I. Beyond fragile states: understanding security and development through a systems approach

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Countries affected by war and instability (collectively referred to as fragile states) face developmental, environmental, humanitarian and other complex challenges. This section examines this complexity using a systems approach to fragility. It focuses on recent trends in these fragile states, both in terms of their development outcomes and the international policy responses in the form of the emerging Sustainable Development Goals. A case study on Africa demonstrates the value of applying a systems approach.

**Systems approach to complex challenges**

Systems thinking means developing an understanding of how all strategic actors engage with each other in processes to produce outputs or outcomes. Collectively, these interconnected parts comprise a system and the performance of the system is measured by its outputs or outcomes. Systems are frequently interconnected, have amplifying and stabilizing feedback loops, are occasionally cyclical, chaotic or otherwise non-linear, and are quite often complex (see figure 8.1). Much systems thinking has developed from environmental studies: the concept of ecosystems is a case in point; air, water, soil, weather and climate, plants and animals have interconnected effects on the performance of each other and the system as a whole.

The systems approach offers powerful insights for policymakers working with fragile states as it implies that, to succeed, any solutions will need to be internally consistent with the rest of the system. However, a systems approach solution for resilience—or anti-fragility—may be short-lived, as systems may be dynamic with problems and solutions constantly evolving and adapting even as they are implemented. Furthermore, since complex act...
systems in the real world cannot be replicated in a laboratory, there may be no counterfactual outcomes against which performance can be tested. Because of the complexity of the system and possible spillover effects across domains (e.g. social, political, economic and humanitarian), the problem and the effects of the solution, intended or otherwise, must be understood fully if any solution is to improve the performance of the system.

Social systems, like states and societies, are highly interconnected through borders, trade, tourism, financial markets, migration, the Internet, the environment and other porous boundaries, and it can therefore be difficult to define the edges of a complex system. In the fictional country stylistically represented in figure 8.1, past inter-ethnic grievances result in recent elections being highly contested, which in turn leads to political violence. The violence causes a chain of events, and leads to months of industry shutdown and interrupted economic activity resulting in significant economic losses. The people displaced by the violence have been moving within the country, causing strain on already limited water resources. If the system amplifies these effects by, for example, generating new grievances, it may produce mistrust and renewed violence during the next

election. Any solution to these challenges will require an understanding of
the feedback effects and their implications in other domains. For example,
a heavy-handed security response may result in heightened grievances and
more displacement in the social and humanitarian domains. In systems
thinking, it is understood that the border of the system in such a complex
situation is a subjective decision set by the policymakers defining the prob-
lem and the solution.

The fictional example in figure 8.1 is simple, but nevertheless demon-
strates the complexity of the relationship between security and develop-
ment in such contexts. Systems can overlap with each other, reside inside
other systems, and interact with systems and the rest of the world. Prob-
lems and solutions associated with statebuilding and peacebuilding often
transcend and interact across the humanitarian, development, security,
justice, political or environmental domains. Change can occur at a speed
and depth that creates both challenges and opportunities. A systems
approach is useful for identifying not only complex problems and chal-
lenges, but also the possibility that there is no ‘best’ solution to these chal-
 lenges. When challenges are seemingly intractable and unsolvable, or are
too complex to be fully understood, they are often called ‘wicked prob-
lems’. The concept of wicked problems is useful for identifying when
‘second best’ and ‘best fit’ solutions are necessary to move past impasses,
political or otherwise. Mapping such a system can reveal unintended
consequences, feedback loops and other cyclical effects. Due to the sub-
jective nature of defining both a system and a problem, interactive mapping
can help to identify differences between stakeholders in what the problems
are and what the possible solutions might be.

Fragile states and systems

Systems thinking provides a new lens for understanding and engaging with
fragile states. The focus on states, their strength or fragility, is not new.
From considerations on how to build state strength in post-colonial polities
in the 1960s to literature reflecting disillusionment with the state and its
failures in the 1980s and 1990s, academic literature on state fragility

4 See Peacebuilding and Statebuilding Goals (PSGs) and the emerging Sustainable Development
Goals (SDGs) that reflect the complexity of holistic systems approaches to development. New Deal,
‘Peacebuilding and statebuilding goals’, <http://www.newdeal4peace.org/peacebuilding-and-state
building-goals/>; and United Nations, General Assembly, Report of the Open Working Group of the


6 Conklin, J., Dialogue Mapping: Building Shared Understanding of Wicked Problems (John Wiley
& Sons: West Sussex, 2006).
preceded the recent attention to fragile states, though the corpus on state fragility has grown exponentially since the beginning of the 21st century.\(^7\)

The discourse on fragile states came to the fore in the early 1990s in the wake of the cold war as a way of identifying and describing the new sources of threats and state failure, as well as the origins of the terrorist attacks on the United States of 11 September 2001.\(^8\) The international community expanded its attention to state fragility and supported fragile states with the aim of ‘achieving turnaround’ and ‘improving development aid effectiveness’ (World Bank, 2002), ‘creating resilience’ (Organization for Economic Co-operation and Development, OECD, 2008) or ‘making a durable exit from poverty and insecurity’ (OECD, 2007).\(^9\)

Fragility has frequently been defined at the state level because of the primacy of national actors and the availability of national level statistics. As a result, the term ‘fragile states’ is a shorthand term that encapsulates the countries that cannot manage economic, environmental or political shocks within their political and institutional processes.

A robust critique of the use of this term has developed largely based on the heterogeneity of countries classified as fragile, though the point has also been made that ‘fragile’ can be interpreted pejoratively.\(^10\) The broad use of the term ‘fragile state’ can lead to conceptual fuzziness and mis-diagnosis of challenges—there are many so-called fragile states that have extremely resilient communities and societies within the political territory of the state. Likewise, there are fragile societies in otherwise resilient states.

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Nonetheless, country level analysis is useful for descriptive purposes. Annual analysis by the OECD and the World Bank, among others, usefully reflect global trends within this disparate group of countries. For conceptual consistency with other literature, this chapter uses the OECD definition and list of fragile states.\footnote{Based on the OECD classification for 2015, the following 50 countries and economies are defined as fragile: Afghanistan, Bangladesh, Bosnia and Herzegovina, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic People’s Republic of Korea, Democratic Republic of the Congo, Egypt, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Iraq, Kenya, Kiribati, Kosovo, Liberia, Libya, Madagascar, Malawi, Mali, Marshall Islands, Mauritania, Micronesia, Myanmar, Nepal, Niger, Nigeria, Pakistan, Rwanda, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sri Lanka, Sudan, Syrian Arab Republic, Timor-Leste, Togo, Tuvalu, Uganda, West Bank and Gaza Strip, Yemen, and Zimbabwe. For methodology on how to compile fragile countries and economies see OECD, \textit{Fragile States 2014: Domestic Revenue Mobilisation in Fragile States} (OECD: Paris, 2014); and OECD, \textit{States of Fragility 2015: Meeting Post-2015 Ambitions} (OECD: Paris, 2015).}

Applying a systems approach to the concept of fragility would mean defining fragility at the appropriate level or levels (sub-national, national, regional, global, (a-)sectorally, temporally or even along non-geographical boundaries to the system) in order to better identify a solution. This chapter employs the term ‘fragile system’ to reflect this requirement when not explicitly reporting on trends for specific countries. Fragile systems are settings where low security and low development interact to form complex challenges for both development and security.

According to the OECD’s definition of a fragile state, approximately 1.4 billion people live in 50 fragile states. The population of all fragile systems may be larger, depending on how the systems are defined. Today, 43 per cent of the world’s extreme poor (those living on less than $1.25 a day) live in fragile states.\footnote{OECD, \textit{States of Fragility 2015} (note 11).} While global poverty reduction efforts have achieved considerable success, progress in fragile states has lagged and current models suggest that more than half of the world’s extreme poor will be concentrated in fragile states by 2030 (see figure 8.2).\footnote{Burt, A., Hughes, B. and Milante, G., ‘Eradicating poverty in fragile states: prospects of reaching the “high-hanging fruits” by 2030’, Policy Research Working Paper WPS7002 (World Bank: Washington, DC, Aug. 2014).}

In addition, fragile systems have resulted in violence and other complex challenges. Recent trends suggest that the world is becoming less peaceful, primarily due to a rise in the number of armed conflicts, an increase in armed violence involving non-state actors (often, but not always labelled as ‘terrorism’) and a consequential increase in the number of refugees and displaced persons.\footnote{Melvin, N., ‘Armed conflict: overview’, \textit{SIPRI Yearbook 2014}, p. 42; and Institute for Economics and Peace (IEP), \textit{Global Peace Index 2014} (IEP: Sydney, June 2014).} However, climate change and rising economic inequalities within and between states, as well as other factors, are also associated with growing levels of conflict. Indeed, as conflict increases, development gains in countries affected by the conflict are reversed and new poverty is
created. A civil war or humanitarian crisis in a developing country can set it back a generation in terms of human development and economic growth.\textsuperscript{15}

Nowhere is this more apparent than in the security and development challenges and opportunities faced by Africa (see the discussion below).

However, it is important to note that not all fragile systems are fragile due to war or direct violence. Many face uncertainty and instability that lead to prolonged periods of lagging development and limited economic growth.\textsuperscript{16} In these systems, the challenges faced cannot clearly be defined as development, humanitarian, security or diplomatic and the solutions may defy singular classification as well. Fragility can be caused by political uncertainty around contested elections and constitutional processes, by limited government capacity to overcome other development challenges, by natural or human caused disasters and by systemic shocks including those associated with climate change, particularly among small islands.


\textsuperscript{16} This uncertainty, instability, fear of violence and a missing positive peace may also be interpreted as structural violence as opposed to direct violence. See Galtung, J., ‘Violence, peace, and peace research’, Journal of Peace Research, vol. 6, no. 3 (1969), p. 171.
nations. Of the 50 states identified as fragile by the OECD, nearly half did not experience any battle-related deaths in 2014.17

A person living in a fragile state is nearly twice (1.76 times) as likely to live in extreme poverty as one living in a non-fragile state. A school-aged child living in a fragile state is almost four times (3.78 times) as likely to be out of school than his or her counterpart in a non-fragile developing country. Similarly, a child born in a fragile country is 2.6 times more likely to die before their first birthday than one born in a non-fragile country. These numbers illustrate both the severity of the development effects of fragility as well as their generational impacts—poverty, malnutrition, lack of access to clean water and sanitation, lack of access to education—which have repercussions for future development and make progress towards development goals more difficult to achieve.

Applying a systems approach to understand challenges and opportunities in Africa

According to the OECD list, almost two-thirds of fragile states are found in Africa (30 out of 50) and the continent is changing at an extraordinary speed. Over the last decade, Africa has seen rapid economic growth (5.3 per cent in 2005–13, 4.6 per cent in 2014 and projected at 5.2 per cent for 2015–16) and transformation that have expanded opportunities and improved living conditions for millions of people.18 Poverty levels are falling, incomes are rising and education and health outcomes are improving. However, changing patterns of conflict, urbanization and slum development, a youth bulge, inequality and social exclusion, climate pressures and environmental damage, all represent challenges for building resilience and have the potential to place African socio-economic and political systems under considerable strain and hamper sustainable development.

Africa’s population is growing fast and is expected to nearly double to 2.4 billion in 2050. By 2030, 37 per cent of its population will be below 15 years of age and 57 per cent below 25 years.19 This expanding labour force represents a tremendous opportunity for the continent. However, this demographic trend must be understood within framework of the

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17 OECD, States of Fragility 2015 (note 11).
19 These results are based on the ‘medium-variant’ projection, which assumes a decline of fertility for countries where large families are still prevalent as well as a slight increase of fertility in several countries with fewer than 2 children per woman on average. See UN Department of Economic and Social Affairs (DESA), Population Division, World Population Prospects: The 2012 Revision (UN: New York, 2013).
labour systems that will need to absorb these new workers. In South Sudan, where 62 per cent of the population is below 25 years of age and the land-locked economy enjoys little economic diversification, the labour market may be simply too small to absorb all of these new workers. This ‘youth bulge’ may therefore be a driver of fragility in Africa.\textsuperscript{20} In 2013 youth unemployment in northern Africa was the highest in the world, reaching more than 29 per cent. Further, official youth unemployment in sub-Saharan Africa averaged 11.8 per cent, which was twice the adult unemployment rate.\textsuperscript{21} As demonstrated in the Arab Spring, the combination of youth unemployment, improved education and the spread of information technologies can interact to create political instability in a fragile system.

Urbanization also creates amplifying feedback, which impacts other systems. Africa’s urban population is projected to grow 45 per cent faster than the continent’s population as a whole, with urban population reaching 55.9 per cent by 2050.\textsuperscript{22} While cities may be the engines of the economic growth described above, the influx of economic migrants and population growth may overwhelm already struggling social and infrastructure systems. Much of this growth is currently expected to be in informal settlements with 100 million Africans living in slums by 2030. Such unplanned urbanization represents a potent threat to stability in African cities.\textsuperscript{23}

Furthermore, climate change is costing African countries an estimated 3 per cent in gross domestic product (GDP) each year and 20 per cent more people in Africa will be at risk of hunger by 2050 due to the changing climate.\textsuperscript{24} The relationship between climate change and conflict is complex, revealing a wicked problem that may never be fully understood. Several studies have found that as weather patterns become more volatile and as countries become warmer, the threat of conflict may increase, yet the correlation between extreme weather resulting from climate change and violent conflicts remain an open question.\textsuperscript{25} Nonetheless, systems will need to

\textsuperscript{23}In 2013, around 36% of the population in conflict-affected fragile states lived in urban areas. Authors’ calculations based on the data by UN DESA (note 222) and OECD fragile states lists (note 11).
be adaptive and evolve to respond to new stresses associated with climate change.

In the 1970s and 1980s there was an average of 12 conflicts per year in sub-Saharan Africa, including inter-state and civil wars. However, the 1990s saw a dramatic increase in the number of conflicts and communal violence.\(^\text{26}\) While the trend levelled off in the early 2000s, there has recently been a resurgence in violence on the continent. All of these trends may interact to create new challenges for peace and sustainable development in Africa, ranging from state level violence to communal violence between non-state actors. A systems approach can help to reduce spillover effects like communal violence by, for example, creating a better understanding of migration (why people move, where they are likely to move and how they can be integrated into the local economy and society).\(^\text{27}\)

**The post-2015 sustainable development agenda**

The Millennium Development Goals (MDGs) established at the United Nations Millennium Summit in 2000 focused on some of the most pressing global development challenges for 2000–15 (see box 8.1). With progress in implementing the MDGs set to be discussed in 2015, there is a clear need to consider the special case of fragile systems—mostly enclaves of lagging progress in African countries—which may be left behind in the next generation of development.\(^\text{28}\) As argued above, security and security-related issues become development issues for these fragile systems. According to the OECD, only a third of fragile states will halve poverty by 2015, whereas two-thirds of non-fragile states are expected to meet that goal. Similarly, there are dramatic differences in fragile states’ progress towards the MDGs for primary education, maternal mortality, and access to water and sanitation. In setting a new global agenda for sustainable development, it is vital to learn from previous security-related experiences, especially when addressing the complex challenges faced by the world’s poorest countries.

Sustainable development is defined as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’.\(^\text{29}\) As these needs are increasingly being defined in terms of economic and social well-being, freedoms and choice, and

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environmental protection, a systems approach is necessary to capture the positive and negative spillover effects and trade-offs across these dimensions. For example, within sustainable development concepts, natural and renewable resources (including the future value of those assets) are treated as capital. Likewise, social capital, not normally captured by balance sheets or measures of investment, will also need to be valued as part of an equitable future needs assessment. Through a global, consultative process led by the United Nations (UN), sustainable development will be reflected in a new set of 17 development goals, including a new objective which sets out to ‘promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclu-

Box 8.1. The post-2015 global development agenda process

In 2015, having reached the target date of the Millennium Development Goals (MDGs) adopted at the United Nations Millennium Summit in 2000, the international community will start discussions on the future development agenda. At the 2010 High Level Plenary Meeting of the UN General Assembly to review progress on the MDGs, UN member states called for new thinking on ways to advance the development agenda beyond 2015. In response, UN Secretary-General Ban Ki-moon established in 2012 a UN System Task Team on Post-2015 and launched a High Level Panel of Eminent Persons on the Post-2015 Development.

The cornerstone of the emerging global narrative on development was established at the UN Conference on Sustainable Development (Rio+20) in 2012, with the adoption of its outcome document The Future We Want. The outcome document described the lessons learned from the two decades of development experience and called for an inclusive process to develop a set of sustainable development goals through the creation of an intergovernmental Open Working Group on Sustainable Development Goals. Both the High Level Panel and the Open Working Group have strived to form a single development framework, with poverty reduction and sustainable development at its core. In parallel, in order to foster an inclusive, open and transparent global conversation, the UN Development Groups have initiated national, global and thematic consultations involving partnerships with multiple stakeholders (including local authorities, civil society, the private sector and academia). The Secretary-General synthesized these inputs into the report The Road to Dignity by 2030 and recognized the 17 Sustainable Development Goals (SDGs) laid out by the Open Working Group to be the main basis for the Post-2015 process. During 2015, the UN member states will negotiate and adopt the final SDGs.

Objections were raised by some UN member states against the new goals in relation to the inclusion of concepts like rule of law (as opposed to the later formulation as ‘access to justice’), issues related to sovereignty and foreign occupation and the means of implementation. However, the mere proposal of including peace, social inclusion, justice and relevant national institutions that provide these public goods, reflects the evolving global understanding of the relationship between security and development.

**Conclusions**

Fragile states are a special type of fragile system, defined at the national level. These states are vulnerable because they lack effective, accountable and inclusive institutions, as well as diversified economies and inclusive political systems necessary to manage economic, social, environmental or political shocks. In most cases, violence has the effect both of magnifying underlying social and economic pressures and eroding the institutions needed to manage shocks, creating a fragility trap from which it is very difficult to escape.

By using systems thinking and linking complex problem solving in fragile systems in current development theory to the concept of resilience within the sustainable development agenda, security and development research can evolve. It is becoming increasingly clear that complex phenomenon like war, humanitarian emergencies, poverty, instability and insecurity require a systems approach to identify systems level solutions.

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