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Incorporating "Security" in Sustainable Development Goals (SDG): Insights from Food Security and Climate Change

Ayfer Genç YILMAZ*
Gülşah SEDEFOĞLU**

*Istanbul Ticaret University, Department of Political Science and International Relations
e-mail: agenc@ticaret.edu.tr

**Istanbul Ticaret University, Department of Statistics
e-mail: gsedefoglu@ticaret.edu.tr

Abstract

After drawing a theoretical framework based on a reciprocal approach for understanding the relationship between security and development, the paper suggests a causal diagram in which all Sustainable Development Goals (SDGs) occur as an interdependent whole and security is embedded as "Goal 0" to symbolise the link from security to development or vice versa. The diagram unveils the interaction between development and human and state dimensions of security, arguing that the definition of security cannot be limited to nonviolence or peace. Instead, the diagram emphasises that security, akin to development, is a multidimensional concept. The paper thus brings a comprehensive approach to security, emphasising the interdependence between human and state security, and highlighting how both perspectives contribute to development. By incorporating security in SDGs and making it more visible, the paper aims to bring a solution-oriented perspective to the policy-making process. Finally, the paper discusses the nexus between development and security through the analysis of two cases within SDGs: climate change and food security. The paper concludes that incorporating security in SDGs can provide a basis for implementing effective policies in the transition from sustainable development to sustainable security and successfully putting forward the 2030 agenda for the SDGs.

Keywords:

security; development; sustainable development goals; security-development nexus.

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The end of the Cold War sparked a significant rethinking of security. Constructivist approaches led the way, shifting focus from the state and military towards a wider range of actors and threats (Buzan, Waever and De Wilde 1998, 6). A key moment was the 1994 introduction of human security by the United Nations Development Program (UNDP). This concept highlighted the interconnected nature of security and development, prompting new avenues of analysis. Despite ongoing debate about the complexities and implications of this relationship across different levels – international, national, and individual – the idea that security and development are mutually dependent has gained traction in both fields.

This paper examines the complex relationship between development and security, questioning whether the Sustainable Development Goals (SDGs) should explicitly include “security” as a standalone goal. While the SDGs, adopted in 2015 as successors to the Millennium Development Goals (MDGs), address a broad spectrum of issues, they lack a dedicated security focus. This omission is notable given that the interdependence of security and development has been widely acknowledged. Even the MDGs, established in 2000, included direct references to global peace and security (Stern and Ojendal 2010, 6). Instead of a distinct security goal, the SDGs incorporate elements of security within Goal 16, which emphasizes peace, justice, and strong institutions (The UN General Assembly 2015). This approach, however, arguably fails to give the concept of security the prominence it deserves.

Many scholars explore the connection between development and security from a critical perspective (Duffield 2017; Beall, Goodfellow and Putzel 2006; Klingebiel 2006) and in different historical geopolitical contexts (Hettne 2010). Duffield (2017) explores how the war on terrorism has deepened the interconnection between development and security. He takes human security as “a technology that empowers international institutions and actors to individuate, group, and act upon Southern populations.” In this regard, the balance between development and security transformed to act in favour of security and at the expense of development (Beall, Goodfellow and Putzel 2006), thus prioritizing homeland livelihood systems (Duffield 2017, 13). Similarly, Klingebiel (2006) explores the potential dangers and risks of the securitization of development policy. From a different perspective, Stewart (2013) concludes that the insecurity will impact development through poverty and the lack of development, along with the horizontal inequalities, largely causes conflict. Khagram et al. (2003) underline the linkage between sustainable development and sustainable security. Keukeleire and Raube (2013) examine the EU development policies in terms of its security implications. Cilliers (2006) emphasizes the interdependence of development and security in post-conflict interventions. Finally, De Simone and Iocchi (2022) question whether the security-development nexus came to an end.

This paper makes three key contributions to existing literature. First, it proposes that the relationship between development and security is reciprocal and interconnected.

Achieving security and development go simultaneously, reinforcing each other. Development flourishes in secure environments, while security relies on a certain level of economic development. Despite the UN's frequent acknowledgement of the humanitarian-development-peace nexus (Guterres 2016, 2017, 2018), practical implementation remains a challenge. This paper seeks to address this gap by advocating for a standalone "security" goal within the SDGs. It proposes designating security as "SDG Zero" to emphasize its foundational role, underscoring that all other goals are contingent on ensuring security for both states and individuals.

Second, the paper champions a comprehensive approach to security, recognizing the complementary nature of human and state security. It argues that both dimensions are linked to development, and therefore, their inclusion is crucial for a complete understanding of the SDGs.

Finally, the paper examines the intricate connections between development, security, and the interplay of human and state security through the lenses of food security and climate change – two prominent themes within the SDGs. By highlighting the interconnectedness of various SDGs, it underscores the need for a causal framework to analyze these complex relationships.

This paper relies on an interpretive research design and focuses on understanding social meanings embedded within international politics. Interpretive research often relies upon case studies that focus on the use of discourses in a given context (Lamont 2015, 43). We want to understand how the SDGs should be redesigned to include state and human security by investigating the case of food security and climate change.

First, we explore the ongoing debate surrounding the relationship between development and security, emphasizing the mutually interconnected nature of this connection. We argue that development and security are mutually reinforcing, each requiring the other to thrive. Next, we propose a restructuring of the SDGs to explicitly include both human and state security as distinct goals. This restructuring involves the introduction of a causal diagram to illustrate the interconnectedness of security with other SDG areas. Finally, we examine the specific cases of food security and climate change within the framework of our proposed causal diagram. Through these examples, we demonstrate the interdependence of various SDGs, further highlighting the crucial role of security in achieving sustainable development.

I-Theoretical Perspective: development and security nexus

The concept of "development" emerged historically as a response to the negative consequences of capitalism, particularly the need to mitigate the disruptions caused by industrialization and maintain social order (Cowen and Shenton 2010, 27).

This inherent link between development and security became even more pronounced during and after the Cold War. Western aid to underdeveloped nations often prioritized the security of Western powers rather than focusing on the security and well-being of the people in those countries.

Scholars have explored the relationship between security and development through various levels of analysis. [Tschirgi et al. \(2010, 48\)](#), for instance, distinguish between the individual, national, and international levels. During the Cold War, a clear distinction existed at the international level between development, focused on domestic socio-economic issues, and security policies, concerned with inter-state political and military matters. However, since the end of the Cold War, security and development concerns have become increasingly intertwined at both international and global levels ([Chandler 2007, 362](#)). This period also witnessed the “securitization” of development, shaping the current understanding of the security-development nexus. This nexus represents a set of interconnected goals and strategies for achieving both security and development ([Hettne 2010, 44](#)).

The UNDP’s introduction of “human security” in 1994 marked a pivotal moment in redefining security and its relationship with development. As [Kaldor \(2012\)](#) notes, the 1994 Human Development Report aimed to leverage the concept of security to underscore the urgent need for development. The UNDP highlighted the contrasting security needs of individuals and states ([Hettne 2010, 34](#)), arguing that human security encompasses more than just the absence of conflict. This broadened the understanding of security from a state-centric focus to a more proactive, individual-centric approach. However, despite its appeal, the concept of human security has been criticized for its lack of clarity and analytical precision ([Newman 2004](#)). Interpretations vary, with some proponents focusing narrowly on threats of violence, while others embrace a broader definition that includes vulnerabilities like natural disasters and famine ([Klingebliel 2006, 1-2](#)). This broader interpretation positions human security as an expansive concept encompassing both traditional and non-traditional security concerns ([Tsai 2009](#)).¹

Thus, with the introduction of human security, some scholarly studies defend the argument that human and state security are mostly intertwined. [Barnett and Adger \(2007\)](#) explain how human insecurity increases the risk of conflict. They suggest that any risk to national security may be both a cause and a consequence of human insecurity. For example, UN Secretary-General Kofi Annan, in his speech in 2004, claimed that people in rich countries would become more secure when their governments help underdeveloped countries defeat poverty and disease ([UN 2004, vii](#)). In other words, the security of populations in the Global South can have direct implications for the national

¹ For example, the UN (2003, 3) claims that the concept encompasses “human rights, good governance, access to education and health care, ensuring that each individual has opportunities and choices to fulfill his or her own potential”.

security of countries in the Global North. This interconnectedness was emphasized in the context of the Millennium Development Goals, highlighting the nexus between human security, state security, and development. The comprehensive nature of human security has reinvigorated discussions on the link between security and development, with the concept gaining widespread use among development and security organizations globally (Walton and Johnstone 2023, 4).

In the aftermath of the 9/11 attacks, underdevelopment has been reconstructed as a security issue (Tschirgi *et al.* 2010, 48) and sustainable development has been portrayed as a requirement to avert conflict (Dalby 2019, 117). Floyd and Matthews (2013) underlined the significance of “policy innovations that might facilitate peaceful cooperation and ameliorate economic shortages and difficulties that might cause various forms of insecurity.” During this period, fragile states, civil wars and terrorism have been seen as direct threats to the well-being and security of Western countries (Tschirgi *et al.* 2010, 50). For example, the EU, in its Security Strategy, states that security is the first condition for development. When formulating its security policies, the EU explicitly referenced poverty reduction and cited this as a significant tool for fighting terrorism (European Council 2003, 2).

In the following decade, by the 2010s, with the rise of a post-interventionist approach, the nexus between development and security seemed to break down. The stabilization agenda requires that the Global South should secure itself. Northern countries, in turn, assist them in doing so through a limited role rather than being directly involved in the stabilization process (Walton and Johnstone 2023, 2). In this regard, De Simone and Iocchi (2022) argue that the security-development nexus, a product of the 1990s liberal peacebuilding consensus, has come to an end.

Historical analysis reveals that the relationship between security and development is dynamic and influenced by context. A multi-dimensional theoretical framework is necessary to grasp this complexity and translate it into effective action. While the specific nature of the security-development nexus may shift over time, the fundamental interdependence of these two elements remains constant.

Spear and Williams (2012, 21) propose several ways of framing the relationship between security and development. One view sees it as a zero-sum game, where prioritizing one inevitably undermines the other. Another perspective suggests a positive-sum relationship, where security and development are mutually reinforcing, as articulated by former UN Secretary-General Kofi Annan (UN 2005). A third approach posits a hierarchical relationship, with security concerns dominating development initiatives.

This paper adopts a positive-sum approach. According to this approach, security and development are not mutually exclusive, but rather complementary and reinforcing. This means that investments in one area can lead to gains in the other. Thus, a holistic

approach that addresses both development and security concerns is more likely to achieve lasting peace and security. This framework highlights why integrating security into the SDGs is essential. The following section analyzes the existing SDGs and demonstrates the need for explicitly incorporating security into this framework.

II-Sustainable Development Goals (SDGs) and Security

Sustainable development is an inclusive objective to continuously improve the quality of life and well-being on Earth while considering the ability of future generations to meet their own needs. While the concept of sustainable development gained widespread recognition with the 1987 UN World Commission on Environment and Development report, the term itself had already begun circulating within academic circles in the 1980s. By the 1990s, discussions differentiating economic growth from development fuelled the emergence of new approaches to economic development that prioritized sustainability. This change stemmed from recognizing that development goes beyond simply increasing the economic output, which is today represented by the Gross Domestic Product (GDP) indicator obtained by expressing values of all goods and services produced in a given year, described in terms of a base period. The European Union (EU) has stressed that GDP has inherent limitations by design and purpose as a measure of development in its report on 'GDP and beyond' (European Commission 2009). Specifically, GDP fails to account for crucial factors like environmental sustainability and social inclusion despite its widespread use in policy analysis and its historical status as a leading indicator of macroeconomic activity. Similarly, the UN explored the complex relationship between economic growth and development in the Human Development Report 1996 and introduced the concept of human development. On the other hand, economic growth has been treated as part of the whole in defining development rather than playing an overarching role. The World Bank's *Voices of the Poor: Can Anyone Hear Us?* (Narayan et al. 2000) is one of the most comprehensive studies contributing to the literature on the shifting definition of development and one of the central policy actors undertaken for the World Development Report to gather the views of more than 60,000 people who experienced poverty. The project delves into the experiences of the poor through questions such as "How do poor people view poverty and well-being? What are their problems and priorities?" The results point out that, beyond income, people define poverty based on a range of factors, highlighting its multidimensional nature. However, the key finding of the study is that the majority of people's priority is security: food security, family security, home security, land, and inheritance (Narayan et al. 2000).

Data availability, computational and methodological developments, and the demand for national and international policy play an efficient role in the dynamic improvement of the development concept. Sen's (2000) capability approach expressing the basis of the multidimensional aspect of poverty has also contributed to defining poverty and

development. The UNDP proposed the Human Development Index (HDI), which hinges on the capability approach, as a measure that extends beyond GDP by including income, health, and education in the definition ([Decancq and Schokkaert 2016, 22](#)). Following Sen's capability approach, the Oxford Poverty and Human Development Initiative (OPHI) has developed the Global Multidimensional Poverty Index (MPI) to capture the multidimensional aspect of poverty in developing countries, just as the need to collect more information for measuring development. Thus, development and security have intertwined over time due to the dynamic development structure by intersecting at the human denominator ([Bilgen 2017, 29](#)).

[The UN General Assembly \(2015\)](#) adopted the Sustainable Development Goals (SDGs) entitled "Transforming our world: the 2030 Agenda for Sustainable Development" in 2015 as an extended version of the Millennium Development Goals. The SDGs are listed to eradicate extreme poverty and hunger; to achieve universal primary education; promote gender equality; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria, and other diseases; ensure environmental sustainability; to develop a global partnership for development.

The Sustainable Development Goals (SDGs) comprise 17 interconnected goals aimed at creating a better world by 2030. These goals encompass a wide range of aspirations, from ending poverty and hunger to promoting health, education, and gender equality.² The proposed diagram draws heavily on the mutual relationship between security and development. Our causal diagram visually reinforces the reciprocity of security and development, demonstrating that security and development are interconnected. As seen in Figure 1, a causal diagram can also demonstrate the intercorrelation among the goals. The most salient feature of these goals is that any development in one of the goals affects others.

In our proposed causal diagram, we restructure the SDGs by introducing "security" as "Goal 0." While the concept of security is not explicitly mentioned within the current SDGs (except within Goal 2 on food security), Goal 16, which focuses on peace, justice, and strong institutions, touches upon human rights and the importance of independent human rights institutions. It acknowledges the interconnectedness of human rights, peace, security, and development, which partially supports our argument. Crucially, we designate security as "Goal 0" because it underpins all other goals. Whether at the individual or state level, the ultimate aim of addressing development challenges is to achieve security and peace. Security is the foundation upon which all other aspirations for sustainable development rest.

The absence of a dedicated security goal within the SDGs and the lack of explicit recognition of the interconnectedness of state and human security

² All the goals and their specific targets are detailed on the UN website: <https://sdgs.un.org/goals>. For instance, Goal 2 covers achieving food security, improving nutrition and promoting sustainable agriculture.

present a significant challenge for policy implementation. To address this, we propose positioning security at the heart of the sustainable development agenda. This means recognizing that progress (or setbacks) across all 17 SDGs will have ripple effects on both state and human security and, ultimately, on development itself.

Inspired by Goldstein (2016), we advocate for a solution-oriented approach. To effectively advance the SDG agenda, we must re-examine these goals through a multi-dimensional lens that acknowledges the dynamic interplay between development and security. This requires moving beyond traditional interpretations of these concepts. By doing so, we call for a shift from a focus on sustainable development goals to a broader vision of sustainable security for all.

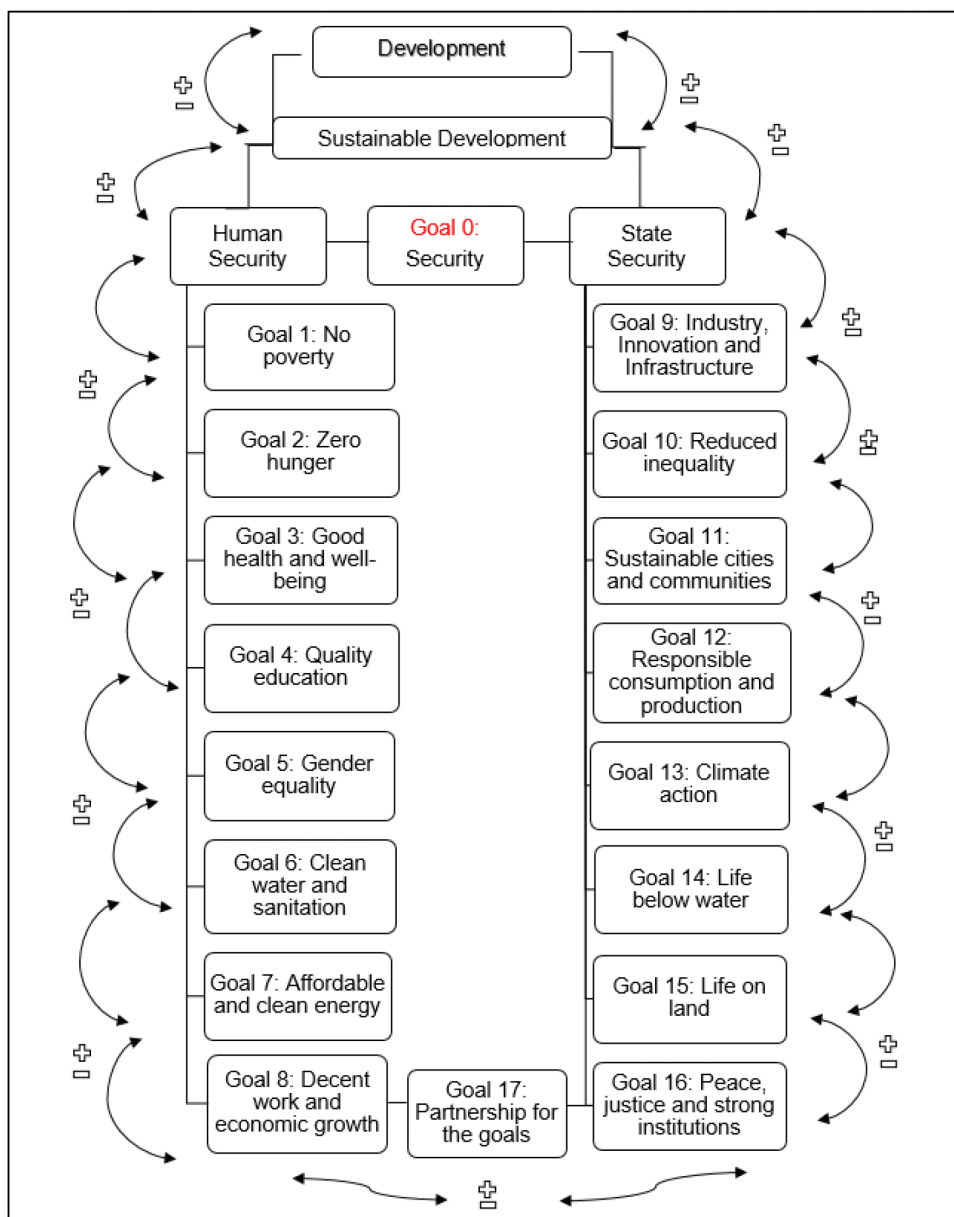


Figure 1 Causal diagram for sustainable development goals
Source: own preparation

Furthermore, in Figure 1, we try to recast SDGs as a global security issue and reserve separate places for state and human security in the diagram. From this point of view, in the following section, we look closer to this argument with two different but connected cases, climate change, and food security, in correlation with human and state security, which will also help us understand why we divide the security as human and state within the SDGs.

III-Food Security, Climate Change as SDGs and security-development nexus

While food security and climate change appear as separate goals within the SDGs, their interconnectedness highlights the inherent link between development and security. As two of the most pressing issues facing our world, their analysis reveals a cascading effect with implications for global security. This underscores the necessity of integrating both traditional and human security dimensions within the SDGs framework. Figure 2 illustrates the intricate relationship among development, security, climate change, and food insecurity, providing a visual representation of this complex nexus.

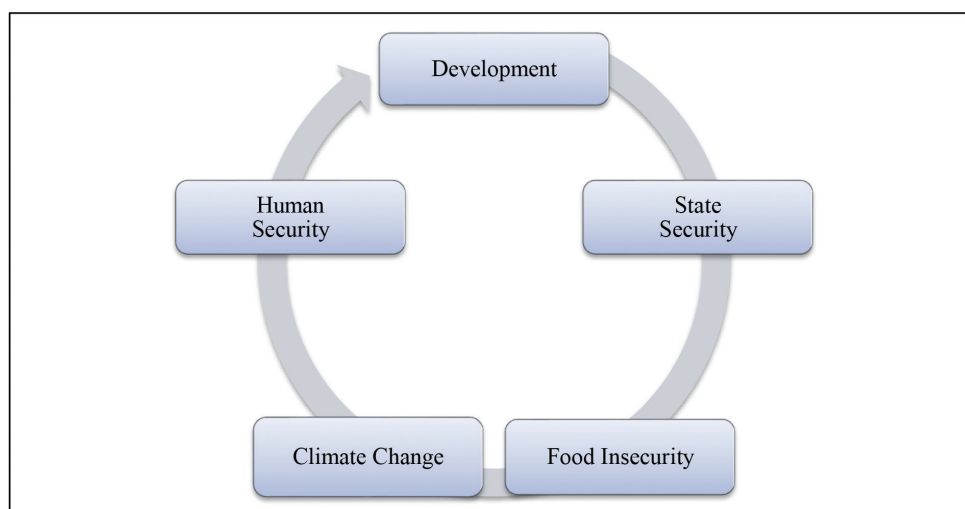


Figure 2 The interlink of development, human and state security, climate change, and food security
Source: own preparation

Food security, enshrined in SDG 2 (Zero Hunger), is defined by the Food and Agriculture Organization (FAO) (2009) as access to sufficient, safe, and nutritious food—physically, socially, and economically—to support an active and healthy life. While primarily associated with human security and development, food insecurity has profound implications for state security as well.

For developed countries, food insecurity in the Global South can trigger mass migration, posing potential challenges related to integration and identity. Furthermore, competition for scarce resources exacerbated by food insecurity can

fuel internal and external conflicts. As [Busby \(2018\)](#) notes, factors like agriculture, food prices, economic growth, migration, and disasters can mediate conflict. The link between food security and national security is increasingly recognized, exemplified by the World Food Programme's 2020 Nobel Peace Prize for its efforts in combating hunger and fostering peace in conflict zones.

[The UN General Assembly \(2015\)](#) places climate change as a distinguished title within SDGs in Goal 13. The UN (n.d) defines climate change as “the long-term shifts in temperatures and weather patterns arising from natural causes such as sun's activity or volcanic eruptions and from human activity, which is the primary driver of climate change.” However, high temperatures are not the one fact of climate change since the Earth has an interrelated system where any changes in one area can influence all the other changes in others, such as droughts, water scarcity, rising sea levels, flooding, storms, melting polar ice ([Garcia 2010](#)).

The relationship between climate change and security is complex and debatable. While some scholars focus on climate change's potential to exacerbate violent conflict ([Busby 2018](#)), the link is not universally accepted. However, there is growing recognition of climate change's impact on state wealth, economic growth, and human security, highlighting the interconnectedness of climate, development, and security ([Richards 2023](#)).

The International Panel on Climate Change (IPCC) advocates for a comprehensive approach that integrates these three elements, prioritizing development policies to mitigate climate change's adverse security impacts. This relationship is inherently interconnected and development and security are mutually reinforcing, with each dependent on the other, particularly in the context of climate change. Climate-related insecurities directly hinder sustainable development.

Integrating security into the SDGs framework offers several advantages. It can facilitate policies to reduce the environmental impact of conflict, currently an under-recognized issue. Furthermore, it can amplify the voices of vulnerable nations, like those in the Pacific Islands Forum, facing existential threats from climate change. As [Richards \(2023\)](#) observes, the current SDGs framework fails to adequately address the unique environmental hazards confronting these countries.

The interconnectedness of the SDGs is further exemplified by the intersection of climate change and food security, with significant implications for both human and state security. As previously noted, progress in one SDG influences others, creating a ripple effect across the entire framework. Climate change, as highlighted by [Spratt and Dunlop \(2019\)](#), already threatens food security through drought, crop yield decline, and rising food prices, particularly in vulnerable regions like the Middle East, Maghreb, and Sahel. [Dupont and Pearman \(2006\)](#) emphasize the direct link between climate change and food insecurity, citing desertification, rising sea levels,

and extreme weather events as contributing factors. This climate-induced food insecurity has far-reaching consequences. It has contributed to migration crises, as noted by Spratt and Dunlop (2019), and reinforces the notion of food security as a national security issue, especially for food-importing countries (Christensen 1977, cited in [Nussio and Pernet 2013](#)). The impact is particularly acute in regions reliant on rain-fed agriculture, like the Horn of Africa, where El Niño events have caused widespread food insecurity and drought (Parker *et al.* 2016). This vulnerability is further underscored by the heavy financial burden of food imports faced by many African nations.

Conclusion

Throughout history, the concept of development has increasingly been linked to security in discourse and at the policy level. This paper questions the controversial relationship between development and security and defends a reciprocal approach, implying that security and development are preconditions for each other. After implementing the mutual characteristic of the relationship between development and security, the paper makes a policy recommendation and suggests introducing security into the causal diagram of SDGs by labelling it “SDG number zero”. The number zero of SDGs, security, is placed at the top of the diagram to avoid the emergence of war, violence, and conflict by addressing structural-developmental root causes. Furthermore, the causal diagram positions security as “Goal 0” at the top to signify its foundational role within the goals and to emphasize it as a multidimensional concept covering the other 17 goals. Progress on any SDGs strengthens the foundation of a stable and secure environment. Conversely, failing to progress on any of these goals can lead to heightened social tensions and potential conflict, thereby jeopardizing security.

The paper concludes that the shortcomings at the policy level can be compounded by incorporating the concept of security -with both dimensions of human and state security- in SDGs. In their search for solutions to global problems, global actors explicitly or implicitly address the security-development spectrum. However, there is a gap between policy rhetoric and reality. Incorporating security within the SDGs may act as a solution for filling this gap. Especially as international institutions and organizations acting within the domains of security and development are highly fragmented and operate in isolation from each other. The incorporation of human and state security into SDGs and the proposition of a causal diagram have the potential to strengthen the collaboration among different actors with different professionalisms. Thus, incorporating security in SDGs is instrumental in bringing a comprehensive approach at the practical level. Integrating security in SDGs suggests a way to reach beyond the traditional choice between “development strategies” or “military and intelligence organizations” as solutions. In the long run, the passage from sustainable development to sustainable security after incorporating human and state security dimensions in SDGs becomes the primary objective at the policy level.

In conclusion, the explicit securitization of SDGs may offer an essential alternative policy option. Put differently, the balance between security and development must be reorganized in favour of security and at the expense of development. The incorporation of security into SDGs may act as a catalyst for accelerating efforts toward the securitization of SDGs, which is a requirement *per se* under the adverse conditions accelerated by climate change and food security, among many others.

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