over 450 jobs.

The Support Fund for Investments of Senegalese Abroad (Fonds d'appui à l'investissement des Sénégalais de l'extérieur)²⁶⁹ aims at promoting productive investments in Senegal by citizens living overseas with the long-term objective of encouraging their voluntary return to the country. Agriculture and agribusiness are among the priority sectors for funding, and investing in rural regions is preferred (other than the capital).

The Plateforme d'Appui au Secteur Privé et à la Valorisation de la Diaspora Sénégalaise en Italie, a bilateral cooperation initiative set up between the Government of Senegal and the Italian Ministry of Foreign Affairs and International Cooperation in 2008 aims at providing financial and technical support to enhance the economic potential of the Senegalese community in Italy. The programme, now in its second phase, aims to foster productive investment in small and medium enterprises by Senegalese (or Italian and Senegalese partnerships) in selected regions within Senegal. Its first phase contributed to generating 580 enterprises and 2 300 jobs.²⁷⁰

Financing development programmes in their homelands through collective remittances consists of a relatively new approach for diasporas to support their communities of origin. Such collective remittances associations have been created in Europe and the United States, including hometown associations, ethnic, alumni, religious and professional associations, nongovernmental organizations, investment groups, welfare or refugee groups and Internet-based groups. The number of associations appears to be correlated with the size of the diaspora in each country.²⁷¹

Several African investment funds attract investments from African migrants abroad. Examples include the Liberian Diaspora Social Investment Fund, the Rwandan Diaspora Mutual Fund, and the Zambia First Investment Fund. African diasporas in Denmark offer to ship second-hand equipment – typically destined for schools, universities, orphanages, and hospitals – through 123 associations covering 22 African countries. These associations also engage in collective remittances and educational campaigns, including campaigns to increase awareness of HIV/AIDS, discourage female circumcision, and advance civil rights.²⁷²

In Mexico, since the early 1990s, remittances from the United States have evolved from being transactions between individuals and households, to include transfers from Hometown Associations (HTAs), formed by migrants from the same town, and sent to support the entire community of origin. In Chicago, over 100 HTAs have sent more than USD 1 million to support public infrastructure and promote education.²⁷³

In 1993, the Mexican government established a programme, entitled 'Two for One', followed by the 'Three for One' programme, which matched collective remittances with government funds (two/three dollars for every dollar raised). These programmes focused on financing development projects to provide basic infrastructure and services, and generate employment. Between 1993 and 2000, in one region alone (Zacatecas), 429 projects collectively worth over USD 16.8 million were jointly funded.

The success of the programme has been underlined by the establishment of the Campesinos El Remolino Club in Juchipila municipality, which used the 'Three for One' programme to fund the El Ranchito dam so that local people could irrigate their land and water their cattle. However, not all projects were successful, and there are examples of poor planning, corruption and money running out before the completion of projects.²⁷⁴

Governments should provide information and incentives to increase and facilitate migrants' investments, as well as optimize the use of remittances in agriculture to stimulate off-farm businesses. This would have a positive impact on income and employment opportunities for those left behind. By promoting channels for migrants' investments in employment-intensive activities and supporting the use of remittances for productive investments in local opportunities, it would be possible to generate further growth and development.²⁷⁵

Migration impacts at places of destination and the potential of agriculture to promote regular and safe movements of migrants

In the regions of destination, migration may have both positive and negative effects. It can reduce mismatches between available and needed skills, expand the domestic market, contribute to public finances, and promote innovation and entrepreneurship. However, managing migration at the place of destination incurs some costs, and supporting the social and economic integration of migrants requires investments in social and economic resources and civic engagement. Migrants may fail to find satisfactory employment and to integrate into the new society, risking becoming even poorer and more vulnerable. Policies minimizing this risk and maximizing the benefits of migration for host communities are needed.

Evidence shows that international immigration – even large and sudden immigration inflows – does not have significant effects on the labour market at places of destination. In general, the impact of migration on employment and wages in the host area or country depend on the skills of migrants and those of existing workers. Labour market effects tend to be relatively small and concentrated among local workers and past immigrants that compete with the newly arrived for the same jobs.²⁷⁶ Nevertheless, the specific characteristics of the host economy also play an important role. For example, evidence from Germany suggests that a 1 percent increase in the German labour force through migration raised unemployment by less than 0.1 percent.²⁷⁷

Some studies have documented significant (both positive and negative) impacts on national labour market outcomes at destination places. Among these, an analysis of the impact of international migration over the period 1980–2005 on a number of OECD countries shows that migration increases employment one for one, implying no crowding-out of local labour. Migration was also found to increase the GDP of the host country without affecting average wages or labour productivity, although migrants' wages at the destination remained some 20–30 percent below those of comparable native-born workers.²⁷⁸ The evidence also indicated that there was a partial convergence in wages between local and migrant workers, if migrants remained at destination for long periods. In another study focussing on the impact of immigration on poverty in the United States, the evidence suggested that competition for jobs between migrant and local had no effect on wages and poverty, in general.²⁷⁹

However, the effects of migration are less beneficial when the host economy is not performing. Evidence from a study on migration to South Africa suggests that migrant labour resulted in a reduction in local workers' employment rates at the district level, and a reduction in their total income at the national level.²⁸⁰ In most cases, short-term negative effects of immigration on the host country's labour market tend to dissipate in the long run.²⁸¹

By moving to higher-productivity countries, migrants also boost global GDP

In 2015, the contribution of migrants to global GDP was estimated at approximately USD 6.7 trillion, or 9.4 percent – some USD 3 trillion more than they would have produced in the countries of their origin. North America captured up to USD 2.5 trillion of this output, while approximately USD 2.3 trillion went to western Europe.²⁸²

Migrants are likely to consume more social services than local people, on average. The extent to which a migrant will rely on social benefits in the host country largely depends on a number of characteristics, such as age at arrival, education and reason for migration. For example, evidence from a number of studies on migrants in Europe suggests that refugees tend to use more social services.²⁸³

Because migrants rejuvenate the labour force in the host economy and pay taxes, they contribute to public finances. The net fiscal impact of migration tends to be small, less than 1 percent of GDP in developed economies.²⁸⁴ There is, however, large heterogeneity across migrant groups. A 2000 study shows that highly-educated migrants in the United States provide new human capital, find employment successfully, and pay more in taxes than the cost of their consumption of public goods and services. But less educated and elderly immigrants may result in net costs to public finances.²⁸⁵

International migration is becoming an important source of population growth and stability in some parts of the world, and is contributing to reverse negative growth in others. Between 2000 and 2015 in North America, positive net migration contributed to 42 percent of the population growth, while in Europe, in the absence of positive net migration, population would have declined.

In the future, migration is projected to have a significant impact on population in a number of regions

In Europe, current trends in migration will not be enough to compensate for the surplus of deaths over births. Without migration, the decline of population would have been even more pronounced and would have started earlier. Under a zero-net-migration scenario in North America, the size of population would start to decline in 2040, while in Oceania the decline in total population would double by 2050.²⁸⁶

Demographic change is closely related to economic opportunity. If current population trends continue, approximately 520–560 million people will join the global labour force by 2030, most of whom will be in South Asia and sub-Saharan Africa. Across countries, international migration smoothes out imbalances in labour markets with migrants, employers and sometimes whole industries benefiting as the demand for labour and skills is met.

In the context of the demographic projections in developed countries, policies supporting regular migration and regular employment for migrants are fundamental to maximize migrants' contributions to the tax base and social security systems needed to support growing ranks of retirees.²⁸⁷ Nevertheless, the means, skills, knowledge or networks necessary for migrants to find employment are poor, and informal processes may dominate resulting in efficiency losses for the migrants themselves, as well as for the countries of origin and destination.

Hungry and poor migrants are at higher risk of experiencing underpaid, informal, illicit and dangerous jobs. This leads to a downward pressure on wages and working conditions, and foregone taxes for host countries. Efficiency losses also reflect social costs, dissatisfaction and unhappiness, resulting not only during the transition towards employment but also from difficult conditions and exploitation.

Migrants may also suffer due the hostility and discrimination of the local population against them. Although xenophobia is often seen as a significant problem in developed countries, it is becoming increasingly common even in migrant-receiving countries in the developing world. For example, in May 2008, xenophobic violence swept South Africa's poor urban migrant communities, affecting the livelihoods of many migrants and resulting in over 100 000 displaced persons.

The impact of migration mostly depends on the migration policies in place (flows regulation, management and integration, or those engaging migrants and social costs), but also on policies in labour markets, agriculture, education, social protection and health, investment and finance, that can also shape migrants' livelihoods and flows.

Gaps in public policies play a large role in lessening migrants' full contribution to society

While most countries have a wide range of migration-specific policies, very few have implemented policies across sectors for enhancing the potential of migration.²⁸⁸ Often, there is little understanding of the effects of migration on specific sectors of the economy, or of the effects of specific sectoral policies on migration. Policies and frameworks will have to take migration into consideration so that potential migration flows and the corresponding transition to employment are smooth and well-functioning, match skills and capacity needs, and avoid losses emerging from informality.

Managing migrants' entry, especially when there are large waves of irregular migrants, requires efficient migrant reception and integration systems in the host countries. In Italy, the recent migration waves across the Mediterranean led to the reform of the rescue and reception system, as well as of programmes aiming at migrants' well-being, education, health and employment.²⁸⁹ Supporting asylum applicants, who are legally unable to earn a livelihood for long periods of time, as in Italy and Germany, results in increased costs. Typically, the costs of managing migration entry are estimated to be less than 0.2 percent of GDP across major destinations, but can escalate in case of large waves of irregular migrants.²⁹⁰

Agriculture has the potential to foster the economic and social integration of migrants, asylum seekers and refugees

In developed countries, sectors such as agriculture, tourism and care services, have become largely dependent on migrants. This is partially because local workers do not find seasonal work and the related working conditions and wages in these sectors attractive; for them, higher education levels compared with those of migrants result in different skillsets that could reflect higher wages or better working conditions. On the other hand, providing decent working conditions to migrant seasonal agricultural workers ensures that the migration experience is a positive one for both the migrant and the receiving country.

Since 1986, the H-2A programme has allowed United States farmers to hire foreign guest-workers temporarily, providing them with housing, food, and transport to work. Since the Bracero programme (1942–1964), immigration policy in the United States facilitated seasonal employment of foreign agricultural workers, most of them from rural Mexico.²⁹¹

Agriculture in Europe is also highly dependent on the labour of migrants. In the United Kingdom, up until 2013, the Seasonal Agricultural Workers Scheme (SAWS) allowed fruit and vegetable growers to employ migrant workers from Bulgaria and Romania as seasonal workers for up to six months at a time. From 2014 onwards, the transitional labour market controls on Bulgarian and Romanian nationals were lifted as part of these countries' membership to the European Union, making the scheme redundant. Nevertheless, discussions on a new seasonal labour scheme are ongoing, as Brexit, and the related constraints to mobility of labour from Europe, may result in agricultural labour shortages and in losses to the farming industry.²⁹²

In this regard, it is also important that seasonal work schemes take into consideration agricultural calendars of both countries of origin and destination.²⁹³ SAWS – or those schemes currently in place in Australia, Canada and New Zealand – could provide insights to policy-makers on how to legislate seasonal migration and respond to labour needs in agriculture.

New Zealand's policy consists of allowing companies in the agricultural sector to apply for the Recognized Seasonal Employer Scheme once labour shortages are demonstrated.²⁹⁴ New Zealand's scheme served to supply labour to agriculture, promoted international collaboration in the Pacific, and contributed to income generation and development of selected Small Island Developing States.²⁹⁵

Australia's Seasonal Worker Programme is similar to that of New Zealand.²⁹⁶ It also establishes a list of companies that are pre-authorized to hire seasonal workers in agriculture, and has recently launched a pilot to extend the scheme to the tourism sector in northern Australia. In Canada, the Seasonal Agricultural Worker Programme differs from the above in that the recruitment of a Temporary Foreign Worker is the responsibility of the governments of the countries that participate in the programme, and employers are not allowed to use private recruiting companies to select workers.²⁹⁷ A memorandum of understanding, agreed upon between Canada and the partner government, requests the latter to station an agent in Canada to assist in the administration of the programme.²⁹⁸

In February 2014, the Council of the European Union adopted Directive 2014/36/EU on the conditions of entry and stay of third-country nationals for the purpose of employment as seasonal workers, mostly with regards to the agricultural and tourism sectors.²⁹⁹ The directive provides the overarching regulatory framework for seasonal migration to the European Union, and establishes the rights to which seasonal workers are entitled to during their stay there. To a certain extent, the directive allows for individual European Union members to tailor the implementation to their specific national needs. For instance, member states will retain the right to determine the volume of admissions and will have the possibility to reject applications if European Union workers are available.³⁰⁰



Sanliurfa, Turkey.

Thora fled Aleppo with her fourteen children, and was an IDP in the Syrian Arab Republic three times before fleeing to Turkey. She's been living in a refugee camp for three years and is now spending three months learning practical agriculture skills as part of an FAO programme.

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Summary and key points

This technical report addressed the linkages between migration, agriculture, food security and rural development, placing emphasis on both international and internal movements of people. Migration decisions are the result of several interrelated factors, including economic incentives and social drivers, but also conflicts, climate change and natural hazards. Underdevelopment, poverty and hunger can cause large movements of migrants, but often the linkages between migration, food security and agriculture are realized through the interactions of the major drivers of migration and in contexts characterized by economic, political and environmental fragilities.

The report discussed the evidence of these interactions by reviewing the literature and by presenting recent empirical work based on household survey data, aiming to promote and support policy dialogue and targeted actions. Agriculture and rural development can play an important role in addressing the adverse drivers of migration and in focussing on the social and economics conditions of rural areas of origin and destination.

The analysis unfolded a number of key points on the interplay between migration, agriculture, food security and rural development, and these are presented below.

- ▶ In the context of famines, the relationship between food security and migration is direct, as people do not see viable options other than migrating for escaping hunger. Famines force people to move in search of food and to escape disease. Their movement often tends to be temporary, but at the same time presents a significant challenge for local communities, the country as a whole, and – at the aggregate level – for the international community.
- ▶ Adequate humanitarian assistance as well as livelihood and resilience-building support should be provided to people who are internally displaced within their own countries or forced to move to neighbouring countries as refugees. Support provided in areas closer to home communities or countries of origin is more cost-efficient and brings social benefits in the long-term when situations stabilize, provided that appropriate protection measures, opportunities for livelihoods and services are in place.³⁰¹
- ▶ Rural people migrate both across borders and within their country of origin. In rural areas, migrants contribute to alleviating poverty and food insecurity thanks to the remittances sent back home and their investments in local economic opportunities. Moreover, remittances lead to improved health, education, housing and entrepreneurs. Globally, the impact of remittances on the development of local communities is considerable, bringing in large amounts of funds that help sustain millions of families.
- ▶ Rural-to-urban migration forms part of the structural transformation of the economy. It is essential for economic growth and the rise of a modern economy, but can also create challenges when the young and most dynamic members of rural societies migrate. When people leave rural areas due to poverty and lack of opportunities for employment in informal sectors in urban areas, rural-to-urban migration contributes little to overall economic growth.
- ▶ Migration can be a strategy used by farm households to cope with income uncertainties and food insecurity risks. Poor rural households often send one or more family members into cities to work in sectors other than agriculture in order to reduce the risks of hunger and extreme poverty, and cope with possible adverse shocks the household might face. The evidence suggests that households whose members are anxious about food security, are more likely to decide that an adult should migrate in search of employment to support better lives for themselves and the family.
- ▶ In many developing countries, poor rural households resort to seasonal migration to cope with seasonal hunger. Agriculture is subject to fluctuations in production, income and employment due to its seasonal nature and, typically in rural areas, non-farm employment opportunities are limited. Seasonal migration forms an important strategy to smooth income and food consumption. Households from villages with a higher proportion of seasonal migrants are less likely to skip meals during periods of low food availability.
- ▶ Sudden onset disasters often have an immediate, but potentially short term, impact on peoples' lives and livelihoods, including displacement. When return is not a viable option due to safety concerns, holistic approaches to relocation may be required, including housing, cash transfer programmes, employment opportunities and community projects.

- ▶ The often recurring nature of natural hazards can erode coping capacities over time and require proactive policy responses to support adaptation strategies and the protection of lives and assets, including through disaster risk reduction. While it may not be straightforward to establish a direct relationship between the slow onset impacts of climate change and migration, there is growing reference to climate change as a threat multiplier. Rural households may resort to migration of family members to diversify the family's income sources across sectors and smooth income in the face of the uncertainty associated with climate variability and shocks.

Migration gives rise to both opportunities and challenges in the areas of origin and destination. In addition to identifying its linkages with agriculture and food security, the analysis also focused on its impact. For example, migration from rural areas could have negative implications for agricultural productivity due to labour shortages, affect intra-household labour substitution patterns, and add to the work burden of women. In other cases, especially where agriculture is characterized by underemployment, migration may result in better employment opportunities and higher incomes for those who remain. At the place of destination, when migrants are socially and economically integrated in the host communities, they contribute to GDP and to innovation and skillset upgrade.

Policies should aim at maximizing the benefits of migration and minimizing the risks associated with it. Given the interconnections between agriculture, food security and migration, measures promoting rural development in the areas of origin and destination must also ensure that migration is safe, orderly and regular – an informed choice rather than a response to distress. Investing in sustainable agriculture, rural development, climate change adaptation and resilient livelihoods addresses the adverse drivers of migration from rural areas: rural poverty, food insecurity, lack of decent job opportunities, inequality, natural resource depletion and climate change.

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Migration has contributed to form the societies we live in today, and as such, it is part of our shared history. Both the causes and consequences of migration are multifaceted and complicated. While many people leave their homes as a result of conflict or poverty, others move under conditions of peace, political stability and development. A large share of international migrants originate from rural areas. Both international and internal migration (i.e. the movement from rural areas to cities) form an important part of the structural transformation of an economy, and bring opportunities and challenges for rural economies. Examining the complex interlinkages of migration with agriculture, food security and rural development is necessary in order to address the diverse drivers of migration and work towards ensuring that people migrate out of choice and not necessity.

This report examines the existing literature and provides evidence from both developed and developing countries, focusing on why people from rural areas decide to migrate. It explores the drivers of migration, both international and internal, and aims to deepen our understanding of the interlinkages with agriculture, food security and rural development.

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