



SPARC

Supporting Pastoralism
and Agriculture in Recurrent
and Protracted Crises

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EVIDENCE REVIEW

FARMING AFTER FIGHTING

Agricultural recovery after conflict: a review of
evidence and practice

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About SPARC

Climate change, armed conflict, environmental fragility and weak governance and the impact these have on natural resource-based livelihoods are among the key drivers of both crisis and poverty for communities in some of the world's most vulnerable and conflict-affected countries.

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) aims to generate evidence and address knowledge gaps to build the resilience of millions of pastoralists, agro-pastoralists and farmers in these communities in sub-Saharan Africa and the Middle East.

We strive to create impact by using research and evidence to develop knowledge that improves how the UK Foreign, Commonwealth and Development Office (FCDO), donors, non-governmental organisations, local and national governments, and civil society can empower these communities in the context of climate change.

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ACRONYMS

FAOSTAT	Food and Agriculture Organization Corporate Statistical Database
FRELIMO	Mozambique Liberation Front
GDP	gross domestic product
KR	Khmer Rouge
NGO	non-governmental organisation
RENAMO	Mozambican National Resistance

SHORT SUMMARY

Conflicts in the Global South have increased in the 2010s, usually civil conflicts that persist for a decade or more. They raise the question of how agriculture, which may bear heavy costs during conflict, recovers when peace returns.

We assessed six conflicts that ended in the early 1990s and early 2000s – in Cambodia, Mozambique, Peru's southern highlands, Rwanda, Sierra Leone and northern Uganda – to review the experience and extract lessons.

War was costly to farmers and herders. Lives were lost, people were maimed and injured; some people fled the fighting never to return to their villages. Physical assets were often destroyed – crops, livestock, barns on farms, government buildings and telecoms in the public realm. Other assets fell into disrepair: roads, irrigation systems. In Cambodia and Mozambique, mines were sown, rendering farmland too dangerous to till. Public services were often suspended, trade was disrupted.

Despite the losses to warfare, when peace returned, agriculture recovered rapidly in all cases other than northern Uganda. To some extent, rapid growth reflected a rebound as farmers returned to their fields, putting fallowed land back to work. It was not just a rebound: levels of production before conflict were soon restored, then surpassed: for many crops and countries, growth of output was faster after conflict than before hostilities.

Increased output came as much as, if not more than, from crops grown very largely by smallholders as from the commercial and export crops typically grown on larger farms.

The speed and strength of agricultural recovery after conflict was even more remarkable because, after conflict, in four cases – Cambodia, Mozambique, Peru and Rwanda – farmers received very little public support. Governments had other priorities, such as keeping the peace, and they had few funds to invest. Leaders often preferred large farms to smallholdings, believing the former to be capitalised, technically advanced and efficient.

Policy lessons

The recovery of agriculture after conflict should be seen within the wider landscape of rebuilding polity, economy and society in rural areas when peace returns. Three things need to be done for rural areas and agriculture to recover:

- 1.** Rural society needs to rebuild social capital. This is partly a matter of governance, re-establishing both formal local government and informal village leadership, and partly about restoring public services (schools, health posts, water, road maintenance). It is also partly commercial: a rural society needs its shopkeepers, traders, truckers, bus drivers and all those who keep the local economy ticking over.
- 2.** Land may need special attention: disputes may well be more likely after conflict, especially when displaced persons return to reclaim their farms.
- 3.** Smallholder farmers need everything they needed before conflict, but more pressingly: passable roads; extension to learn of new technology; and whatever it takes to overcome the failures in markets that mean formal credit is out of the question, risks cannot be insured, and costs of inputs are higher than they should be.

That is quite an agenda, but not an impossible one. Specifically agricultural priorities include making sure that farmers have access to land, which can be difficult when displaced people and refugees return home to reclaim their farms. They include making sure farmers can restart their cultivation and herding. Often the most limiting factor is labour, especially for households who lost their men and are now headed by widows: offer them cash or vouchers to pay for the labour they lack. Draught animals for ploughing may also be a priority.

Restoring roads is central to recovery of farming and the whole rural economy: without trade, farms and villages languish. Similarly, getting schools and health posts up and running again matters. Less obviously, administrative services in rural market centres may be almost as valuable.

These considerations may be taken to mean that smallholders need little else to recover their farming livelihoods. Many farmers in the Global South do manage with very little outside assistance. But to offer nothing more to farmers risks missing out on the potential for something more than just recovering. To leave farmers with the minimal support of some public goods flies in the face of evidence that: most smallholders are desperately short of capital, especially for more costly items such as oxen to plough and pumps to irrigate; they lack reliable technical advice on better methods and access to new technology such as improved seed; rural access roads may just about be passable, but their poor repair drives up operating costs so farmers pay unduly to get their produce to market; and irrigation schemes need repair. It is hard to believe that some additional effort and support to address these issues would not repay greater public investment.

OVERVIEW

Background, questions and method

How does agriculture recover when conflict ends? Most conflict during the last 30 or more years has been civil war in which insurgents fight government forces, or factions fight for control of the country. Civil wars flare up for diverse reasons, but often arise in low-income economies marked by social inequality, above all horizontal inequalities between social groups. Many lives are lost to civil war, largely because such wars typically last for many years – usually 10 or more. Economic costs can be high, and cumulative as conflict erodes trust that underpins market economies.

General principles for recovery have been identified: in brief, they involve rebuilding a state and society marked by legitimacy (of power), fairness, and (law and) order. Only one source was found that reviews the specific case of agricultural recovery (Özerdam and Roberts, 2012). More evidence can be found only in country studies of recovery from conflict, in which agriculture is not the focus.

In the absence of established understandings, this review was requested by the UK Foreign, Commonwealth and Development Office to address three questions:

- What is needed to help agriculture recover after conflict?
- What should development partners do when peace has been restored – which investments, programmes, policies? Can such actions contribute to keeping the peace and, if so, how?
- Although recovery may be first and foremost about restoring assets and institutions damaged by war, does peace provide an opportunity to undertake initiatives previously unthinkable, or to build back physical assets better than before?

An implied overarching question is whether there are generalised lessons from experiences of agricultural recovery, or whether each case is particular, perhaps unique.

Evidence was drawn first from the literature on conflict and its effects on economic and social development. In the absence of more than one synthesis of agricultural recovery, agricultural insights had to be drawn from specific cases.

We looked for countries that: were low or lower-middle income before conflict; had experienced a decade or more of conflict; and had achieved a working peace brokered since 1990. Thirteen countries or regions met these criteria, from which six were chosen primarily because published evidence was available, and partly to reflect a diversity of contexts and experiences. The six areas are: Cambodia, Mozambique, Peru's southern highlands, Rwanda, Sierra Leone and northern Uganda.

Literature was reviewed, country specialists were consulted, and, to look at the record of agricultural production during and after conflict, statistics compiled by the Food and Agriculture Organization Corporate Statistical Database (FAOSTAT) were analysed.

Findings

The conflicts were diverse in their origins, although all six cases concerned rural areas of low productivity, and smallholder farming with lagging economic growth. Otherwise, the conflicts were triggered by grievances between groups – regional resentments, ethnic cleavages, generational differences, political ideological divisions and religious war.

War was mostly sporadic and intermittent. In some cases, many rural people fled from fighting, but others remained, trying to farm and herd as best they could. War was also long, more than 10 years for the five cases other than the short, but brutally intense conflict in Rwanda.

Conflict was costly, above all in people: those killed, injured and maimed; those who were displaced or migrated out, some of them never to return; and those who lost their schooling. Physical assets were often destroyed – crops, livestock, barns on farms, government buildings and telecoms in the public realm. Other assets, such as roads and irrigation systems, fell into disrepair. In Cambodia and Mozambique, mines were sown, rendering farmland too dangerous to till.

Public services, including schools and health posts, were interrupted as facilities were attacked and staff fled. Movement was restricted, impeding trading and the operation of markets. Village institutions and governance were disrupted, although the extent and seriousness of this are hard to judge. (In rural Peru, the war may have created stronger, not weaker, village leadership.)

When peace returned, agriculture recovered rapidly in all cases other than northern Uganda. To some extent, rapid growth reflected a rebound as farmers returned to their fields, putting fallowed land back to work. The area under production increased markedly after conflict, although not by as much as increases in output. It was not just a rebound: levels of production before conflict were soon restored, then surpassed: for many crops and countries, growth of output was faster after conflict than before hostilities.

Increased output came as much, if not more, from crops grown very largely by smallholders as it did from the commercial and export crops typically grown on larger farms.

The speed and strength of agricultural recovery after conflict was all the more remarkable, when public policy after conflict is considered. In four cases – Cambodia, Mozambique, Peru and Rwanda – support to (smallholder) farming was not a priority when peace was restored. Indeed, to be blunt, small-scale farmers were neglected. There were pragmatic reasons for this surprising deficit. Governments prioritised holding the peace which often meant spending on former combatants to deter them from a return to arms. After war, the public coffers were low, so there was no money to invest in agriculture. Donors often did not fill the gap: they prioritised the human needs of returning refugees, and the restoration of schools and health posts.

But there was also an ideological slant against smallholders. Leaders and technical staff alike in all the above four countries in the 1990s did not see smallholders as a source of growth: they believed that larger-scale farming, capitalised with access to modern technology, was the route to agricultural growth.

Ideas were to change 10 or so years later, in the early 2000s, in these countries when a sea-change in thinking about agricultural and rural development took place.

Until the late 1990s, many policy-makers, under the sway of the Washington Consensus, believed that all that farmers needed to thrive was macroeconomic reform and stability. Farmers' needs for public goods and for measures to counter pervasive failures in rural markets (above all, credit markets) were underestimated. That changed when the first Millennium Development Goal, to reduce poverty, shone a light on where poverty was concentrated – in rural areas and among farming communities.

Policy lessons

The recovery of agriculture after conflict should be seen within the wider landscape of rebuilding polity, economy and society in rural areas when peace returns. To focus only on farming, without recognising the other things that make for a peaceful and (more) prosperous countryside, would be a mistake. The other things form a three-part agenda for agricultural (and rural) recovery. In order of importance:

- 1. Rural society needs to rebuild the social capital it once had.** That is partly a matter of governance, re-establishing both formal local government and informal village leadership. It is partly about rebuilding social fabric which may be enhanced when public services once again function, when children can go to school, when a local health post is open, when water sources are maintained, when roads are in decent repair. It is also partly commercial: a rural society needs its shopkeepers, traders, truckers, bus drivers and all those who keep the local economy ticking over.
- 2. Land may need special attention: disputes may well be more likely after conflict.** If rights to arable fields, grazing and commons were ambiguous before, as they often are under collective tenure,¹ they are likely to be all the more so as displaced persons return. Disputes that formerly might have been managed by village councils may be harder to settle when either village leadership has been eroded by displacement and violence, or when the disputes are more difficult than before – as applies when refugees return to find their lands occupied by others.
- 3. Smallholder farmers need everything they needed before conflict, but more pressingly:** passable roads; extension to learn of new technology; and whatever it takes to overcome the failures in markets that mean formal credit is out of the question, risks cannot be insured, and costs of inputs are higher than they should be.

That is quite an agenda, but not an impossible one. The key is to make some progress across the agenda, rather than perfecting any one element. Three intuitions support this argument. One is that villagers do not expect much from outsiders. They know through painful experience that they have to manage their lives with little outside support. A second is that small improvements give hope and inspiration. When people can see gains and compare to what they had before, the future becomes inviting. Moreover, the gains confer legitimacy on government and promote confidence that peace is preferable to war.

¹ To clarify: collective tenure is often admirably flexible, adapting to the changing needs of rural populations to provide widespread access to farmland and the commons; but it can be ambiguous, with rights decided by process and circumstance rather than by rigid codification.

A third intuition comes from the record of agricultural recovery. Despite all that farmers have endured during conflict, despite the many losses and setbacks, the return to growth in most cases was remarkable. This was achieved in difficult circumstances and conditions, and with incomplete and imperfect public policies and investments.

The three-part agenda can be made harder and take longer to work through if the wrong decisions are made by outsiders – governments, non-governmental organisations (NGOs), commercial firms – when peace comes.

Of the potential pitfalls, those concerning governance and land are the deepest, because they have the potential to stoke resentments and indeed to reignite fighting.

Pitfalls concerning the specifics of agricultural development are lesser concerns. As Cambodia, Rwanda and Peru show, adopting agricultural strategies based as much on ideology as careful analysis, strategies that bias public support towards larger farms and write off the potential of smallholders, does not preclude a later reassessment and reorientation of public investment and policy. Such pitfalls lengthen recovery time, they mean that many farm households have to endure more hardship than they should. That is not good, but defects in strategy can usually be remedied.

That said, even lesser pitfalls can and should be avoided. How much stronger might agricultural recovery have been in Cambodia, Rwanda and the highlands of Peru if just a little more support had been given to smallholders?

Specifically agricultural priorities include making sure that farmers have access to land, which can be difficult when displaced people and refugees return home to reclaim their farms. They include making sure that farmers can restart their cultivation and herding. Often the most limiting factor is labour, especially for households who have lost their men and are now headed by widows: offer them cash or vouchers to pay for the labour they lack. Draught animals for ploughing may also be a priority.

Restoring roads is central to recovery of farming and the whole rural economy: without trade, farms and villages languish. Similarly, getting schools and health posts up and running again matters. (Apart from anything else, few things establish the legitimacy of government in villages more than the sight of functioning schools and health posts.) Less obviously, administrative services in rural market centres may be almost as valued: a local office where farmers and their families can obtain identity cards, register as voters, log claims to land, and so on – farmers and their families need to reassume their roles as citizens.

These considerations may be taken to mean that smallholders need little else to recover their farming livelihoods. Many farmers in the Global South do manage with very little outside assistance. But to offer nothing more to farmers risks missing the potential for something more than just recovering. To leave farmers with the minimal support of some public goods flies in the face of evidence that most smallholders are desperately short of capital, especially for more costly items such as oxen to plough, pumps to irrigate. They often lack reliable technical advice on better methods and access to new technology such as improved seed. Also, rural access roads may be just about passable, but their poor repair drives up operating costs so farmers pay unduly to get their produce to market, and irrigation schemes need repair. It is hard to believe that some additional effort and support to address these issues would not repay greater public investment.

1. INTRODUCTION

1.1 Background and motivation

Conflicts have become all too common in the 2010s, with more conflicts and more battlefield deaths in some years than at any time since 1990 (UN and World Bank, 2018). How does agriculture – and the farmers and herders who earn their living from the land – recover when conflict ends?

While scholars have studied recovery of economies overall from conflict, little of the published literature addresses the specific concerns of agriculture. We thus begin by looking at economic recovery, before looking at agricultural recovery.

1.1.1 Conflicts: causes, costs and recovery

For at least the last 30 years, most conflict has been civil war in which insurgents fight government forces, or factions fight for control of the country, and rarely nation states fight one another (Blattman and Miguel, 2010; Kozul-Wright and Fortunato, 2011). Civil conflicts vary by geography – whether nationwide, affecting only some regions, or concentrated in rural areas, for example. They also vary by intensity and continuity – with either continuous or intermittent fighting, interspersed with lulls and pauses.

This study considers conflicts sufficiently widespread, intense and violent to be understood as wars. It does not consider smaller-scale conflict, such as: the violence that can erupt when herders and farmers dispute access to land or water; raiding where one (usually pastoralist) group attacks another, probably giving rise to revenge attacks; or the crime, lawlessness and banditry often seen in remote areas where drugs are grown or processed or some valuable mineral is (informally) mined.

The causes of conflict are several and diverse. Conflict typically breaks out when low levels of economic development are coupled with inequalities – especially horizontal inequalities between different social groups (as opposed to vertical inequalities between classes) (Blattman and Miguel, 2010; Kozul-Wright and Fortunato, 2011). That said, a generalised theory of the origins of civil war remains elusive (Blattman and Miguel, 2010).²

The death toll has been high:

‘an estimated 5.5 million people were killed in 35 civil wars during the 1990s, making it the deadliest decade since the 1940s.’

(Kozul-Wright and Fortunato, 2011)

² A common mistake is to seek causes by looking at who may benefit from war, then assume that such beneficiaries must have caused conflict (Kozul-Wright and Fortunato, 2011): no such correspondence necessarily exists.



Increased loss of life does not result so much from more conflicts, but rather from their increasing length. Civil wars are usually protracted: countries in civil war often see violence for more than a decade, in some cases for multiple decades (Blattman and Miguel, 2010).

‘The picture of contemporary warfare emerging from these broad trends is one of the increasingly protracted and disruptive civil conflicts able to generate profound and long-lasting divisions in the society.’

(Kozul-Wright and Fortunato, 2011)

Apart from loss of life, the economic costs of conflict are high:

‘Civil wars and conflicts arguably inflict more suffering on humanity than any other social phenomenon. Now they are emerging as central to many countries’ political evolution and possibly as key impediments to global development.’

(Blattman and Miguel, 2010)

Economic costs apply to agriculture as much as to the economy overall: between 1970 and 1990 in sub-Saharan Africa, every year of conflict cost an estimated 12% of agricultural production (Özerdam and Roberts, 2012).

Moreover, once conflict breaks out, effects can be cumulative. As violence erodes trust, so the (intangible) institutions that underly economies of specialisation with (market) exchange break down (Kozul-Wright and Fortunato, 2011).

Recovery from conflict can be relatively rapid and strong – witness the pace at which Germany and Japan were able to rebuild after the immense destruction of the Second World War – but only under certain conditions. One is that the economy before conflict was growing: indeed, economic historians observe that a country's economic growth rate after conflict is often similar to that before conflict (Blattman and Miguel, 2010).

'Relatively rapid' recovery may surprise, given the destruction of housing, factories, rail lines, dams, power plants, roads, bridges and so on during warfare. Such physical facilities, however, can be rebuilt – and, indeed, the losses may be less than imagined, if some of the destroyed facilities were close to the end of their useful lives and would have soon needed replacing or refurbishing.

More important for recovery, it seems, are skills in the labour force. War may cost lives, injury and disability, but rarely are the losses so large that more than a minority of the skilled workforce has been lost. But it is not just individual skills that count: equally important may be collective human skills – that is, the institutions, the rules of the game, that allow people to cooperate. The recovery of Germany and Japan depended much on collective skills and institutions.

A clear difference thus arises between wars among states, after which combatants return to their countries to work alongside comrades, and civil wars, when belligerents from different sides have to rebuild their lives, economies and societies while living close to one another. In the former case, trust may even increase under conflict as fighters and non-combatants bond to win the war. Whereas, in the latter case, fighting between former friends and neighbours can undermine the bonds of society (*ibid.*).

Retained skills and institutions are not the only factors that allow economies to grow rapidly after conflict. In some countries – usually economies little industrialised – unused and under-used resources may be available to put to (more productive) work³ – usually because an economic incentive, a new market, makes it worth doing so. For example, in Mexico in the early 1930s, after President (and General) Cárdenas pacified the country to end more than two decades of strife and war, Mexicans put under-used land and labour to work – helped by the potential to export to the United States and by the investable funds the state had from new oil royalties.

Lessons for recovery

General, perhaps very general, principles for recovery from conflict are known. They may be summarised as rebuilding a state and society marked by legitimacy (of power), fairness, and (law and) order (Blattman and Miguel, 2010; Boyce, 2011; Hamre and Sullivan, 2002; Kozul-Wright and Fortunato, 2011). A good part of this literature is directed at audiences of policy-makers from the US and other Western powers, explaining how great powers should approach reconstruction and recovery in the Global South, often stressing what to avoid more than what to do.⁴

3 This is Porter et al.'s 'first stage of growth' (Porter et al., 2001).

4 This literature comes from the 2000s, much of it inspired by the failures in Afghanistan where astonishing amounts of money were invested to very little avail. Given what was to happen in Kabul in the 2010s, this advice was either never read or ignored.

The advice takes the form of principles, qualified by the caution that they must be tailored to specific circumstances.⁵ Blueprints do not exist, nor perhaps should they, argue those cited, because they over-simplify, and can lead to two errors.

One mistake is to conflate the building of a democratic state, marked by legitimacy and fairness, with building a market economy, thereby treating measures to promote the latter as sufficient to achieve political and social goals (Kozul-Wright and Fortunato, 2011). That, of course, can mean that critical measures to build states go unattended.

The other mistake (Hamre and Sullivan, 2002) arises when outside agencies fail to see themselves as political actors in recovery. If they do not realise what their actions contribute to legitimacy, fairness and order, they may unwittingly subtract from these ideals, thereby making recovery all the harder.⁶

1.1.2 Agriculture and recovery

Surprisingly little has been written about agriculture in recovery from conflict. We found just one source (Özerdam and Roberts, 2012) that addresses this directly and generically. Other relevant evidence has to be found in accounts of recovery in individual countries, when the analysis of agriculture is rarely the focus of the study.

Even if we have just one synthesis of understandings about agriculture in and after conflict, what the authors document is useful. In summary, Özerdam and Roberts (2012) first look at how conflict affects agriculture. They see:

- Physical destruction of the means of farming – of crops, livestock, stores, equipment, irrigation works and processing plants. In some cases, there is also chemical contamination of soils, sowing of mines and littering of unexploded ordnance.
- Loss of farming populations to military recruitment and conscription, to death, injury and disability. These tend to affect (young) men more than women, leaving the latter and the elderly to farm. Often there may be no farming at all, at least temporarily, as rural populations flee violence to seek refuge elsewhere. When people flee, the land may be taken over by others, making their return when peace arrives all the more difficult.
- Loss of farming skills: displaced youth in refugee camps may not learn to farm, and may not wish to return to the village when they can. The social fabric may be further weakened as formal education is disrupted, and as people who experience or witness violence suffer trauma. The management of common property in rural areas – forests, grazing, water points – that depends on informal institutions may be disrupted.

5 As an academic, Blattman laments that the evidence cannot be more precise on what works (Blattman, 2010; Blattman and Miguel, 2010). He thus calls for more detailed empirical study, deploying experimental analysis.

6 Reading this literature – so much good advice, cogently argued – in the early 2020s, one wonders just how and why so much of this advice was apparently set aside when Western powers subsequently strived, at huge financial cost, to reconstruct Afghanistan and Iraq, to little effect. As we shall see in the cases presented in this study, success is equally possible: even if, as applies in the cases of Cambodia and Rwanda, success was achieved by local leaders in the teeth of some donor advice. Not that Western powers always get it wrong, as we will see in the case of Sierra Leone.

- The suspension of government services for agriculture during conflict. Buildings may be destroyed, and staff may seek refuge elsewhere. In any case, much of the government budget may be diverted to military spending, so local services of all kinds – including administration, education and health – cannot be supported.
- Interrupted access to markets for those able to farm during conflict, and farmers reverting to subsistence as urban demand contracts. If farmers cannot reach their fields every day, they may switch from annual crops to perennials and tree crops that can be left unattended for longer. Loss of income may force some farmers into debt.
- When people are displaced, attempts to farm around the margins of refugee camps, putting heavy pressure on local soils and water. Food aid given to affected populations may change local diets, for example from rice to wheat flour, leading to demand for produce that cannot readily be grown locally (such as wheat).

When conflict dies down, **agricultural recovery** depends first and foremost on meeting some minimal political and social prerequisites, namely:

- security – disarmament and demobilisation, creation of national armies and police
- governance – creating a coalition government that can govern, perhaps with constitutional reform
- justice and reconciliation – restoration of trust, documenting of truth, and psychological healing.

Once (some) progress has been made on these three elements, an agenda of socioeconomic recovery awaits: providing immediate relief for those rendered destitute by conflict, restoring public services, rebuilding infrastructure, reintegrating displaced populations, stabilising the macroeconomy and rebooting local government.

The various requirements are not strictly in order, nor should the achievement of any one be seen as essential to progress in other spheres: small gains in different dimensions can reinforce one another. For example, a peace accord is more likely to be seen as legitimate if there are some early benefits as people go back to work and earn more. Process, Özerdam and Roberts (2012) stress, is the essence of recovery, including making sure that what is done when (a fragile) peace is achieved does not undermine principles of legitimacy and fairness. Above all, reconstruction should not wait until all hostilities have ceased or until what donors may see as a relief phase has been completed.

In this, a trap lies for donors trying to assist. Their main means are funds and equipment. Such donations can help, but they can breed dependency, when the priority is to remobilise local people and their resources. Moreover, if carelessly distributed, donations can favour particular groups and not others, making them look unfair – thereby undermining a core principle of recovery from conflict.

Özerdam and Roberts (2012) leave their observations at this point. Matters can be taken to another level of detail, by considering more specific responses that may support agricultural recovery. Agencies – national governments and the donors that work with them, local governments and NGOs – may provide the following.

Immediately after peace is restored:

- goods or cash to allow populations to return home when they have fled conflict, and to those in situ to survive until the next harvest: cash grants, food, building materials
- replacements for lost agricultural assets: seeds, tools, livestock (restocking)
- reconstruction of rural economic infrastructure – repairs to roads, bridges, irrigation works
- training of farmers and small-scale entrepreneurs to raise their productivity
- restoration of public services – schools, health posts, administration, agricultural extension, etc., which requires posting staff and may also involve repairing and rebuilding facilities.

In the medium or longer term:

Continuing provision of public goods for agricultural and rural development. This includes: building roads, providing power; providing services of all kinds including schools, health posts, water; and funding research and extension.

Additional and complementary actions to accelerate agricultural growth, including:

- **development of new value chains** typically targeting high-value produce, sometimes for export markets
- **investments in major infrastructure**, such as roads to link remote areas with productive potential to markets, irrigation and drainage, communications in phone towers, and electricity⁷
- **reforms to tenure** with redistribution of land – examples may not be so common in the 21st century, but have been seen in the past, most notably in Japan, Korea and Taiwan in the late 1940s and early 1950s. In those cases, the power of landlords was neutered by the conflict, allowing a fairer and more productive allocation of land. More recently, we typically see measures to improve the governance of natural resources, especially the commons
- **organisation of farmers into cooperatives** to facilitate access to inputs, credit, technical assistance and market produce. This may also be designed to form farmers into a political bloc to support the regime in power.

These are all potential things that may be done. Whether they are, in what circumstances, and with what outcomes, is an empirical matter.

Mercy Corps (2018) has codified its experience of conflict. When fighting is intense, the priorities are to maintain output on farms through supply of crop inputs, sometimes distribution of livestock and promotion of home gardens, and to protect the lives of vulnerable persons such as women and youth. As conflict abates, scope emerges to rekindle local markets and trade, work with groups of households to address local problems, reconstruct the

⁷ Communications and power have undergone technical advances. Only a few decades ago, phone communications meant physical lines, and rural electricity was thought of as primarily about connecting to national grids. In the 2020s, in rural areas, mobile phones and the internet depend on microwaves rather than cables; rural electricity is increasingly likely to be supplied from local renewable sources – wind, solar panels – feeding micro-grids.

social fabric and resolve some causes of conflict. When some peace is restored, albeit perhaps at an uneasy peace, the priorities switch to making sure markets function, to economic and agricultural policy, and to the governance of land.

1.2 Questions addressed

Three questions were set for this review, as follows:

- What is needed to help agriculture recover after conflict?
- What should development partners do when peace has been restored – which investments, programmes, policies? Can such actions contribute to keeping the peace and, if so, how?
- Although recovery may be first and foremost about restoring assets and institutions damaged by war, does peace provide an opportunity to undertake initiatives previously unthinkable, or to build back physical assets better than before?

Those were the questions set at the outset. An overarching question can be added, one that became more apparent as the study proceeded: is it possible to generalise from the cases studied, or is each case unique?

1.3 Methods

Evidence has been drawn primarily from the literature on conflict and its effects on economic and social development. Experiences of agricultural recovery have rarely been synthesised: relevant publications report agricultural recovery in particular cases, and agriculture is one sector mentioned, rather than the focus of these publications.

Given the need to draw on evidence, we looked for appropriate cases to review, for countries that met the following criteria:

- Low- or lower-middle-income before conflict.
- Experience of a decade or more of conflict – where recovery is challenging owing to considerable damage to people, property and social relations. (Recovery from a brief conflict is usually easier.)
- Countries that achieved a working peace. In some cases, a ceasefire agreement was brokered between warring parties; in others, one side decisively prevailed. The subsequent peace may not be absolute: there may be some belligerents who fight on or who turn to crime and banditry – some parts of the country may remain dangerous for years to come. The point is that most combatants cease to fight, death and injury subsides very considerably, and most people return to lives where violence is a far lesser threat than before.
- Cases where peace has been restored within the last 30 years.

Some 13 countries met these criteria, with peace restored on the following dates:

- Angola, from 2002
- Burundi, from 1996
- Cambodia, from the early 1990s
- Côte d'Ivoire, from 2007 (although after only five years of conflict)
- Liberia, from 2003
- Mozambique, from 1992
- Nepal, from 2006
- Nicaragua, from the early 1990s
- Peru (the southern highlands), from the early 1990s
- Rwanda, from 1994, after a brief but brutal conflict
- Sierra Leone, from 2002
- Timor-Leste, from 2002
- Uganda (northern areas), from 2002/04.

Almost every other candidate country remains in conflict, including Afghanistan, Iraq, Libya, the Sahel from Mali to Sudan, Somalia, Syria and Yemen.

To review all 13 cases would have exceeded our resources. Moreover, several of the cases would be hard to study, relying mainly, as we had to, on secondary evidence. Angola, Burundi, Liberia and Timor-Leste were excluded on this criterion. In other instances, the case may not have revealed much. For example, in Nepal, it is hard to discern the impact of the civil war on agriculture or even on the economy overall. Similarly, Côte d'Ivoire's conflict was less destructive than most others on the list.

From the remaining seven cases, we selected six, in part to try to reflect diversity of initial circumstances, conflict and measures taken when peace was restored.

Sierra Leone stands out for severe conflict, later hit by Ebola, but with surprisingly strong economic and agricultural growth subsequently.

Cambodia experienced one of the most damaging of all recent conflicts, and yet recovery was strong, to the point where, in the new century, economic and agricultural growth have been stellar.

Rwanda's history is marked by the extraordinary violence of its conflict, and the determination of the subsequent regime to escape the country's deep poverty – in the face of its seemingly poor prospects as a densely settled, landlocked country with at least one troublesome neighbour, the Democratic Republic of Congo.

Peru is unusual in this list. It was not a low-income country when civil war broke out in 1980. That conflict was, however, largely contained within the Sierra Sur (southern highlands), a region of deep poverty and deprivation, that if assessed as a country would have been low-income. Peru also stands out for some of the policies adopted after peace was restored, showing what is possible in a middle-income country.

Mozambique experienced a long conflict, starting with the independence struggle, moving to bitter civil wars after independence. Although a very low-income country when peace was restored in 1992, the economy has enclaves of prosperity.

Uganda suffered repeated conflicts between 1980 and 1986, including the war in the north that persisted until the early 2000s.

Nicaragua was omitted from this review, largely because it did not look likely to add to the insights from the other six cases. It experienced an extraordinary decade in the 1980s, a decade of revolution, counter-revolution and economic chaos. If, however, we look at its economy and agriculture over the medium term, it seems that, after the turbulent 1980s, the country went back to its previous economic dynamics. It helps support the point that a good indicator of economic performance after conflict is performance before conflict.

For each country, literature was found and reviewed, supplemented in some cases with interviews with specialists who know the countries. Summaries of the cases appear in Appendix A.

The country cases were analysed by writing an account of each country to a common scheme, then comparing and contrasting cases, sometimes helped by constructing matrices to show similar information across the six cases. As a method, this is practical and feasible: it has the virtue of allowing idiosyncrasies – usually matters of process and causal pathways – from particular countries to stand out. The limitation is that it can become systematic. To use a more formal method to compare cases, such as qualitative comparative analysis, would have required more evidence and data than we could readily access, and probably a stronger working theory by which to structure information. It might also have risked losing sight of country idiosyncrasies in a drive to find regular patterns when comparing cases that defy generalisation.

To examine the growth of agriculture and particular crops during and after conflict, data were compiled from FAOSTAT, from which growth rates were computed.



2. FINDINGS

2.1 Conflict

Table 1 summarises key features of the six countries – or, rather, four countries and two regions because the conflicts considered in Peru and Uganda were very largely confined to single regions. (However, for ease of reading, we use ‘six countries’ in this report as shorthand for ‘four countries and two regions’.)

Before conflict, agriculture in the six countries was mainly smallholder farming. The only country with more than a handful of large farms and estates was Mozambique. Farmwork was largely by manual labour with some animal draught for ploughing. Labour productivity was low, as consequently were returns to labour and farm incomes. Areas that were to see conflict had low agricultural growth and lagging rural economies: poverty was widespread.

Conflict in these cases broke out for several reasons, often with interlocking factors, in ways that defy a simple theory of civil war.⁸ Poverty may have contributed to violence, but it was not the trigger for it. Two of the six conflicts broke out as political groups decided that armed revolution was the road to power (in Cambodia and Peru, where violence began with insurrections by Marxist groups). Two insurrections were fuelled largely by regional disgruntlement that other parts of the country were favoured while their areas were neglected (in Mozambique and northern Uganda). Northern Uganda has the distinction that rebellion was led by prophets who framed their revolts as holy wars. Sierra Leone’s civil war has been interpreted as a revolt of youth stymied in access to land by elders, but the ambitions of Liberian warlords were also part of the story. Rwanda’s genocide stemmed from longstanding tensions between Hutus and Tutsis, which some leaders exploited to channel additional grievances.

This is a very cursory view of the origins on the six conflicts: far more detail could be provided and should be provided for a complete understanding of the violence, but it is not material to this report.

When war started, conflict was often intermittent and sporadic as insurgent forces engaged in guerrilla war, seizing opportunities for ambushes on nominally more powerful government forces. In between the actual fighting, an uneasy and temporary peace sometimes prevailed in which those remaining in the conflict zones – many people fled – tried to continue their lives as best they could. The two part-exceptions, when violence was widespread, intense and uninterrupted, were the genocidal phase of Rwanda’s war, and some of the 1970s in Cambodia – when the Khmer Rouge (KR) unleashed an astonishing violence against its own citizens even though the party and government faced little if any organised opposition.

War was to last more than 10 years in all countries other than Rwanda. In Cambodia, the war lasted 24 years.

⁸ Three of the cases fit the model offered of economic deprivation allied to horizontal inequities (Blattman and Miguel, 2010; Kozul-Wright and Fortunato, 2011). But in Cambodia, Peru and Sierra Leone, grievances were based on vertical schisms between ‘haves’ and ‘have-nots’.

TABLE 1: THE CASES SUMMARISED

Case Years of conflict	Situation before conflict	Destruction during conflict	Measures taken to recover, governance and context of recovery	Outcomes after conflict
<p>Cambodia 1969 to 1993</p> <p>[Several phases: from 1969 US-backed regime versus rebels; KR 1975 to 1979; Vietnam-supported regime versus KR rebels to 1989, peace talks commence with final accord in 1993]</p>	<p>Mainly smallholder farming, low productivity, with Cambodia seen as an economic laggard within Southeast Asia; deep poverty.</p>	<p>US bombing of Cambodia in the early 1970s; massacres – a quarter of the population killed under the KR, much damage to irrigation and roads, depopulation of cities; much lower conflict after Vietnamese intervention.</p>	<p>Reconstruction with aid funds. Chinese investments. Cambodia saw investment in manufacturing, especially clothing, in factories created by Far Eastern investors, low wages the attraction.</p>	<p>Recovery took time, but by the 2000s, the economy started to grow rapidly. Agriculture recovered, with some export crops – premium rice, oil palm. Smallholder farming recovered with market opportunity, with some extra irrigation through small pumpsets. From 2000: very rapid growth of economy and agriculture</p>
<p>Mozambique 1977 to 1992</p>	<p>Dual agricultural economy: mainly smallholder farming, but with some large farms, some of them state enterprises. Most farming is low productivity, primarily subsistence in a sparsely populated, poorly connected countryside. High rates of poverty.</p>	<p>Guerrilla forces of the Mozambican National Resistance (RENAMO) challenged the Mozambique Liberation Front (FRELIMO) government whose centrally planned economy was failing. Most rural areas came under rebel control. Warfare led to loss of life, but not much infrastructure was there to destroy. Much of the damage to commercial farms came from the forced exodus of Portuguese settlers in 1975, and subsequent mismanagement and neglect by the new regime.</p>	<p>Reconstruction with considerable aid funding.</p>	<p>Strong recovery of economy with peace, with coal mines and aluminium smelting. Modest recovery of agriculture.</p>
<p>Peru, southern highlands (Sierra Sur) 1980 to 1992</p>	<p>Low-productivity farming, mainly smallholder; region remote, poorly connected; deep poverty the norm; mining enclaves.</p>	<p>Civil war: high loss of life, high migration out to Lima and other cities. Severe disruption of trade and public services.</p>	<p>The end of war allowed faster development of mining enclaves. Little support to highland farming, with national focus instead on coastal commercial farms. From the early 2000s, government increased spending in rural areas by six times in real terms, including on schools, health posts, roads, irrigation and cash transfers.</p>	<p>Major reduction in poverty. Public spending injection stimulated the rural economy, including non-farm business. Some agricultural growth, including organic quinoa. Better integration of the region with the rest of the Peruvian economy.</p>

TABLE 1: THE CASES SUMMARISED - CONTINUED

Case Years of conflict	Situation before conflict	Destruction during conflict	Measures taken to recover, governance and context of recovery	Outcomes after conflict
Rwanda 1990 to 1994	Mainly smallholder farming, low productivity.	Brutal if short civil war with genocide. Heavy loss of life. Lesser destruction of infrastructure.	Restoration of peace. Policy stressed economic growth. For agriculture, policy after was tried to consolidate land holdings, get farmers to monocrop and farm in blocks. Attempt to resettle dispersed rural population in villages.	Strong recovery. Agriculture apparently stalling in the 2010s
Sierra Leone 1991 to 2002	Mainly smallholder farming, low productivity, widespread rural poverty. Very low indicators of development.	Warfare saw massacres and mutilations, with widespread trauma. The economy was heavily disrupted, with little physical infrastructure in rural areas to destroy.	Reconstruction heavily dependent on aid funds.	Strong recovery of economy and agriculture albeit from a low base.
Uganda, north Two phases: from 1979/81 to 2006 – bush war against the immediate post-Amin governments; from 1986 to 2003, from when Museveni took over and new insurgencies broke out in the north, led by prophets	Uganda had barely recovered from the violence, repression and economic chaos of the Amin regime when conflict broke out in the early 1980s. Commercial farming had been hit hard by the expulsion of Asians.	Loss of life and mass displacement as government forced most of the rural population into camps.	Renewed aid to Uganda. At one point, Museveni became a donor favourite. Attempts to reform the Ministry of Agriculture, agricultural research and extension.	Modest to strong recovery from the mid-1980s, rapid economic growth since 2000. Agriculture, however, stagnated in the 2010s.

2.2 Costs of conflict for farmers and agriculture

2.2.1 Loss of people and skills

In all cases, many people lost their lives in conflict, while others were wounded and disabled. Loss of life was extreme in Cambodia and Rwanda, where lives were lost not only in conflict but also in massacres affecting anyone, not just those carrying arms. Death, maiming and wounding from fighting affected men more than women (other than during the two massacres mentioned). After conflict, women usually outnumbered men: for arduous farm tasks traditionally undertaken by men, labour was lacking.⁹

More problematic than losses in conflict zones were mass displacements of rural people seen in all cases. Sometimes entire villages would take flight, or scattered rural communities would be corralled into so-called 'protected villages'; in other cases, individuals and their households migrated to escape the violence, manifest as much-elevated rates of migration from country to town.

When peace was restored, not everyone who had left returned. Some preferred their new occupations in their new locations. In some cases, where people spent years displaced in camps, their land had been occupied by someone else in the meantime, so that to return was either to accept loss of land, or required reallocation of land with much social tension over who was entitled to what in the circumstances.

Loss of farming skills is mentioned in some cases, because a generation of displaced youth had not the experience of working with their elders and learning from them. Just how prevalent this was, and how costly it was, is rarely addressed in the literature – not surprising because it would be difficult to measure these skills and compare them to those of previous generations who had not been displaced.

2.2.2 Loss of physical assets

War led to deliberate destruction of houses, stores, livestock, crops in fields, electricity pylons (where they existed, in Peru) and bridges. In remote rural areas, government research stations and offices were also destroyed. Other physical losses were by-products of conflict: rural roads and irrigation works were usually not maintained and lapsed into disrepair.

In Cambodia and Mozambique, land mines were sown, creating a hazard that would take years and years of painstaking effort after peace to clear. Farmers in both countries avoided the most-mined areas, but elsewhere took their chances. The unfortunate were killed or maimed as they triggered an unexpected mine.

9 This point needs some reflection. In most agrarian societies, different farm tasks are commonly gendered. Tasks considered to require either greater physical strength (clearing scrub to create new fields or ploughing with oxen, for example), or to be risky (such as scaling cocoa trees to prune them) are often seen as 'men's work'. Indeed, for a woman to undertake them is regarded as unnatural and improper. In practice, women can do many of these tasks and are prepared to take them on, regardless of risks. But it takes time for societies to observe women doing these tasks, recognising their abilities, and accepting that they can do them.

2.2.3 Suspension of public services

Many public services were interrupted during conflict: buildings that represented the state, such as local administration offices, were commonly attacked by insurgents. Public telecoms – radio masts, for example – were another target.

Health and education were often suspended, not necessarily because health posts and schools were damaged beyond use, but because the staff fled to safer places. Public water supplies often fell into disrepair for lack of maintenance or staff to operate them.

2.2.4 Disruption of trade

In severe conflict, normal business – involving lorries transporting goods, markets and shops open – was largely halted. But even when conflict was intermittent or low-level, insecurity forced drivers to take longer routes to avoid danger zones; roadblocks by warring parties saw taxes imposed on transport. Even when markets remained open, fewer people attended them, either because some of them had fled the area, or because it was too dangerous to walk to market.

Trade disruption disproportionately affected farmers growing cash crops for distant markets. Farmers growing for home consumption or for trading on local circuits were less affected.

2.2.5 Institutions and trust

Warfare potentially erodes social relations, collective governance and trust in others – owing variously to fighting between people who previously cooperated, to local collective forums being suspended, and to people being displaced. Little is documented about such losses – perhaps because it was not easy to measure such changes or to judge whether they were temporary or longer-lasting.

Surprisingly, some local institutions survived conflict. In Cambodia, village leadership re-emerged after the many years of conflict largely intact.

In Peru, the social effects were sometimes the opposite of what might be imagined. Self-defence groups (*rondas campesinas*) were formed among small farmers to combat guerrillas.¹⁰ Participating in these militias built a sense of agency among group members, instilling a pride that they could act effectively to their own benefit.¹¹ After the fighting died down, group members drew on this new resource to lead their communities, to implement collective projects and to express themselves politically.

10 In Peru, the allegiance of most of the rural population was sorely tested by their being attacked by both insurgents and state forces. By a small margin, the rebel Sendero Luminoso came to be seen as the more dangerous side, so the army was often able to form *rondas campesinas*: peasant militias that patrolled their localities, looking to confront the guerrillas.

11 Context matters here: the indigenous people of the Sierra had been looked down upon for centuries by the country's rulers – descendants of Spanish conquistadores – and made to feel inferior. The *rondas* were one factor in a changing rural Peru that led to indigenous people increasingly taking a public stand to express their pride in their origins, culture and language, and to stand up for their rights as citizens.



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2.3 Agricultural growth after conflict

What happened to agricultural output during conflict and afterwards in recovery?
(Table 2, Figure 1)

Because the conflicts in Peru and Uganda were regional, and because there are no estimates of regional agricultural production, we took two crops grown very largely in the two regions but much less in the rest of the country as indicators of agricultural change: potatoes for highland Peru, and millet for northern Uganda. Because, as will be explained, in several cases little support to agriculture was offered for 10 or so years after peace, we divided the recovery period into the first 10 years, and subsequent years.

Conflict was costly for agriculture: years of conflict were years of outright agricultural contraction in all cases other than Uganda. Losses were extreme for Cambodia, Peru (potatoes) and Rwanda.

In most cases, the 10 years after peace was restored saw rapid agricultural growth, above all in Rwanda, Sierra Leone, and Peru (potatoes). If we took Cambodia's recovery as the years after the fall of the KR in 1979 and before the Paris peace accords of 1991, when an incomplete peace reigned, the rate of recovery would be the highest of all at an annual average rate of 10.5%.

To some extent, rapid growth after peace reflected a rebound as farmers returned to their fields, as land effectively fallowed during conflict was once more put to production. Very large increases in area under crops were seen during the first 10 years of recovery in Peru (potatoes), Rwanda and Sierra Leone. That said, increases in cropped area were smaller than increases in agricultural value in all cases other than Peru (potato) and Uganda (millet), so the rebound was not just the result of fields being put back to use.

Lack of support to agriculture during the first 10 years of recovery, seen in four cases (Section 2.4), seems to have made remarkably little difference to growth when peace was restored.

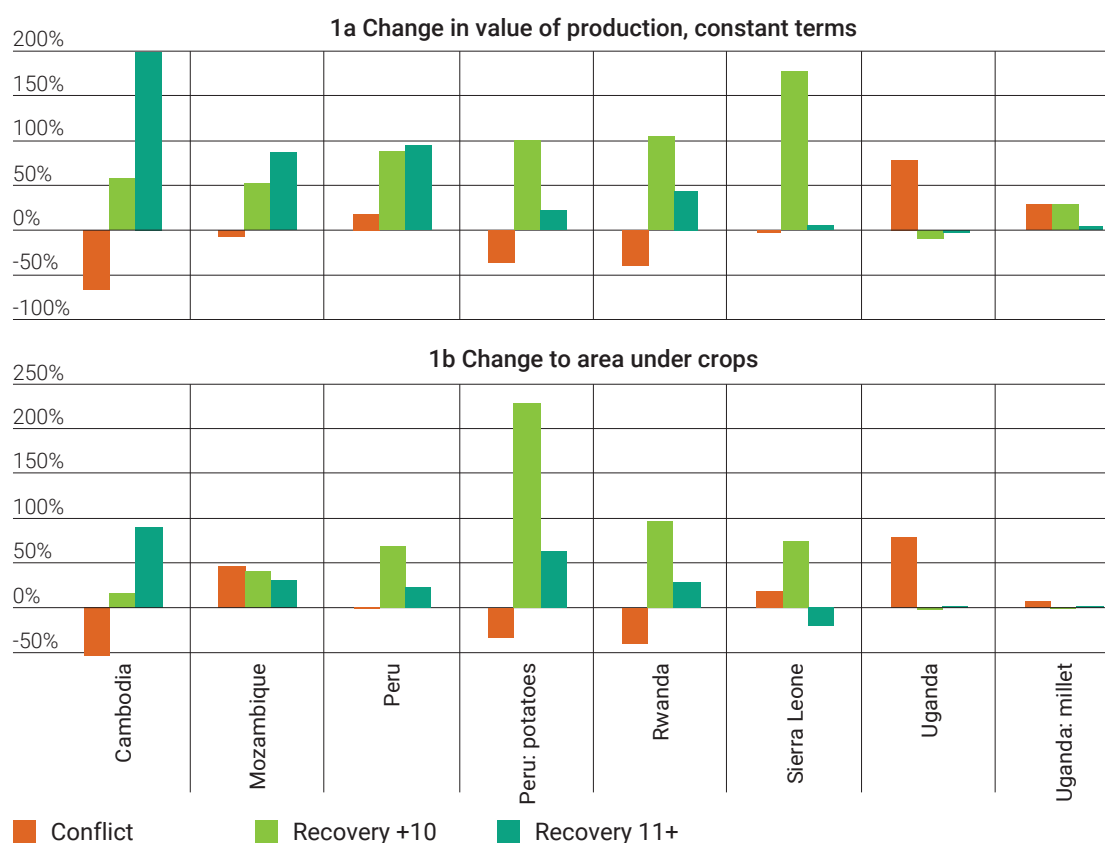
TABLE 2: AGRICULTURAL GROWTH FOR YEARS OF CONFLICT AND YEARS SINCE CONFLICT

	Conflict years	Post-conflict years		Change: value of agricultural production, constant terms		
		First 10 years	Subsequent years	Conflict	Recovery: first 10 years	Recovery: year 11 onwards
Cambodia	1971 to 1979	1991 to 2001	2001 to 2019	-66%	57%	199%
Mozambique	1977 to 1992	1992 to 2002	2002 to 2019	-7%	52%	87%
Peru	1980 to 1992	1992 to 2002	2002 to 2019	17%	87%	95%
Peru: potatoes	1981 to 1992	1993 to 2002	2003 to 2019	-36%	101%	22%
Rwanda	1990 to 1994	1994 to 2004	2004 to 2019	-40%	105%	44%
Sierra Leone	1991 to 2002	2002 to 2012	2012 to 2019	-3%	177%	5%
Uganda	1986 to 2004	2004 to 2014	2014 to 2019	78%	-9%	-3%
Uganda: millet	1987 to 2004	2005 to 2014	2015 to 2019	38%	-64%	-69%
				Change: area under crops		
Cambodia	1971 to 1979	1991 to 2001	2001 to 2019	-54%	16%	90%
Mozambique	1977 to 1992	1992 to 2002	2002 to 2019	47%	42%	30%
Peru	1980 to 1992	1992 to 2002	2002 to 2019	-1%	69%	23%
Peru: potatoes	1981 to 1992	1993 to 2002	2003 to 2019	-34%	229%	63%
Rwanda	1990 to 1994	1994 to 2004	2004 to 2019	-40%	96%	28%
Sierra Leone	1991 to 2002	2002 to 2012	2012 to 2019	17%	75%	-21%
Uganda	1986 to 2004	2004 to 2014	2014 to 2019	79%	-2%	1%
Uganda: millet	1987 to 2004	2005 to 2014	2015 to 2019	28%	-57%	-70%

Source: Compiled from FAOSTAT data.

Note: Cambodia from 1979 to 1991 saw the value of agriculture rise by 201%, and the area cropped increase by 109%.

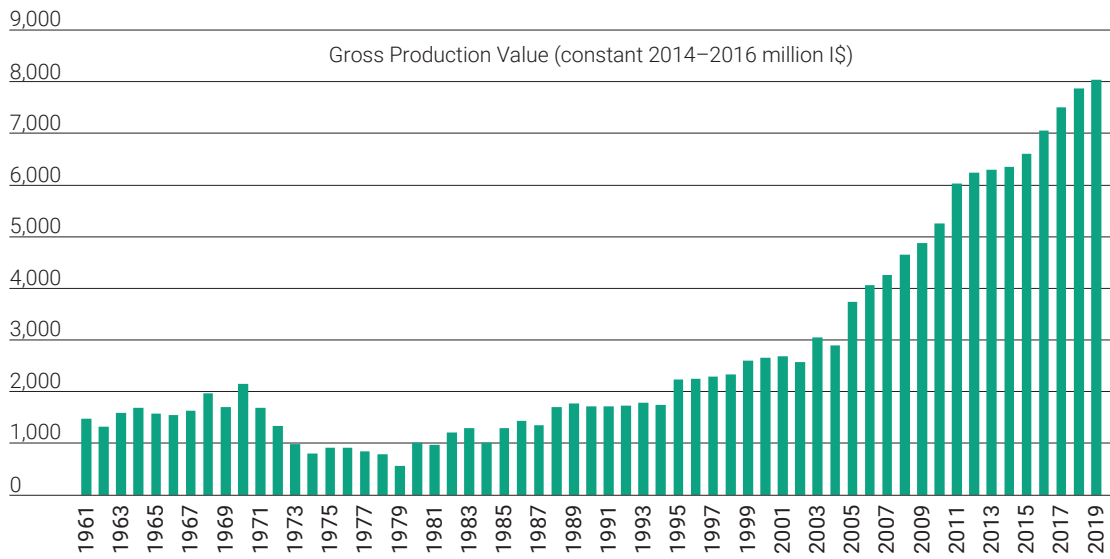
FIGURE 1: AGRICULTURAL GROWTH FOR YEARS OF CONFLICT AND YEARS SINCE CONFLICT



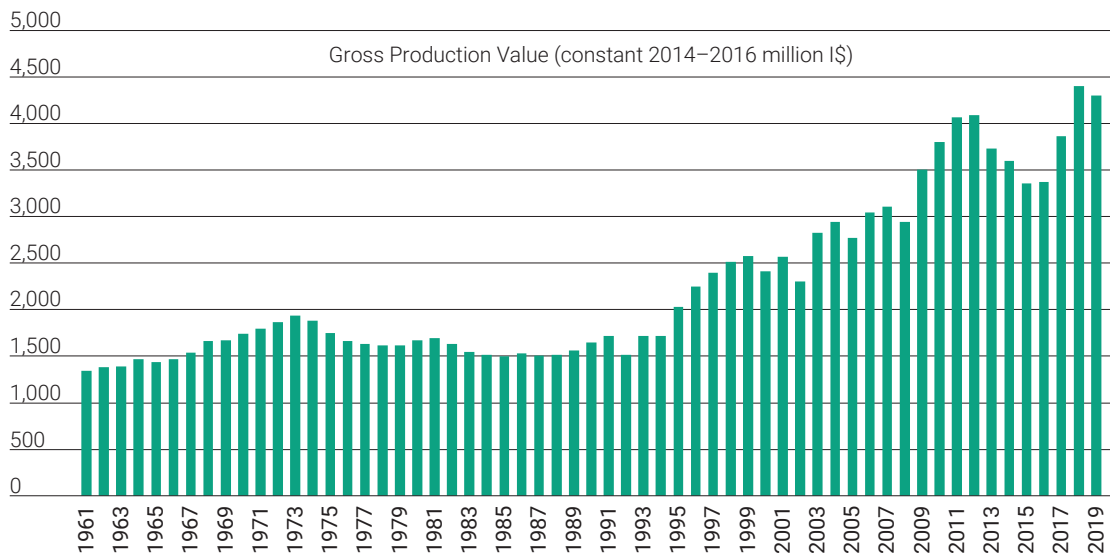
Source: Compiled from Table 2.

FIGURE 2: VALUE OF AGRICULTURAL PRODUCTION FOR THE SIX CASES, 1961 TO 2019, CONSTANT TERMS

Cambodia



Mozambique



Peru (potatoes)

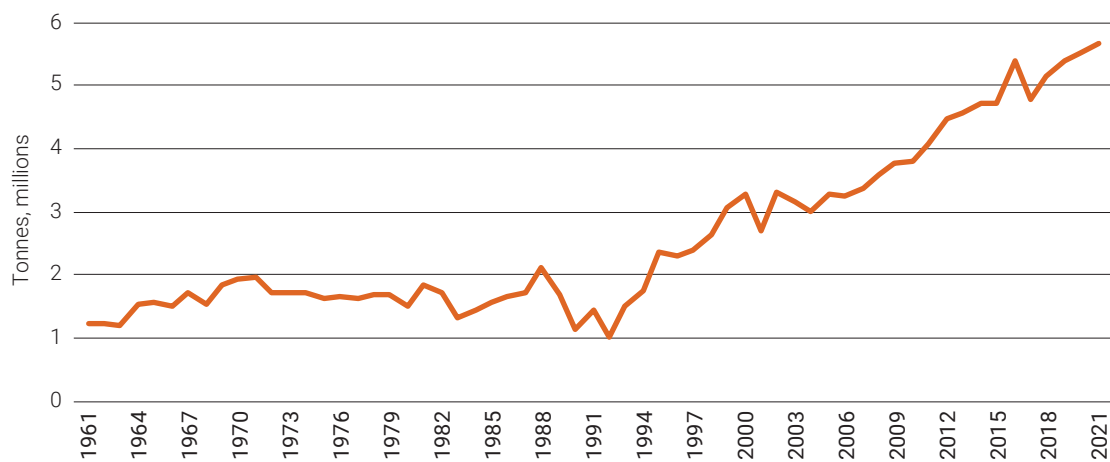
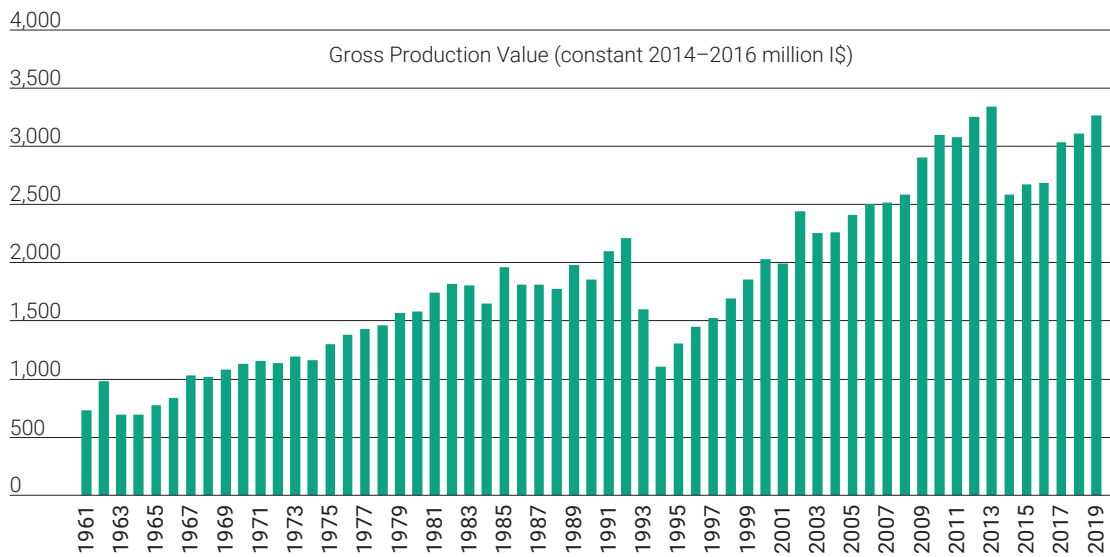
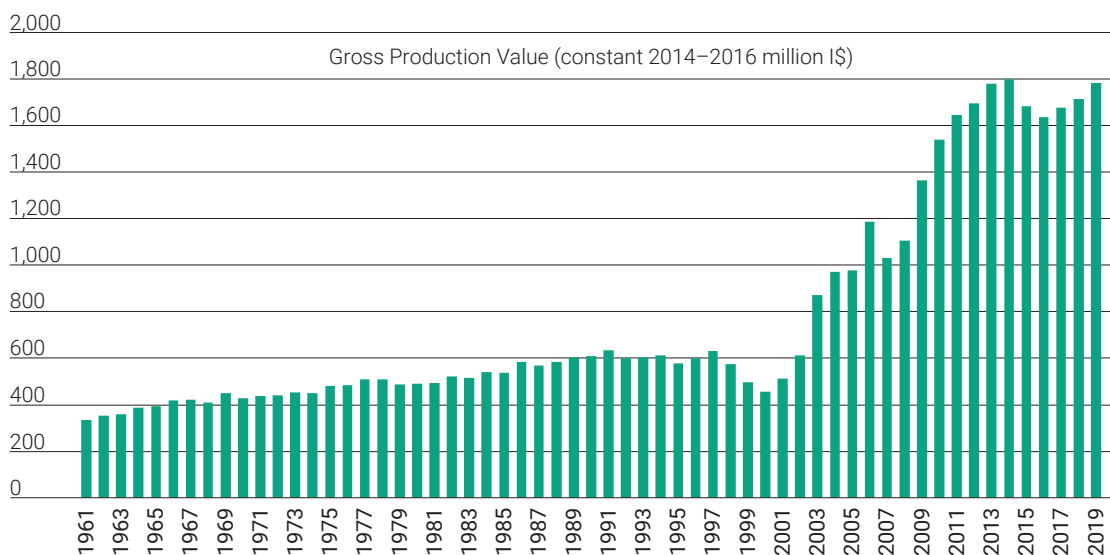


FIGURE 2: VALUE OF AGRICULTURAL PRODUCTION FOR THE SIX CASES, 1961 TO 2019, CONSTANT TERMS – CONTINUED

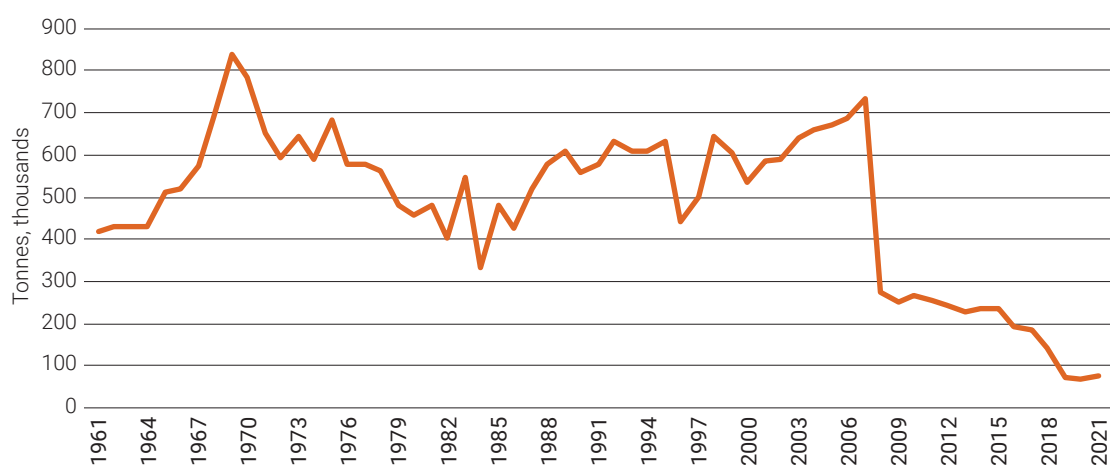
Rwanda



Sierra Leone



Uganda, millet



Source: All charts compiled from FAO FAOSTAT data.

In the years of recovery subsequent to the first 10, in all cases other than Cambodia, agricultural growth slowed – with some sharp reductions in growth seen in Rwanda and Peru (potatoes). These two results are unexpected, given how much the governments of both countries redirected support to farmers 10 or so years after peace. This might suggest that strong recovery seen in the first 10 years of peace was down to a bounce, as unused fields and pastures were put back into use.

A simple check on this is to plot the estimated value of agricultural production in constant terms since 1961 for the overall output for Cambodia, Mozambique, Rwanda and Sierra Leone; and for potatoes in Peru and for millet in Uganda (Figure 2).

These charts show that growth after peace was, in all cases other than Uganda (millet), strong. The value of production (or quantity of potatoes in Peru) increased not only to make up for recession during conflict, but to surpass previous levels of production by large margins. Indeed, the charts show quite remarkable growth after peace, and growth that is largely sustained – with one curious qualification. For Mozambique, Rwanda and Sierra Leone, production fell in the early 2010s for a year or two, before resuming growth. It is not immediately clear why this was seen in three different parts of Africa at similar times. The same does not apply to Cambodia or to Peru (potatoes), where growth was largely sustained.

The exception here is Uganda (millet). After peace in 2006, production peaked in 2007, but thereafter fell precipitously, to barely more than a tenth of peak output. The reason for this remains to be investigated.

Which farmers were able to recover from conflict?

Who was able to recover from conflict: small-scale family farmers or large-scale commercial farmers? Was the recovery stronger in staples grown in part for home consumption, or was it stronger for cash crops grown for the market, and in some cases, for export?

Readily available statistics, such as those reported by FAO, do not break down production by type of farmer, but production is estimated by crop. Some crops are, in the six countries, grown very largely by either large or small farmers, so they proxy for farm size.

Now that production changes are seen by crop, we can see if these results resemble those when considering all agricultural production. By and large, the pattern is similar. In detail:

- Conflict led to falls in production of all crops, other than quinoa (a crop in decline before civil war) and asparagus (grown on the coast and not affected by war) in Peru, and all three crops chosen for Uganda (an unexpected finding that is hard to explain) (Table 3, column 2).
- When peace came, production rose for most crops, save for asparagus in Peru (which had not been touched by war in any case), and for the three crops in Uganda (Table 3, column 3).
- The first 10 years of peace saw faster growth of crop output than before conflict, except for maize and coffee in Rwanda, millet and sorghum in Uganda (Table 3, column 4). Growth after peace was not just recovery and rebound: growth had accelerated from the rate seen before conflict.
- Growth after the first 10 years of peace was often slower than in the first 10 years of peace; but not always – a general tendency cannot be seen (Table 3, column 5).

Now to the question of the performance of smallholders and their crops compared to larger-scale farmers and their commercial crops. Results were mixed: in some cases, smallholders and their crops outperformed the larger-scale farmers. In Cambodia, rice output grew more than rubber; in Rwanda, maize and beans production grew more than coffee; in Sierra Leone, rice output grew more than that of oil palm and coffee. In other cases, output of large-scale farm crops grew more quickly: in Mozambique, sugar output rose faster than maize; in Uganda, sesame production increased by more than that of millet and sorghum. In Peru, growth of potatoes, quinoa and asparagus were similar after peace.

The point is that recovery was not often driven by large farms and cash crops: more often, it was the food crops grown by smallholders that showed faster recovery.

This analysis is unavoidably crude in the absence of more detailed data. The results do not, moreover, necessarily mean that all smallholders were equally successful in recovering from conflict. It could well be that a disproportionate share of increased output came from the more advantaged small farms.

TABLE 3: COUNTRIES AND CROPS: PRODUCTION BEFORE, DURING AND AFTER CONFLICT

	Did conflict lead to a fall in production?	Did peace see faster growth than under conflict?	Did the first 10 years after peace see growth faster than before conflict?	Was growth subsequently even faster than in the first 10 years?
Cambodia Rice	Yes	Yes	Yes	Yes
Cambodia Rubber	Yes	Yes	Yes	Yes
Mozambique Maize	Yes	Yes	Yes	No
Mozambique Sugar	Yes	Yes	Yes	No
Peru Potato	Yes	Yes	Yes	No
Peru Quinoa	No	Yes	Yes	No
Peru Asparagus	No	No	Yes	No
Rwanda Maize	Yes	Yes	No	Yes
Rwanda Beans	Yes	Yes	Yes	No
Rwanda Coffee	Yes	Yes	No	Yes
Sierra Leone Rice	Yes	Yes	Yes	No
Sierra Leone Oil Palm	Yes	Yes	Yes	Yes
Sierra Leone Coffee	Yes	Yes	Yes	No
Uganda Millet	No	No	No	No
Uganda Sorghum	No	No	No	No
Uganda Sesame	No	No	Yes	Yes

Source: Compiled from FAOSTAT data.

Note: Countries and crops in bold indicate crops grown mainly by smallholders.

2.4 Responding to peace: farmers, governments, donors and NGOs

When conflict subsided, governments tried to restore public services, to repair broken physical infrastructure. Assisting agricultural recovery, however, was not always a priority. Indeed, in four cases – Cambodia, Mozambique, Peru and Rwanda – government did little, for several years, to help rural people affected by conflict to recover – surprisingly little.

Three reasons explain a good part of this apparent neglect. **First, when peace was restored, the overwhelming priority was to maintain the peace.** This entailed forging and servicing political alliances to dissuade previously armed parties from returning to war. In Cambodia, ex-combatants had to be paid as part of the (very large) armed forces, even if there was no fighting to be done. Their commanders needed enough pay to deter them from the temptation to become a local warlord. Government had to allow the commanders to find lucrative businesses that would supplement their meagre official salaries.¹²

In Rwanda, the ruling party faced a balancing act when, upon peace being restored, refugees returned. These comprised both Tutsis, who were naturally allied with the ruling party, and Hutus, who the government feared harboured genocidaires among them.

Only Peru avoided costs in keeping the peace. There, peace was restored by almost complete military victory over the insurgent *Sendero Luminoso*,¹³ so government did not have to make accommodations to restore order because armed opposition had all but disappeared.

Second, all four governments had, at least initially, ideological preferences for larger-scale agriculture: they did not see smallholders as leading agricultural development. In Cambodia, the ruling party had little faith that smallholders could drive agricultural growth. Indeed, the party did not much like them farming individually: they preferred that smallholders worked cooperatively – something the farmers were usually very reluctant to do.¹⁴ For development, the government allocated large blocks of (apparently unused) forest to investors to plant commercial crops, hoping the investors would bring capital and technical skills to agriculture.

In Mozambique, the first instinct of the government – still influenced by the Marxian approaches adopted after independence that favoured state farms and collectives – was to promote export crops grown on medium- and large-scale farms. Much store was put in developing trade corridors from main ports to the interior, corridors in which roads and power lines could be concentrated, where large farms would grow crops and create jobs. The large farms' capital and know-how, it was hoped, might then spill over to neighbouring smaller farms. If smallholders were to be part of agricultural development, it would be as contracted outgrowers supplying additional produce to processors sourcing mainly from the larger farms.

12 For the first half of the 1990s, a key earner for commanders was logging. Thailand had just restricted legal logging, so there was great demand across the Cambodian border for logs. The commanders were only too happy to oblige: they took over tracts of forests and began felling.

13 *Sendero Luminoso* was led by Abimael Guzman who built a personality cult about himself. When he and his lieutenants were captured in a Lima suburb in 1992, the movement was beheaded and demoralised. Although new leaders took over the remnants, the spell had been broken, and what had once seemed an unstoppable revolutionary force was reduced to sporadic banditry. It no longer exercised the imaginations of disaffected and idealistic youth.

14 The ruling party, the Cambodia People's Party, was born as an offshoot from the KR in the late 1970s. Through the 1980s it was a Marxist-Leninist party. Hence the belief that small farmers should work in socialist cooperatives.

In Rwanda, in the years following peace, the ruling party had little faith that smallholders could raise production and productivity without considerable state leadership. Instead, they believed smallholders should farm together in larger-scale blocs, that people should live in villages rather than on their farms, scattered across the landscape, and that farmers should grow approved crops in monocultures rather than mixed and intercropped stands. Farmers were thus ordered to work together, to relocate, to grow particular crops in approved ways: as though low productivity arose from insufficient order and formalisation among a peasantry that was technically ignorant.

In Peru, the Fujimori government of the 1990s relied on technocrats for its economic policy. They were concerned first and foremost to stabilise the macroeconomy and encourage investment, not least by international companies. Among opportunities for investors, the mountains contained valuable mines to develop. For agriculture, the technocrats favoured the medium- and large-scale farms of the coast. Irrigated and capitalised, these farms produced high-value crops that could be exported. The government saw little to be achieved on the small farms of the Sierra (Andean highlands), farms that were remote, sometimes with poor soils, reliant on rains, worked largely by hand with hardly any capital to augment arduous labour. Government technical staff and political leaders were still inclined to see highland farming as backward, a manifestation of some cultural deficiency of the farmers – rather than the result of 400 or more years of official neglect and exploitation of the largely indigenous highland population.

In all four cases, the neglect of smallholders was based on ideology and no little prejudice against smallholders. Governments just did not believe that sufficiently rapid agricultural development could ever come from small farmers. Time and again, their doubts were to prove exaggerated.

The third reason for neglect was practical: after conflict, governments had few funds to invest, above all in Cambodia, Mozambique and Rwanda. These governments faced high costs variously in paying armies, assisting returning refugees and restoring elementary public services. Although donors often returned with much larger budgets after peace, donor priorities were not necessarily smallholders in areas hit by conflict. Donors typically prioritised the humanitarian needs of refugees and the restoration of schools and health services. Hence, even had these governments wanted to encourage smallholder farming, they lacked the means to invest more than minimally in physical infrastructure, agricultural research, farmer services and so on.

Inattention to smallholders in these cases, however, did not last. In Cambodia, Mozambique, Peru and Rwanda, smallholders came back to the attention of the government in the early 2000s, about 10 years after peace was restored.

In Cambodia, this owed much to the growth of state revenues from a thriving economy¹⁵ and continuing donor support: by the late 1990s, the government had the means to fund smallholder development. The growing economy also meant the danger of relapsing into conflict had diminished.

15 This was driven first and foremost by manufacturing, as foreign investors were attracted to a now peaceful Cambodia with a low-wage workforce. Above all, they set up textile and garments plants.

In Mozambique, it was clear by the late 1990s that the drive to develop larger-scale, capitalised farmers was leaving the majority of the rural population in poverty. To address that poverty, specific programmes for smallholder development had to be undertaken – as both government and donors realised.

In Peru, the administration of President Toledo that began in 2003 decided to invest booming mineral royalties in an enormous increase in public spending in rural areas: government raised spending, in real terms, in rural Peru by no less than six times over a decade.¹⁶ The ministries spent on roads, schools, health posts, irrigation systems, and set up cash transfers for mothers on low incomes.



In Rwanda, harvest failures in 2002 exposed how little had been done to develop agriculture. The ruling party was shaken: it re-examined its approach to smallholder development and realised that more public investment was necessary.

The cases of Sierra Leone and northern Uganda differ in that the need to develop agriculture, and above all smallholder agriculture, was recognised as a priority when peace was restored in the early 2000s. They did not necessarily differ from the other four countries in the first priority being to maintain peace – but that was perhaps easier in these cases, because peace came after insurgents had suffered devastating defeats.¹⁷

Why was agriculture and small-scale agriculture seen as a priority in these latter cases, but not in the former four? The most obvious, and perhaps the only factor, was simply timing. In the early 1990s, agricultural development was not in vogue among donors. On the contrary, donors were wary of agriculture. Donor evaluations carried out in the 1970s and 1980s suggested that farming was a troubled sector where a disproportionate number of their projects had failed (Staatz and Eicher, 1986).

Moreover, the Washington Consensus (Williamson, 2009; World Bank, 1994), which took hold of mainstream development thinking from the late 1970s onwards, stressed overall economic growth through macroeconomic stability and the creation of a business environment to encourage private investment.

16 I know of no other country anywhere that ramped up public spending in rural areas to this extent over such a short period. When Wiggins visited southern Peru in 2015, the evidence of the spending was everywhere – new schools, health posts, well maintained roads, and mothers telling him about their cash transfers. (More, the face of government in rural areas was often a young woman, educated and trained, able and eloquent. Such women left a strong impression on village mothers who watched and imagined what their daughters might become, if they stuck at their studies.)

17 Perhaps, on the other hand, the tensions that led to insurgency in the first place had barely been addressed.

Special attention to any one sector of the economy was not necessary: why should agriculture be different? On the contrary, they saw that in many countries of the Global South, state support for agriculture in the 1960s and 1970s had spawned parastatals, state firms that all too often were inefficient, costly,¹⁸ and paid farmers well below international parity prices. They appeared to be living proof that what farmers needed was economic liberalisation – with state agencies replaced by private traders who would be more effective and more economical.¹⁹ This may have been a donor narrative to start with, but governments in the Global South, especially in low-income countries that depended on aid, realised they had to go along with these ideas if they were to be funded.

By the early 2000s, much had changed. Agriculture had returned to the forefront of development thinking, above all in Africa. When, in 1999, the first Millennium Development Goal was set as halving poverty and hunger by 2015, attention focused on where the poor and hungry lived: overwhelmingly in rural areas where farming was usually the main livelihood. Unflattering comparisons were made between agricultural development in Africa and in Asia.

Policy-makers and opinion leaders in Africa began to argue that agriculture needed public investment and support, and not just economic policy reform. When African ministers of agriculture met in Maputo in 2003, they declared that they would strive for 6% annual growth of agriculture and devote 10% of government budgets to do so. With the Maputo Declaration, not only was agriculture centre-stage, but also agricultural policy and investment was back as a state responsibility, not something that could be left solely to private business and markets (Wiggins, 2014).

Consequently, by the early 2000s in Cambodia, Mozambique, Peru and Rwanda, governments paid more attention to agriculture, invested more in measures to support it, and recognised that smallholder farming had more potential to grow than they had formerly thought. When peace was restored in Sierra Leone and northern Uganda in the 2000s, their governments were also thus inclined to invest in agriculture, including smallholder agriculture.

18 Some parastatals ran up very large deficits that they financed by overdrawing their accounts at the central bank. They were major contributors to undue expansion of the money supply and consequent inflation.

19 These were not the only arguments: the Washington Consensus saw negative protection of agriculture – effectively taxation of farming – owing to unwise national policies as having crippled African agriculture in the 1970s (Krueger et al., 1991). Macroeconomic reform and economic liberalisation greatly reduced negative protection, so farms, more than any other kind of business, should have benefited from reforms.

3. DISCUSSION AND CONCLUSIONS

3.1 Summarising the arguments

To recap, this review makes the following points.

Conflict is costly to agriculture: large areas may be untilled, and production falls. It is even more costly to farmers and people in their households who risk death, injury and disablement, who often have to flee for their lives, trying to survive until it is safe to return.

In most cases, agricultural output recovered rapidly after conflict. Within a season or two of peace, agriculture rebounded – in terms of both area tilled and production. Moreover, and perhaps equally surprisingly, that rebound was usually sustained as output regained the level before conflict, surpassed it and continued to grow. Growth may slow somewhat with time but it neither came to a halt nor did it slow to a crawl.

The fast rebound of agriculture might imply that governments prioritised the sector. But, no: on the contrary. When peace was restored, farmers often got little public support to resume their livelihood. That was partly because governments prioritised maintaining the (often uneasy) peace achieved. Farming was rarely central to that objective – except for providing land to returning refugees, because land disputes can cause fighting to flare up. Even had agriculture been a priority, governments usually lacked funds to invest in rural areas: national economies after conflict were often in poor shape, with tax revenues low.

Given that context, what a government then decided to do for agriculture depended, in (considerable) part, on preferences usually informed more by ideology than by evidence and analysis. Leaders were tempted to see peace as an opportunity to begin afresh – to do things differently, set bold goals and declare ambitious strategies. While bold visions need not have precluded smallholder development, in practice, time and again, small farmers were seen as something from a dismal past, rather than actors in a dynamic future. Larger-scale farming – mechanised, capitalised, technically advanced – this was the tempting vision. In practice, this view clashed with the reality that smallholders occupied much of the land and were not going away, at least not in the short term.

The vision of rapid transformation underestimated the potential to upgrade smallholdings. It undervalued what may be achieved by investing in some common or garden public goods to serve small-scale farmers. These include: roads, for example; ensuring farmers can borrow, be it to buy better inputs, or to install irrigation; and technical guidance on new ideas coming from research stations and agribusiness suppliers of seed, fertiliser, chemicals, veterinary medicine, tools and machinery.

In the absence of public support, peace for most farmers meant going back to farming, in some cases having returned from a refuge, to start to farm fields and plots that had been little cultivated while the fighting raged. Despite little or no external help, farmers proved

to be resourceful. The rebound came from smallholder crops grown for subsistence and local markets, as much as, if not more than, from larger farms and their commercial and export crops.

In several cases reviewed, 10 years or so after peace, tax revenues had grown, so governments could invest in agricultural support. Some leaders experienced an epiphany, as they realised that smallholder farming cannot or should not be ignored – an epiphany sharpened as the vision of rapid transformation through large-scale farming proved chimerical. For all these reasons, after a decade of peace, smallholders often found themselves, at last, being offered something more than minimal support.

Despite this change of course, additional support did not, in at least two cases (southern Peru and Rwanda), make a difference to the growth of agricultural output. The reasons for this are something to be addressed in another study, probably one in which the specific detail of these cases will prove critical.²⁰

An overarching question concerns generalisation: are there general lessons to be drawn? The six cases were chosen in part to be diverse, and that diversity is reflected in the findings. Nevertheless, some observations are common or similar across three or more cases which, on reflection, is perhaps more remarkable than the many idiosyncrasies that show up the more one delves into a particular case.

3.2 Lessons for policy-makers

3.2.1 General considerations

The recovery of agriculture after conflict should be seen within the wider landscape of rebuilding polity, economy and society in rural areas when peace returns. It would be a mistake to focus only on farming, without recognising the other things that make for a peaceful and (more) prosperous countryside. These other things form a three-part agenda. In order of importance, as follows.

1. Rural society needs to rebuild the social capital it once had.²¹ That is partly a matter of governance, re-establishing both formal local government and informal village leadership. It is partly about rebuilding social fabric, which may be enhanced when public services once again function, when children can go to school, when a local health post is open, when water sources are maintained, when roads are in decent repair. It is also partly commercial: a rural society needs its shopkeepers, traders, truckers, bus drivers and all those who keep the local economy ticking over.

2. Land may need special attention: disputes may well be more likely after conflict.

²⁰ For example, in highland Peru one might imagine that the growing rural non-farm economy, and migration to urban areas, meant farmers invested in diversified enterprises and employment rather than their farms. But that hypothesis remains to be tested.

²¹ Social capital is intriguing: some (Putnam et al., 1992) have argued that social capital makes major contributions to growth and development; others (North, 1992; Rodrik et al. 2004) emphasise institutions as rules of the game, embedded in whatever social capital may be. Aldrich et al., (2021) consider the role of social capital in responding to conflict and disaster. The question their thoughtful review prompts is whether social capital is rebuilt by direct efforts to do so – for example, getting people together in clubs and forums – or whether it is restored indirectly in the ways described in the above paragraph.

If rights to arable fields, grazing and commons were ambiguous before, as they often are under collective tenure, they are likely to be all the more so as displaced persons return. Disputes that formerly might have been managed by village councils may be harder to settle when either village leadership has been eroded by displacement and violence, or when the disputes are more difficult than before – as applies when refugees return to find their lands occupied by others.

3. Smallholder farmers need everything they needed before conflict, but more pressingly:

passable roads; extension to learn of new technology; and whatever it takes to overcome the failures in markets that mean formal credit is out of the question, risks cannot be insured and costs of inputs are higher than they should be.

That is quite an agenda, although not an impossible one. The key is to make some progress across the agenda, rather than perfecting any one element. Three intuitions support this argument. One is that villagers do not expect much from outsiders. They know through painful experience that they have to manage their lives with little outside support. Extravagant promises may be made by campaigning candidates as elections approach, but villagers know that much less is delivered than promised. They have learned to make the best of what little support they get.

A second is that small improvements give hope and inspiration. When people can see gains and compare to what they had before, the future becomes inviting. Moreover, the gains confer legitimacy to government and confidence that peace is preferable to war.

A third comes from statistics on agricultural recovery. Despite all that farmers endured during conflict, despite the many losses and setbacks, the return to growth in most cases was remarkable. This has been achieved in difficult circumstances and conditions, and with incomplete and imperfect public policies and investments.

The three-part agenda can be made harder and take longer to work through if the wrong decisions are made by outsiders – governments, NGOs, commercial firms – when peace comes. It is not hard to write a devil's recipe for making things more difficult.

Of the potential pitfalls, those concerning governance and land are the deepest, because they have the potential to stoke resentments and indeed to reignite fighting. Moreover, these matters are not those where a script can readily be written. Gross mistakes can be foreseen and avoided, but lesser ones may be apparent only by monitoring and learning in real time.

Pitfalls concerning the specifics of agricultural development are lesser concerns. As Cambodia, Rwanda and Peru show, adopting agricultural strategies based as much on ideology as on careful analysis, strategies that bias public support towards larger farms and write off the potential of smallholders, does not preclude a later reassessment and reorientation of public investment and policy. Such pitfalls lengthen recovery time and mean that many farm households have to ensure more hardship than they should. That is not good, but defects in strategy can usually be remedied.

That said, even lesser pitfalls can and should be avoided. How much stronger might agricultural recovery have been in Cambodia, Rwanda and the highlands of Peru if just a little more support had been given to smallholders?

3.2.2 Specific considerations

When peace is restored, what farmers need above all else is **access to their land**, especially when they return from where they took shelter. In most cases reviewed, this did not prove difficult, the exception being Rwanda where some Rwandan Tutsis had taken refuge out of the country for many years. Otherwise, given access to land, and usually their old farms, most farmers seemed able to restart their agriculture.

What makes resuming agriculture possible? Farmers' immediate needs include: seeds and tools; provisions to eat until the next harvest; and labour. It would seem that many farmers found the seeds and tools, and somehow managed to find something to eat. **The main sticking point in this list is labour.** For households that have lost their adult males in the war, the remaining members – the elderly, mothers, young children – may find it hard to open up more than a fraction of their land. It may not just be labour they lack, but also oxen and ploughs – livestock being a prime casualty of conflict.

Donors commonly provide returning farmers with seeds and tools, something for which (surprisingly) there is little to no evidence of useful effect (Wiggins et al., 2021). A better use of funds might be to target widows and female-led households with cash or vouchers to recruit labour to help on their fields.²²

Support after peace may go direct to farm households, but equally important is to **restore critical infrastructure**. Roads are one example. With roads open and passable, traders can go back to their business, buying up harvest surpluses and providing consumer goods in return – few farmers, even in countrysides ravaged by war, farm for subsistence alone.

It goes almost without saying that **getting schools and health posts up and running again** matters. (Apart from anything else, few things establish the legitimacy of government in villages more than the sight of functioning schools and health posts.) Less obviously, administrative services in rural market centres may be almost as valued: a local office where farmers and their families can obtain identity cards, register as voters, log claims to land, and so on – farmers and their families need to reassume their roles as citizens.

These considerations may be taken to mean that smallholders need little else to recover their farming livelihoods. It is true that many farmers in the Global South manage to survive with very little outside assistance. Farmers, when interviewed,²³ do not expect assistance – they know from experience that they are far down the queue, that election promises are often not fulfilled and that, when funds and goods are distributed, all too often gatekeepers channel them to favoured elites (ruling party members, for example), rather than the majority.

22 Sometimes, village leadership may be altruistic, assisting widows with collective work gangs. Accounts of this may be heart-warming: surveys, however, tend to show that vulnerable households receive little communal support.

23 The following reflections come, most recently, from interviews with cocoa growers in western Ghana in late 2019 (Wiggins, personal communications).

So, should governments – and their development partners, and NGOs – just leave farmers to it, to get on with their farming? Well, perhaps. But this risks missing the potential for something more than just recovering. To leave farmers with the minimal support of some public goods flies in the face of evidence that most smallholders are desperately short of capital, especially for more costly items such as oxen to plough, pumps to irrigate; that they lack reliable technical advice on better methods and access to new technology such as improved seed; that rural access roads may just about be passable, but their poor repair drives up operating costs so farmers pay unduly to get their produce to market; and that irrigation schemes need repair. It is hard to believe that some additional effort and support to address these issues would not repay public investment.²⁴

24 Studies of public investment in physical public goods in farming areas (Fan and Rao, 2003) and in agricultural research and extension often show (very) high rates of return (Alston et al., 2020).

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ANNEX A: COUNTRY CASES SUMMARISED

A.1 Cambodia

Cambodia's history since the 1960s has been one of the most dramatic of any in the world. First the country plumbed the depths, initially under the impact of US bombing in the late 1960s, to be followed in the 1970s by the murderous regime of the KR. Cambodia then recovered gradually in the 1980s and early 1990s, to emerge, by the new millennium, as one of the fastest-growing countries of the Global South.

Few, if any, countries suffered more (proportionate to its size and population) from conflict in the 20th century than Cambodia. By 1979, when the KR was driven from Phnom Penh, after more than a dozen years of violence, the country lay in ruins. Many roads, buildings, towns – and all their associated physical infrastructure – had been destroyed or were in dire need of repair. At least one million people died, several million more had been displaced, and many were in refugee camps across the Thai border.

To address the question of how agriculture recovered from this, is to address the larger question of how the country recovered. Fundamental to overall recovery were the political settlements forged since 1979 – with critical conjunctures in the late 1980s that led to the 1991 peace accords, and again in 1997/98 after the ending of power sharing. Not surprisingly, after the depths of violence into which Cambodia sank in the late 1960s and 1970s, maintaining a political settlement that has allowed peace and security across much (but not all, not until 1998) of Cambodia has been the imperative. This story, in turn, cannot be disentangled from the fate of the economy, because, without economic revival, no state would be legitimate.

So, how was the economy restored, an economy that by the late 1990s would grow vigorously, more so than most other countries – making Cambodia a growth star among low-income countries? Under the KR, the economy had been reduced to a shell, as the party sort to control production and direct it to food and essential manufactures. Markets were not allowed, trading was banned, and money was dispensed with.

After 1979, the government, despite its avowed socialism, allowed a return to private enterprise – above all in individual farming – and an economy articulated by markets. Policy was hesitant, because the ruling party dreamed of a socialist economy in which the state would play a leading role; but pragmatism prevailed – there was to be no return to the wild ideological dreams of the 1970s that resulted in destruction and mass murder.

After peace between the government and the KR forces was agreed in 1991, and above all after a coalition government was formed in 1993, economic policy became completely liberal. Any ideas about extensive state management were abandoned. Private enterprise was not just permitted, it was feted. Investors from Thailand, Malaysia and other Asian countries – garment manufacturers in search of cheap labour – took advantage of generous incentives to set up factories. With peace also came aid, as donors provided funds on a

scale not seen since the 1960s: funds that allowed the state to begin to provide schooling and health services, rebuild and repair roads, and to provide public services essential to development and political legitimacy.

From then on, the economy grew ever more quickly, cementing the political settlements, and providing wealth that could be used first and foremost to buy off those who might rebel, and second to create jobs and incomes for ordinary people. But the political settlements were far from ideal. Donors, seeking good governance, were aghast – but, as it became clear that the state kept the peace and allowed economic growth, their objections have been muted. One should not imagine that economic growth revived quickly. Cambodia staggered through the 1980s, crippled by international sanctions²⁵ and the continuing border wars with what remained of the KR. With the removal of sanctions and normalisation of relations with the People's Republic of Kampuchea (PRK) government of Cambodia from 1989 onwards, and above all with the peace accords of 1991, the economy recovered more strongly; but it was to be until the late 1990s that investment spurred rapid growth.

Agriculture, despite being the main source of livelihoods in Cambodia, is a side plot at best in this story. In the 1980s, the government could do little to revive agriculture, other than to begin repairs to roads, carry out some irrigation works, and to allow markets, and to permit smallholders – organised in communes – to farm the land individually, as they had always wanted to. Government lacked the staff and budgets to do much more for farmers.

A certain benign neglect of farmers persisted in the 1990s, but two modifications were significant. One, the return of aid donors with their grants and loans meant it was possible to fund agricultural and rural development. Two, the government believed that larger-scale commercial farming could take advantage of unused and little-used land: large concessions were granted to companies to grow rubber, palm oil, cassava, and other commercial crops for sale, and in some cases, for export.

Lessons from Cambodia about agricultural recovery after conflict

One, agricultural policy may be subordinate to the imperatives of restoring and maintaining peace – which means a political settlement must be forged, and must hold. It is hard to underestimate just what political art and compromise may be necessary to do so. The room for agricultural investment and policy may be mightily constrained by this political imperative.

Two, after conflict, the road back to prosperity may be long. The means to invest in agriculture may be limited, and extremely limited compared to the many needs that commonly arise in reconstruction. It is not hard to plan to revive agriculture, but where is the capital for public investments? Where is the capital for farmers to invest? And where are the skilled personnel to run public services for farmers? All of these can be in pitifully short supply.

Three, it is not that nothing can be done, nor that decisions made do not matter. At worst, governments can fritter away what resources they have on the wrong investments: they can stymie, through ill-considered policies, the private efforts of farmers and those who work with them in supply chains.

²⁵ Imposed because the regime installed after the KR was chased by Vietnamese troops from Phnom Penh and was not recognised by most states, being seen as puppets of Vietnam, itself being punished by the West for having won the Vietnam war. Vietnam's troops finally left Cambodia only in 1989.

At best, what the state can do complements the work of farmers and traders, perhaps to more effect than might be imagined. A functioning state that guarantees peace is essential, a state that provides some public goods is necessary, but beyond that, much of what drives agriculture comes from the private initiatives of farmers and those they do business with – traders who collect crops, some input dealers who sell seeds, fertiliser, tools and so on.

After 1979, Cambodia saw its farming grow at more than 5% a year through to the early 2000s, well ahead of its population (2.7% a year). Given the relative neglect of farming, the only way to explain this growth – rates that many low-income countries would envy – is to acknowledge the cumulative impact of all the things that farmers did to raise output on their farms. Immediately after conflict, when fields were lying unplanted, or half-attended at best, it is not hard to envisage some mighty increases in output as regular farming resumed – as reflected in some spectacular percentage increases in output registered in the early 1980s. But, after a few years, many fields were back in use and the scope for such leaps was much attenuated. Growth was sustained, however. That must come from small improvements – some additional land tilled, some more use of manure, switching some land out of paddy to higher-value vegetables, keeping a few more chickens and pigs, etc.

Given peace and security and the freedom to trade, farmers, it seems, went to work and to good effect. Nothing else seems able to explain the growth rates recorded.

A.2 Mozambique

Violent conflict in Mozambique began with the armed struggle for independence in the mid-1960s. In 1975, the country gained independence from Portugal. The independent government, led by FRELIMO, adopted a socialist approach to development. A one-party state was established, and revolutionary reforms implemented from 1977 onwards aimed at dismantling colonial power in favour of state and collective enterprise.

FRELIMO development strategies disrupted the smallholder economy, through widespread and indiscriminate nationalisation of private property; and forced villagisation and collectivisation of peasant livelihoods. Opposition was met by oppression stoking resentment. Regional differences added to tensions: the south dominated politics, the centre and north were marginalised.

In 1977, a brutal civil war erupted led by RENAMO, supported by South Africa and Rhodesia (now Zimbabwe). The war lasted 16 years: nearly one million people died, five million were displaced.

The combination of war, population displacement, trade embargoes with the two neighbouring white regimes, the departure of many Portuguese settlers together with their capital and skills, and policies that repressed private enterprise led to a collapse of the settler economy with its export crops, and hobbled the remainder of the economy, dominated by smallholder farming. During the 1980s physical infrastructure was destroyed, lives were lost, and the economy contracted.

Civil war ended with a peace agreement in 1992, as RENAMO laid down arms to become a formal opposition party. But by then Mozambique had become one of the world's poorest countries.

In 1994, the country embarked on reforms with economic liberalisation and some decentralisation. Government invested in roads, education, health and communications: private investors were encouraged to invest in developing the country's considerable natural resources, among them minerals and agriculture.

Mozambique enjoyed a remarkable economic recovery after peace, growing at almost 8% a year on average between 1993 and 2014. In the 1990s, much of that growth came from agriculture. The south recovered faster than the centre and north: the south was less hit by war, and was closer to South Africa, a key trade partner and source of foreign investment.

Immediately after peace, government hoped that foreign investors in large-scale farms would bring in capital and know-how, and that this would spill over to smallholders through outgrowing schemes. Although some of the commercial farms succeeded in boosting output, and although some smallholders were able to recover from war by opening up old fields, it took until the late 1990s before government recognised, as analyses of households surveys revealed the poverty of so many rural households, that extra efforts were needed if most smallholders were to raise production and productivity significantly.

A.3 Southern highlands of Peru

Southern Peru in the 1980s gives insight into the effects of conflict in a middle-income country, albeit a country divided economically and socially between the relatively prosperous coast and the impoverished highlands (sierra). The southern highlands of Peru were the poorest region of the country before conflict, largely rural, peopled by smallholders growing crops and raising livestock primarily for subsistence.

The 1980s insurrection in the southern highlands (Sierra Sur) by Maoist guerrillas provoked a fierce response from the army. Both sides tried to control smallholders, and both suspected them of siding with their enemies. Peasants were trapped in the middle and suffered massacre by both sides: 69,000 died, and 600,000 fled the fighting.

War much disrupted the highland economy, but it did not lead to serious loss of infrastructure. As fighting died down in the early 1990s (full peace was to be delayed until 2000 or so), the highland economy rebounded, despite government doing very little indeed in the 1990s to support smallholders.

Farmers benefited, however, from strong economic growth in the 1990s that eventually led to many more jobs in the 2000s. From 2002 onwards, the government increased its spending on roads, irrigation, schools, health posts and cash transfers in rural Peru by six times in real terms.

From that time, poverty in the Sierra Sur fell rapidly, in part owing to agricultural recovery, but probably more because of non-farm jobs and cash transfers to mothers on low incomes.

A.4 Rwanda

Rwanda's civil war emerged when rebel group the Rwandan Patriotic Front – composed largely of Tutsi refugees who had spent decades in exile – launched a war against Rwandan Armed Forces in 1990. The conflict escalated in April 1994, resulting in a genocide that killed one million persons and displaced another two million.

Rwanda is a geographically small country with one of the highest population densities in sub-Saharan Africa. Most people live on small, fragmented farms, which they rely on for subsistence production. The genocide – which saw killings take place at a pace of about 8,000 Tutsis per day – led to the mass movement of farming families either internally or to neighbouring countries. This triggered a food shortage that caused the price of staples to skyrocket, and a food security crisis to ensue.

The question of Rwanda's recovery from this conflict, particularly for agriculture, cannot be discussed without acknowledging the political pressures in the country at the time. Immediately following the war, the rebel-led government was occupied with maintaining peace and bolstering political support. It focused primarily on imposing order in the country; fighting off threats from dissident Hutu extremists; and accommodating Tutsi refugees on abandoned land to cement their support. It was only a decade after peace that the government began to form and implement a strategy for agricultural recovery. This begs the question of what happened to agriculture between 1994 and 2004.

After a total collapse of the economy in 1994, real gross domestic product (GDP) rebounded and annual growth rates stabilised, signalling the resurgence of economic activity. Food production improved thanks to good rainfall, returnee refugees resuming land cultivation, and farmers' rehabilitation strategy of switching to short farming cycles and high-value crops. Most farmers used saved seeds to resume farming, and, where this wasn't possible, they relied on those provided by aid agencies as part of emergency relief efforts.

Emergency seed relief and farmers' own seed stocks lasted only so long. A seed shortage, drought, and slow disbursement of donor recovery funds saw production fall, triggering a food security crisis in the early 2000s. This continued until around 2005, when the government responded with a series of interventionist policies consisting of land consolidation, villagisation and crop specialisation. They focused on modernising the agriculture sector and promoting production of export crops such as coffee and tea as part of a broader drive for economic growth and transformation.

According to government data, food production increased in tandem – production rose 33% from 2007 to 2013 – hailing its state interventionist policies a success. However, recent revelations about Rwanda's flawed statistics systems – driven by poor research methods, top-down pressure to report positive outcomes, and less impressive results from new and improved surveys – show that agricultural recovery was minimal during this period and clearly at odds with the prevailing consensus that Rwanda underwent rapid post-war agricultural transformation.

Moreover, the government's recovery strategy proved harmful to smallholder farmers. Subsistence practices were disrupted, poverty worsened, and social relationships and trust among smallholding farmers deteriorated. Meanwhile land-use consolidation failed to have a positive impact on crop yields for households with landholdings of less than one hectare.

Nevertheless, the emergence of the new and corrected data set in 2014 spurred the government to make significant efforts to boost agriculture. It has: heavily invested in infrastructure for post-harvest storage, transport and logistics; built agro-processing factories; and devised and implemented value-based export strategies for traditional cash crops, coffee and tea, as well as vegetables, flowers and silk. Today, Rwanda is internationally recognised for its high-quality single-origin coffee.

The government has since responded to criticisms concerning aggressive enforcement of crop specialisation on smallholder farmers. Growing more food-security crops (sorghum and sweet potatoes) and intercropping practices are now permitted under official policies.

A.5 Sierra Leone

Sierra Leone presents an outstanding case of economic and agricultural recovery despite undergoing a long and brutal civil war, from 1991 to 2002, that decimated the physical and social fabric of the country. The rebel army, the Revolutionary United Front, subjected civilians to vicious and humiliating acts of systematic rape, mutilation and murder, often by children forcibly recruited into the war. Meanwhile, much of the country's rural and urban infrastructure – electrical, water and telecommunications – was destroyed beyond repair. An estimated 70,000 Sierra Leoneans were killed, and over half of the population was displaced.

The economy contracted at an average rate of 4.5% per year during the war. The agriculture sector, which engaged 60% of the population, was hit hard. Families fled rural areas, abandoning their land and livestock; farm inputs and infrastructure were vandalised; and marketing and distribution channels deteriorated. Crop and livestock production was devastated, and food security weakened.

Despite the destruction caused by the bloody civil war, Sierra Leone made a swift recovery. Between 2000 and 2007, GDP rose from 3.8% per year to 7.5% per year, bolstered by the re-opening of large-scale bauxite and rutile mines and a resurgence of the agriculture sector. Despite some fluctuations, export of coffee and cocoa increased between 2001 and 2011, while rice production improved more than five-fold between 2000 and 2006.

Sierra Leone's impressive post-war growth was not a coincidence. Farmers – despite losing most of their seeds to deterioration, theft and rebel-inflicted fires – took advantage of strong social networks to buy or borrow seeds, while credit from local *osusu* savings groups helped rebuild their livelihoods. Some resumed or took up artisanal diamond mining, using the additional income to purchase farming inputs.

As soon as peace was restored, the government sought assistance from the international community to develop the country's agricultural recovery strategy, paving the way for a series of programmes and initiatives aimed at resettling and supporting displaced farmers. These activities were supported by a 20% increase in government expenditure and a sharp rise in donor funding from US\$3 million in 2003 to US\$50 million in 2009. Farmers were reunited with their land to commence cultivation, and they benefited from the development of farmer field schools, agricultural cooperatives, and seed and tool provisions.

Sierra Leone's rapid post-war growth did not last, however. The 2008/09 global economic crisis and the 2014 Ebola outbreak caused GDP growth to deteriorate steadily, and then dramatically. Since the war, periods of modest growth have been offset by the country's dependence on mineral exports, which have left it vulnerable to external shocks.

More could have been done to protect the economy during bouts of volatility. Larger and more equitable government spending on agriculture, better-coordinated donor funds to avoid duplication and conflicting advice to farmers, and greater efforts to reintegrate youth back into rural communities could have contributed to a sustained agricultural recovery.

A.6 Northern Uganda

In 1986 Museveni finally ended most of the intermittent warring that dated back to the end of Amin's regime in 1979. For Uganda as a whole, his victory put an end to the chaos and economic decline that started with Amin's coup in 1970. Early independent Uganda has seen economic growth based on agricultural exports; but by 1986 the economy was on its knees. The peace Museveni was able to impose on most of Uganda led to recovery, but not everywhere in the country.

Museveni's triumph led to rebellion in the north of the country, centred in Acholi. There, fears of retribution against the Acholi who had supplied many of the troops that opposed Museveni, allied to longstanding grudges that the north was marginalised, led to rebellion. Two prophets, supposed embodiments of ancestor spirits, emerged to form guerilla armies in the bush, forcing recruitment of local people including children, terrorising any local who stood in their way, and staging ambushes on government forces.

Their campaign would last until they were effectively defeated around 2006, when the remnants of the rebels fled across the border to South Sudan and DRC. Over the 20 years, the conflict killed an estimated 300,000 civilians, and saw up to two million people interned in government camps, plus others who had been abducted by the rebels. Physical infrastructure was destroyed, public services were disrupted. Crop farming was much curtailed by war, many former fields lay fallow; raiding led to the loss of 90% of the livestock.

When peace was restored, many of the displaced returned to their villages and resumed farming. Not all households were able to do so: some had lost members, most of them men, to conflict and so lacked labour to clear fields and to plough. Government launched programmes for peace and recovery. Classrooms, boreholes, health centre wards and feeder roads were repaired. Public services, above all schools and health posts, were restored. Some support, including renewed agricultural extension, was provided for farmers. Social protection was introduced for those on very low incomes.

All this led to some recovery of agriculture and the rest of the northern economy, but the rebound has been limited. One bright spot has been cash crops, partly led by output from a few large-scale commercial farms set up by foreign and domestic investors. In some cases, however, ownership of land has been disputed, as the displaced returned to reclaim their farms. Some commercial farmers were accused of not engaging with local communities on lands claimed by both parties.

Northern Uganda has remained with lower rates of education and higher rates of poverty than the rest of the nation.

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