

# FOOD SECURITY AND SUSTAINABLE DEVELOPMENT

## Financing “A Sustainable Food Future”

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## Abstract

*Achieving a “sustainable food future” requires building food systems that, in line with the related Sustainable Development Goals (SDGs), support growth and employment, ensure social inclusiveness and equity, promote climate resilience and environmental sustainability, protect biodiversity, and generate healthy diets for all. Many policy, institutional, technological and investment innovations are needed to build such food systems. This brief considers as a necessary foundation, the existence and continuous development of adequate technologies and innovations, including the ones related to soils, land, water, ecosystems, and, in general, those that have been called Climate Smart Agriculture (CSA) or Climate-friendly Sustainable Agriculture (CFSA). The main question this policy brief focuses on is how to mobilize the financial resources to support investments in those technologies and sustainable food systems at the scale needed to have some meaningful global impact. It suggests that a project preparation and financial structuring facility of appropriate scale would help leverage scarce public-sector funds to mobilize the much larger pool of private financial funds that may be interested in participating in these investments but now lack adequately structured projects and investment vehicles to that effect. The policy brief argues that this proposal is similar in spirit to the approach for investments in sustainable infrastructure presented by the Argentinean Presidency.*

## Challenge

Argentina has defined three main priorities for its 2018 Presidency of the G-20: “The future of work”; “Infrastructure for development”; and “A sustainable food future.” These are important topics and the Argentine government must be commended for raising them for the consideration of the G-20 countries and of the whole international community.

In particular, the third priority related to achieving a “sustainable food future,” focuses on “improving soils and increasing productivity.” The important task related to recovering and improving soils must be placed within a larger context, as discussed later in greater detail.<sup>1</sup>

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<sup>1</sup> For instance, the IPBES (intergovernmental Panel on Biodiversity and Ecosystem Services) includes the following definitions:

Land means the terrestrial bio-productive system that comprises soil, vegetation, other biota, and the ecological and hydrological processes that operate within the system.

Degraded land is defined as land in a state that results from the persistent decline or loss of biodiversity, ecosystem functions and services that cannot fully recover unaided within decadal time scales.

Land degradation refers to the many processes that drive the decline or loss in biodiversity, ecosystem functions or services, and includes the degradation of all terrestrial ecosystems including associated



The challenge this brief focuses on considers as a necessary foundation, the existence and continuous development of adequate technologies and innovations, related to soils, but also land, water, ecosystems, and, in general, those that have been called Climate Smart Agriculture (CSA) or Climate-friendly Sustainable Agriculture (CFSA).

Based on that, the main challenge this policy brief addresses is how to mobilize the financial resources to support investments in those technologies and sustainable food systems at the scale needed to have some meaningful global impact on productivity, incomes, and sustainability. In that sense, the challenge is similar to the second proposal presented by the Argentinean Presidency regarding the need to mobilize financial resources for investments in sustainable infrastructure.

## Background

In 2015, with the adoption of the sustainable development goals (SDG), all countries agreed to sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss (SDG # 15). The Koronivia Joint Work on Agriculture agreed to at COP 23 of the UNFCCC highlights the need for climate actions focused on improved soil carbon, soil health, and soil fertility under grasslands and croplands as well as integrated systems, including water management.

The UN noted several key facts in its justification for the SDG “Life on Land”. For example, 2.6 billion people depend directly on agriculture for their livelihoods, but 52 percent of the land used for agriculture is moderately or severely affected by soil degradation. Land degradation affects more than 1.5 billion people globally and arable land loss is 30 to 35 times the historical rate. Due to drought and desertification, 12 million hectares of productive land are lost annually. Soil erosion is the most serious form of land degradation, with between 24 and 74 billion tons of soil lost every year. Due to population pressure and overuse of agricultural lands with limited input application, soil nutrient depletion is another serious land degradation problem in many parts of the world.

A recent study by IFPRI and the University of Bonn Center for Development Research (ZEF) (Nkonya, Mirzabaev and von Braun (eds), 2016), has estimated that the annual

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aquatic ecosystems that are impacted by land degradation.

Restoration is defined as any intentional activity that initiates or accelerates the recovery of an ecosystem from a degraded state. This definition covers all forms and intensities of the degradation state.

Rehabilitation is used to refer to restoration activities that may fall short of fully restoring the biotic community to its pre-degradation state, including natural regeneration and emergent ecosystems.

Source: IPBES, 2015



cost of land degradation due to “land use and cover change” (LUCC) and the use of land-degrading management practices on static crop and grazing land is about \$300 billion (not including costs related to deterioration of ecosystem services, which may increase the estimates significantly<sup>2</sup>). The cost of completely rehabilitating lands degraded due to LUCC worldwide would be about \$4.6 trillion over 6 years, the authors estimate—and if action is not taken to rehabilitate degraded lands during this same period, the world will incur a loss of \$14 trillion, which suggests that such investments have a very positive return.

Land degradation is also a poverty issue, with a large percent of the poor directly affected by land degradation and soil degradation, in particular, has adverse implications for nutrition.<sup>3</sup>

As the global population is projected to increase by 2 billion by 2050 and as diets change, the pressure on land and other resources will only increase.

These problems are part of the more complex interaction between agriculture, climate change, producers, poverty and food security, and environmental sustainability, with multiple reciprocal relationships among all these aspects. On the one hand, climate change affects the availability of water, promotes the development of more pests and diseases, and is generating extreme events (droughts, floods, hurricanes) with negative impacts on rural populations, especially the poorest and most vulnerable, and on food security. On the other hand, agriculture and related practices, such as deforestation, generate up to 30% of global greenhouse gas (GHG) emissions. Therefore, these problems need to be addressed with a comprehensive vision, which includes not only the topic of soils (emphasized by the Argentine presidency of the G-20, already discussed), but also water (the focus of the German presidency), and other aspects of the wider context of the bio-economy.

The goal of an international effort on soil health must be to increase the area of healthy soils that provide adequate nutritious food, produce adequate fiber and other products, and support agroecosystems in providing other important ecosystem services through a biological approach to soil management. Achieving this goal requires enhanced awareness of the biological aspects of soil health and improved mechanistic and quantitative understanding of the relationships between soil health,

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2 According to the results of the recent project on the Economics of Land Degradation economic losses from soil degradation, affecting a variety of ecosystem services, could go up to some \$10 trillion annually (ELD Initiative, 2015).

3 Currently, about 2 billion people are estimated to suffer from micronutrient deficiencies and soils have a role to play in this problem. Most essential nutrients and minerals (e.g. zinc, iron, iodine) cannot be derived from biosynthesis and must be obtained by plants from soils and acquired by humans through the foods they consume. Therefore, local mineral deficiencies in soils produce deficiencies in local food systems, which clinically impacts populations.



climate change, and resilience of agricultural production systems. This knowledge must be translated into technologies and actions on the ground that meet the needs of the farmers. Uptake of sustainable soil management practices is a global problem, so collaboration with development partners is needed to understand how programs and incentives can be better designed and structured so that there is wider adoption of more sustainable management practices that promote soil health. Promoting soil health also requires addressing soil contamination problems. Currently, Sustainable Development Goals (SDGs) do not have any specific targets for addressing soil contamination. Addressing soil contamination is important because it may have direct negative impacts on human health.

At the same time, water is an essential element for life, directly as potable water, or indirectly, as a crucial input for food production. Water is also widely used in energy production (from hydroelectricity to the production of shale gas), and, in mining and industry. Climate change and the water cycle are also closely interrelated, with complex direct and feedback interactions. Intelligence analyses (such as the study of the US Office of the Director of National Intelligence, ODNI, 2012) envision water scarcity as a major source of conflict and turmoil in different developing regions, with very negative global repercussions (war, forced migrations, failed states, and terrorist threats). The report considers that this is already happening in several areas of Middle East, the Horn of Africa and other parts of Sub Saharan Africa, and, less acutely, in other regions of the world, including Central America and Haiti. Floods are also leading to major disasters with human and property losses. The ODNI report suggests that the window of opportunity to address these issues before they get out of control is not more than a decade or so.

On the positive side, there is increasing awareness of best management practices and technologies that have proven to have the triple impact of improving productivity and income of producers, facilitating adaptation to climate change, and reducing GHG emissions (mitigation).<sup>4</sup> The technologies, practices, services, processes and institutional arrangements with these multiple positive effects have been titled Climate Smart Agriculture (CSA) or Climate-friendly Sustainable Agriculture (CFSA). While science has been making progress in understanding what can and should be done, much more is needed in terms of developing and adapting technologies to the Earth's varied agroecological regions. These activities require reinforcing national and international R&D systems (as mentioned below).

Taking the possible interventions and investments to scale and achieving significant

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4 See for example, the 2016 annual report of the program Climate Change, Agriculture, and Food Security (CCAFS, <https://cgspace.cgiar.org/rest/bitstreams/118452/retrieve>) which includes all the Centers of the CGIAR, and it is led by the Centro Internacional de Agricultura Tropical (CIAT), along with IFPRI and other international centers and partner organizations (see [www.ccafs.cgiar.org](http://www.ccafs.cgiar.org)).



impacts globally is a key challenge. One of the limitations to achieving the necessary scale is related to funding. Focusing specifically on irrigation, a study by IFPRI (Ringler, 2017) has estimated that to meet the expected expansion of food demand by 2030, about \$ 7.9 billion of annual investments will be needed in developing countries to expand irrigation and other systems, and an additional \$ 2.4 billion is needed annually to make current systems more efficient. The IFPRI report highlights that sub-Saharan Africa and Latin America and the Caribbean (LAC) are the regions with the greatest opportunities to invest in expanding and improving irrigation productivity. Considering other CSA interventions, the investment requirements are significantly higher (see for instance the World Bank's study by Sadler et al, 2016).

More generally, typical estimates of the costs to achieve the Sustainable Development Goals (SDGs) needed to build food systems that deliver growth and employment, social inclusiveness, climate resilience, environmental sustainability, and healthy diets for all fall in the range of \$1.5-2.5 trillion per year of additional investments in developing countries (Schmidt-Traub, 2015). Even recognizing the methodological limitations of these types of estimates (Devarajan, 2015), the effort required to mobilize the public and private resources for the needed investments is not trivial.

How can the world finance these investments? There are several options (see a brief discussion in Díaz-Bonilla, 2017). These include: traditional bilateral development assistance; multilateral lending; public budgets in developing countries (including better controls on corruption, illegal financial flows, and tax evasion to expand fiscal resources); domestic banking systems; unconventional monetary policies; and finally, private financial markets, including impact investors and socially oriented investors.

Here we focus on the last option related to private financial markets, and suggest the need to expand on the same approach for sustainable infrastructure presented by the Argentinean Presidency.

The Argentinean document argues that there is a large gap in the investments required to build the needed global infrastructure from now to the year 2035, and that, at the same time, "institutional investors around the world have USD 80 trillion in assets under management, typically offering low returns." Therefore, the document states, "mobilizing private investment toward infrastructure is crucial to closing the global infrastructure gap. It can also ensure a better return for those who today save and invest. This is a win-win objective and it requires international cooperation." And the approach suggested is "to develop infrastructure as an asset class by improving project preparation, addressing data gaps on their financial performance, improving the instruments designed to fund infrastructure projects, and seeking greater homogeneity among them..." In the dialogue with other G-20 countries, the Argentinean Presidency should extend the same approach to develop



the mechanisms and financial structures needed to attract private and public financing to scale up investments to build sustainable food systems.

This proposal considers that, as in the case of the suggestion of the Argentine government to develop infrastructure into an asset class, a) studies on the profitability of projects related to rehabilitation of degraded land, small irrigation projects, and other CSA/CFSA practices, show positive results;<sup>5</sup> b) that funding for those projects has been relatively low (Sadler et al, 2016); c) that in the world there is ample liquidity; and d) that there is not an adequate pipeline of projects and financial vehicles through which that liquidity can be invested with an adequate balance of risk/reward by investors looking for stable and long-term returns in activities while supporting socially and environmentally sustainable food production by small and family farms.<sup>6</sup>

As the Camdessus Report “Financing Water for All” (2003) points out, water-related projects, especially in irrigation, are complex and difficult to structure. This also applies to land restoration/rehabilitation and CSA/CFSA practices in general. These small- and medium-scale projects, involving small and family farms tend to be very site-specific; operate with local communities that have a variety of social and productive profiles; require considering complex issues of water rights and environmental sustainability; and need other services and infrastructure support to produce and market the incremental production, among other challenges. Furthermore, involving private investors would necessitate structuring the investment opportunities (as projects but possibly as other type of investable vehicles) so as to make them attractive at reasonable rates of return and with acceptable risk profiles. The proposal below tries to address these challenges.<sup>7</sup>

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5 See Nkonya, Mirzabaev and von Braun (eds), 2016, for land aspects. A study by the McKinsey Global Institute (2011) estimates that among the 15 greatest opportunities to increase productivity in water use (with the positive income result), five relate to food, land and agriculture, including “improving irrigation techniques” and “increasing yields on small farms”. At current prices, the McKinsey study estimates that about 70% of investment opportunities in water productivity techniques would have an internal rate of return of 10% or more. Other studies have identified a variety of CSA practices with very favorable Cost/Benefit ratios (see for instance, the annual report, already mentioned, of the program Climate Change, Agriculture, and Food Security (CCAFS); also see CCAFS, CIAT, MAGA. 2015.

6 The World Bank document mentioned (Sadler et al, 2016), proposes different measures to increase investment, such as the “design innovative mechanisms and adapt others to tap additional sources of public and private capital that can be directed towards smart climate investments in agriculture,” and “new investment vehicles that can attract additional capital through diversification, management and rebalancing of the risk performance profiles of individual investors.” On a related note, Nena Stoiljkovic, Vice President, Blended Finance and Partnerships, International Finance Corporation/World Bank, stressed “that funding is not necessarily the problem, but what is needed are country-specific projects that are commercially viable” (World Economic Forum, 2017).

7 Of course, the economic and financial viability of projects promoting soil restoration in agricultural lands, and other CSA approaches, would be enhanced by the development and implementation of mechanism of payments for ecosystem services (PES) provided by restored and sustainably managed agricultural lands. The proposals considered here, however, do not depend on this policy innovation.



## Proposal

To the extent that the proposal focuses on a financial and operational mechanism to scale up investments in CSA/CFSA practices, it is recognized here that there are other aspects that must be considered to ensure that such scaling up occurs. Among others, two can be mentioned here. First, there must be an adequate policy and institutional environment for the economic agents to undertake the necessary investments with an adequate risk/reward profile. Second, there must be a steady stream of appropriate technologies. This in turn, requires the reinforcement of the work of the national and international research institutes working on the technological aspects of the challenges identified above, regarding land, water, and climate change and the environment. At the national level, countries should try to achieve levels of funding for agricultural R&D&I of at least 1% and, better, 2% of their agricultural GDP.

At the international level, financial support for the CGIAR system should be maintained, and most likely increased, to expand the work on technologies related to rehabilitation of degraded land, small irrigation projects, and other CSA/CFSA practices, and to strengthen the integration of this work with national systems. The CGIAR, with its 15 centers,<sup>8</sup> is the main international organization working on these topics on the ground in a variety of continents and countries, and in close collaboration with hundreds of partners, including governments, national and regional research agencies, civil society organizations, academia, development organizations, and the private sector. All 15 Research Centers are independent, non-profit, international organizations, employing more than 8,000 scientists, researchers, technicians, and support staff worldwide, which are recruited from around the world. The work of the CGIAR is organized into thematic programs<sup>9</sup> that leverage the knowledge of a large number of partner institutions in developing and developed countries. These institutes have a long and recognized track record of working around the world focusing on the analysis of policies, investments, institutions and appropriate technologies and practices with the aim of reducing poverty, eliminating hunger and malnutrition, and

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8 The list of the 15 centers is as follows: AfricaRice, Bioversity International, Center for International Forestry Research (CIFOR), International Center for Agricultural Research in the Dry Areas (ICARDA), International Center for Tropical Agriculture (CIAT), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), International Food Policy Research Institute (IFPRI), International Institute of Tropical Agriculture (IITA), International Livestock Research Institute (ILRI), International Maize and Wheat Improvement Center (CIMMYT), International Potato Center (CIP), International Rice Research Institute (IRRI), International Water Management Institute (IWMI), World Agroforestry Centre (ICRAF), and WorldFish.

9 The CGIAR Integrated Research Programs are the following: Program on Climate Change, Agriculture and Food Security; Program on Forests, Trees and Agroforestry; Program on Water, Land and Ecosystems; Program on Integrated Systems for the Humid Tropics; Program on Aquatic Agricultural Systems; Program on Dryland Systems; Program on Policies, Institutions, and Markets; Program on Agriculture for Nutrition and Health; Program on Dryland Cereals; Program on Grain Legumes; Program on Livestock and Fish; Program on Maize; Program on Rice; Program on Roots, Tubers and Bananas; Program on Wheat; and Program for Managing and Sustaining Crop Collections.



ensuring environmental sustainability.

Acknowledging the need for an adequate enabling environment and for appropriate technologies and innovations, the proposal here focuses on the creation of a project-preparation facility (PPF) to help develop a pipeline of projects for the recovery of degraded and eroded land, small irrigation schemes and water management, and other aspects of climate-smart agriculture practices such as afforestation and reforestation, natural resource management, conservation agriculture, silvopastoral systems, multi-strata agroforestry, mixed inorganic-organic fertilizer and improved feeding.

The PPF will have four main functions: a) Identify and prepare the projects and potential investments on recovery of degraded and eroded land, small irrigation schemes and water management, and other aspects of CSA/CFSA practices, such as afforestation and reforestation, and natural resource management, working with small and family farms and their communities, and relevant country authorities; b) Identify possible sources of international, private and public investment and financing, and analyze their investment motivations and operational requirements; c) define the financial engineering, legal and regulatory structures, and operational aspects that need to be addressed and solved in order to mobilize the expected resources and implement such projects with economic, social and environmental sustainability; and d) provide the support for the monitoring and evaluation activities related to that pipeline of projects.

The preparation of those projects requires multidisciplinary work to understand, among other things, the market conditions and the operation of value chains in which producers are, or can be, inserted; the technological and operational challenges of the projects; the legal and regulatory aspects; the constraints and possibilities of the participating producers and communities; the environmental, natural resource, and climate challenges; the objectives and incentives of potential investors, and their risk/reward expectations; and the regulatory, institutional and political framework within which specific projects have to operate.

The size of the PPF depends on the ambition to scale up investments at the global level. Assuming a cost of preparation per project of between 2-4% of the total project costs, then a PPF of 100 million dollars, could help mobilize investments for about 2,500-5,000 million dollars. The PPF can be structured as a revolving facility where the preparation costs are reimbursed to the PPF, by the appropriate private and/or public partner, upon the implementation of the project.<sup>10</sup> With this mechanism,

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<sup>10</sup> The Camdessus Report suggests a similar mechanism: the report calls for the creation of “a Revolving Fund or funds consisting of grant money to finance the preparation and structuring costs of complex projects.” (p.22)



the PPF can end up mobilizing funds for specific investments that will be a larger multiple of the values mentioned above.

A possibility is that the PPF be operated by the CGIAR system in coordination with FAO, combining the strengths of both international organizations to provide the economic, financial, technological, and social analytical capabilities to support countries and local communities to prepare those projects and establish the needed financial structures, and adequately serve as nexus with public and private investors. In particular, the PPF should help apply the large pool of CGIAR's technical expertise also for the preparation and structuring of scalable investment projects in developing countries.

## Conclusion

Achieving a “sustainable food future” requires building food systems that, in line with the related Sustainable Development Goals (SDGs), support growth and employment, ensure social inclusiveness and equity, promote climate resilience and environmental sustainability, protect biodiversity, and generate healthy diets for all. Many policy, institutional, technological and investment innovations are needed to build such food systems. This brief considers as a necessary foundation the development of adequate technologies and innovations, including the ones related to soils, land, water, ecosystems, and, in general, those that have been called Climate Smart Agriculture (CSA) or Climate-friendly Sustainable Agriculture (CFSA).

The challenges are significant, and addressing them will require the mobilization of funds at the required scale, particularly from the private sector. The proposal here presented implies a modest allocation of public funds that can be leveraged to mobilize a much larger pool of private financial funds, which may be interested in scaling up innovative productive practices and technologies that have the triple impact of improving productivity and incomes of producers, facilitating adaptation to climate change, and reducing GHG emissions (mitigation). It is not an exaggeration to argue that the future of humankind depends on how we address the challenges discussed here, offering practical answers that achieve significant impacts globally.



## References

1. Camdessus Report (2003). Financing Water for All. Report of the World Panel on Financing Water Infrastructure. World Water Council. 3rd World Water Forum. Global Water Partnership Chaired By Michel Camdessus. Report Written By James Winpenny. [http://www.worldwatercouncil.org/fileadmin/world\\_water\\_council/documents\\_old/Library/Publications\\_and\\_reports/CamdessusReport.pdf](http://www.worldwatercouncil.org/fileadmin/world_water_council/documents_old/Library/Publications_and_reports/CamdessusReport.pdf)
2. CCAFS (2016). 2016 Annual Report. Program Climate Change, Agriculture, and Food Security (CCAFS) <https://cgspace.cgiar.org/rest/bitstreams/118452/retrieve>
3. CCAFS, CIAT, MAGA (2015). Agricultura Sostenible Adaptada al Clima (ASAC): Alternativas para el Corredor Seco en Guatemala. Cali, Colombia: Programa de Investigación de CGIAR en Cambio Climático, Agricultura y Seguridad Alimentaria (CCAFS). <http://hdl.handle.net/10568/80719>
4. Devarajan, S. (2015) Shame on me: Why it was wrong to cost the Millennium Development Goals. Monday, March 2, 2015. <https://www.brookings.edu/blog/future-development/2015/03/02/shame-on-me-why-it-was-wrong-to-cost-the-millennium-development-goals/>
5. Díaz-Bonilla, E. (2017) Scaling up. Money.. that's what (we) want. CIAT 50th Anniversary November 8-9, 2017, Cali, Colombia. <https://www.slideshare.net/CIAT/presentacion-diaz-bonlla-v3>
6. ELD Initiative (2015). The value of land: Prosperous lands and positive rewards through sustainable land management. Available from [www.eld-initiative.org](http://www.eld-initiative.org)
7. IPBES (2015). "Intergovernmental Platform on Biodiversity and Ecosystem Services." Scoping for a 2002 Thematic Assessment of Land Degradation and Restoration Assessment.
8. McKinsey Global Institute (2011) Resource Revolution: Meeting the world's energy, materials, food, and water needs. November 2011. <http://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/resource-revolution>
9. Nkonya, E., A. Mirzabaev and J. von Braun (eds) (2016) Economics of Land Degradation and Improvement – A Global Assessment for Sustainable Development. International Food Policy Research Institute and Center for Development Research (ZEF). University of Bonn. Bonn. Germany. Springer Open. Springer Cham Heidelberg New York Dordrecht London



10. Ringler, Claudia (2017). Investments in irrigation for global food security. Washington, D.C.: International Food Policy Research Institute (IFPRI). <http://www.ifpri.org/publication/investments-irrigation-global-food-security>
11. Sadler, Marc Peter; Millan Arredondo, Alberto; Swann, Stacy A.; Vasileiou, Ioannis; Baedeker, Tobias; Parizat, Roy; Germer, Leah Arabella; Mikulcak, Friederike (2016). Making climate finance work in agriculture. Washington, D.C. World Bank Group. <http://documents.worldbank.org/curated/en/986961467721999165/Making-climate-finance-work-in-agriculture>
12. Schmidt-Traub, G. (2015) Investment Needs to Achieve the Sustainable Development Goals. Understanding the Billions and Trillions. SDSN Working Paper. Version 2. 12 November 2015. <http://unsdsn.org/wp-content/uploads/2015/09/151112-SDG-Financing-Needs.pdf> Data in <http://unsdsn.org/resources/publications/sdg-investment-needs/>
13. US Office of the Director of National Intelligence, ODNI (2012) Global Water Security. INTELLIGENCE COMMUNITY ASSESSMENT. ICA 2012-08, 2 February 2012. [https://www.dni.gov/files/documents/Newsroom/Press%20Releases/ICA\\_Global%20Water%20Security.pdf](https://www.dni.gov/files/documents/Newsroom/Press%20Releases/ICA_Global%20Water%20Security.pdf)
14. World Economic Forum Annual Meeting 2017. System Initiative on Shaping the Future of Food Security and Agriculture. Summary Report. March 2017. Davos-Klosters, Switzerland 17-20 January. [http://www3.weforum.org/docs/IP/2016/NVA/AM17\\_FSA\\_summaryreport.pdf?ET\\_CID=1648402&ET\\_RID=001b0000002mX9HAAU](http://www3.weforum.org/docs/IP/2016/NVA/AM17_FSA_summaryreport.pdf?ET_CID=1648402&ET_RID=001b0000002mX9HAAU)

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