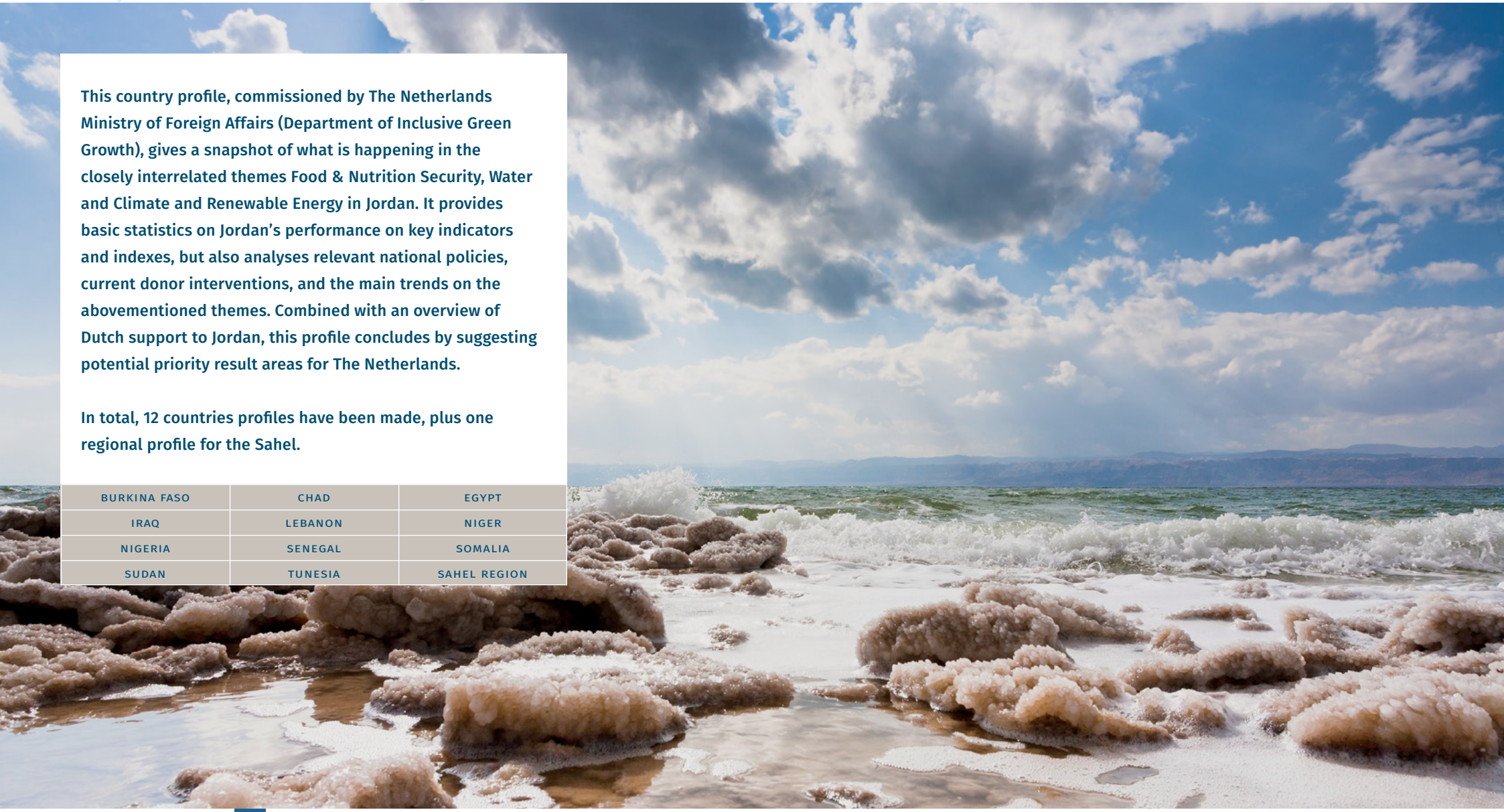
Jordan



This country profile, commissioned by The Netherlands Ministry of Foreign Affairs (Department of Inclusive Green Growth), gives a snapshot of what is happening in the closely interrelated themes Food & Nutrition Security, Water and Climate and Renewable Energy in Jordan. It provides basic statistics on Jordan's performance on key indicators and indexes, but also analyses relevant national policies, current donor interventions, and the main trends on the abovementioned themes. Combined with an overview of Dutch support to Jordan, this profile concludes by suggesting potential priority result areas for The Netherlands.

In total, 12 countries profiles have been made, plus one regional profile for the Sahel.

BURKINA FASO	CHAD	EGYPT
IRAQ	LEBANON	NIGER
NIGERIA	SENEGAL	SOMALIA
SUDAN	TUNESIA	SAHEL REGION

Metrics

JORDAN, FACTS

Government
- Unitary parliamentary constitutional monarchy
- Monarch Abdullah II
- Prime Minister Hani Al-Mulki

Official language: Arabic

Religion: Islam (95%), Christianity (4%), Druze, Baha'i (1%)

Area: Total 89,341 km² (110th)

Population
- 2018 estimate 9,903,802
- Prospect 2050 14,188,000
- Density 107/km² (100th)

GDP (PPP) 2017 estimate
- Total $ 86.193 billion (87th)

GDP (nominal) 2014 estimate
- Total $ 39.453 billion
- Per capita $ 5,092

GENERAL INDICATORS

UN Human Development Index
188 countries: 1st = best opportunities for development

#86 – (1 – 188)

Anti-corruption and Accountability
100 = strongest policies and practices

N/A (100 – 0)

Word Bank Doing Business Index
100 = most conducive environment for business

86 – (100 – 0)

Gender Inequality Index
188 countries: 1st = smallest gender divide

#111 – (1 – 188)

CLIMATE/RENEWABLE ENERGY INDEXES

World Bank ESMAP Electrification Index
population with access to electricity

100%

ND GAIN Index
181 countries: 1st = least climate change vulnerable, and best ready to improve resilience

#81 – (1 – 181)

FOOD NUTRITION SECURITY INDEXES

Global Hunger Index (IFPRI)
Range 0 – 100: 0 = no hunger

8.1 – (0 – 100)

Global Food Security Index (Economist)
113 countries: 1st = best food security

#55 – (1 – 113)

Land Management Index (UNCCD)
180 countries: 1st = most sustainable land governance

#109 – (1 – 181)

WATER INDEXES

FAO AquaStat
Variation per capita internal renewable water resources

30.2%

World Bank Drinking Water Index
population using at least basic drinking water services

99%

JMP Sanitation Index
population with access to improved sanitation facilities

77.3%

N/A: Not Available, Not Applicable, or data is incomplete

Donor interventions and plans

Government policies

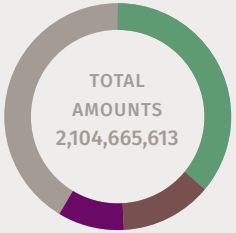
The Hashemite Kingdom of Jordan has well structured policies and guidelines for all of the sectors of interest to IGG, Jordan has a well developed agricultural policy (Strategic plan of the Agriculture Sector in Jordan – 2014), as well as a policy on nutrition (2006).

Since approximately 2005 Jordan has had a well-developed National Master Plan for water. In 2008 a Water Strategy was developed by the Royal Commission for Water. This strategy complemented the master plan and has been updated several times since. This means that Jordan has a thorough understanding of the status of water resources in the country and a concrete approach to managing this.

The Ministry of Environment in Jordan has developed the "National Climate Change Policy of the Hashemite Kingdom of Jordan 2013-2020" in cooperation with GEF.

Top 3 donors (based on 2017 IATI data[1]) 2017

DONOR	AMOUNT (IN $)
United States Agency for International Development (USAID)	806,023,000
EU Institutions	257,617,000
United Nations Children's Fund	208,645,000



Top 3 Sectors attracting development funding

SECTOR	AMOUNT (IN $)
Government and civil society, general	618,367,000
Water and sanitation	296,802,000
Unallocated / unspecified	208,860,000

In the table the three largest donors in Jordan are listed with their respective portfolio in 2017.

USAID has been one of the largest donors active in the water sector. KfW and GiZ are also very active in the water sector. The EU was an active donor, but withdrew from the sector a few years ago. Many donors also focus on civil society projects, emergency assistance to refugees, and peace building measures.

1] This data originates from self-reported data in IATI by major donors. It should be noted that not all aid flows and financial sources are captured.

What NL actors already do

Major commitments from the Netherlands (based on IATI)

BUDGET SPENT BY NETHERLANDS MINISTRY OF FOREIGN AFFAIRS (IN 2017)	AMOUNT (IN $)
Government and civil society, general	7,177,100
Emergency response	5,429,160
Conflict prevention and resolution, peace and security	4,697,790
BUDGET SPENT BY NETHERLANDS ENTERPRISE AGENCY (IN 2017)	**AMOUNT (IN $)**
Trade policy and regulations and trade-related adjustment	27,000
Agriculture	23,261
Industry	4,145

Top three largest programmes supported by the Netherlands (active as of 2017)

THEME	ORGANISATION	PROGRAMME TITLE	COMMITTED ($)
Food security programmes	Netherlands - Ministry of Foreign Affairs	Hydroponic Agriculture Jordan	7,644,600
Trade facilitation and business support	Stichting fondsbeheer DGGF lokaal MKB	Sanadcom for Financing Small and Medium Enterprises (Sanadcom)	7,000,000
Public sector policy	Netherlands - Ministry of Foreign Affairs	Municipal Services and Social Resilience	5,966,250

In Jordan, the Netherlands are active in the field of trade policy and regulations and trade-related adjustment (RVO), Agriculture, Industry and emergency response. The embassy has also formulated a new programme focussing on reductions in water use, reductions in energy and increases in returns on agricultural production. The way that this is envisaged is through assistance in the field of climate smart agriculture (hydroponics, technical vocational education and training (TVET)) and support with planning. The Embassy of the Netherlands in Jordan is also working with Al Balqa Applied University and the IHE Delft Water Institute to set up a regional centre of excellence in waste water management.

Trends and limitations

Food security

Whereas Jordan ranks low on the Global Hunger Index (8.1/100), Jordan maintains pockets of food insecurity, especially in communities that have been hit by the protracted economic crisis of 2008 and are now hosting refugees. Agriculture in Jordan is one of the main users of water (averaging at about 80%), and due to the climatic conditions, only 1.97 per cent of Jordan's land is arable. Also, it only contributes between 3 and 4 percent to the GDP. On the other hand, agriculture is considered to be a historically important sector, and many refugees and foreign workers are active in this sector. Jordan's main agricultural products include: citrus fruits, tomatoes, cucumbers, olives, strawberries, stone fruits, sheep, poultry and dairy products. Current production levels are minimal, meaning it must import 97% of its food.

It is important to remember that the relevance of agriculture in Jordan is a very emotional debate. Whereas most water management experts agree that agriculture in Jordan should be partially phased out, and partially upgraded to improve returns, hence justify the use of expensive water, the people working in the fields are mainly Pakistani and Egyptian labourers. The benefits therefore accrue to landowners, who are usually also ministers and/or members of parliament. The money earned by labourers is usually sent back as remittances.

There have been many attempts over the year to improve the value of the agriculture products produced by Jordan to make them eligible for export to the EU. Especially dates are a product with which the Netherlands Embassy is also working at the moment.

One of the issue with import and export in Jordan is the fact that in terms of Jordan's water footprint, it is estimated that Jordan was importing agricultural products and foods equivalent to approximately 2 BCM/year[2] in 2010-2011. This consisted mainly of wheat, barley, meat and powdered milk. In terms of export, it was estimated that Jordan exported approximately 0.4 BCM/year of virtual water. On the basis of these figures, the balance of virtual water was therefore 1.7 BCM/year of imports, which was a positive balance for a water scarce country. Current figures on the virtual water balance are less well known, but any intervention focussing on agriculture and food security in Jordan has to take the virtual water balance into account to ensure that Jordan is not exporting very valuable water at a less than economical rate.

Water

Jordan is one of the most water scarce countries in the world. Together with Tunisia they rank within the top three countries with the least amount of water per capita. Jordan has an estimated 770 m3/c/y[3], with this number decreasing consistently. This is due to rapid increases in population due to large refugee flows and due to increasing levels of income.

In terms of surface water, there are only two perennial rivers, the Yarmouk River and the Jordan River. Both of these rivers have been dammed upstream and have as a result only very minimal base flow left. The Zarqa River is not a perennial stream but flows mainly during periods of rain. It also transports the treated effluent from the As-Samra waste water treatment plant to the King Talal dam reservoir for re-use for agriculture in the Jordan Valley. Jordan re-uses approximately 70% of its treated waste water in agriculture and mixes it with high quality water from the King Abdullah Canal.

Groundwater in Jordan is mainly used for irrigation in the highlands and supplementary irrigation in the Jordan Valley. Jordan is also mining a large fossil aquifer in the South of the country (the Disi aquifer) for potable water for Amman. All potable water for urban centres in Jordan is also sourced from groundwater. Groundwater (renewable and non-renewable) accounts for about 60% of the annual water budget, or about 508 MCM/yr[4]. Given that this level of groundwater abstraction is almost double of the amount considered safe, the issue of addressing over-abstraction is a key policy issue.

In Aqaba on the Red Sea Jordan has built some desalination plants. There are also private desalination plants that provide water for the tourism sector. Jordan signed a memorandum of understanding (MoU) with Israel and the Palestinian Authority in December 2013 to implement the first phase of the Red-Dead project. A total of 85-100mcm of water will be desalinated every year, while the seawater will be pumped out from an intake located in the north of the Gulf of Aqaba. In addition, a conveyor will be extended to transfer desalinated water to Eilat, and a pipeline will be installed to dump the brine into the Dead Sea in order to stop its constant decline, estimated at one meter every year. The Kingdom will receive an additional 50mcm of water from the Lake Tiberias Reservoir annually in return[5].

Current trends and policies in Jordan focus on reducing water use in agriculture and increasing returns from agriculture.

2] BCM/year is billion cubic meters per year

3] this is the "renewable resource" divided by number of people.
4] https://water.fanack.com/jordan/water-resources/surface-and-groundwater/
5] http://www.jpost.com/Arab-Israeli-Conflict/Jordan-to-go-ahead-with-Red-Sea-Dead-Sea-project-542417

Trends and limitations

Renewable Energy

Jordan meets nearly all of its energy needs by importing oil and gas. Its energy sector faces rising global oil and gas prices, increased domestic demand, and a changing regional political environment that can no longer subsidize the country's reliance on energy imports (Saudi Arabia and Egypt had provided Jordan with subsidized natural gas and oil for many years), which constitute nearly one-fifth of its gross domestic product (GDP)[6]. The solar energy potential in Jordan is enormous as it lies within the solar belt of the world with average solar radiation ranging between 5 and 7 KWh/m2, which implies a potential of at least 1000GWh per year annually. Jordan has started mobilising private sector finance for the construction, operation and maintenance of large solar PV power plants.

A recent pre-feasibility study also shows that water-energy exchanges that are possible between Jordan, Palestine, and Israel are technically feasible and potentially offer substantial economic, environmental and geo-political benefits to each of the parties. Whereas Jordan is not a large contributor to green-house gas emissions, it can contribute significantly to reducing these emissions on a regional level by harnessing its solar potential and ensuring its other resource needs such as water and food are met in return for energy.

Regional issues

The importance of the nexus between water, energy and food security is nowhere as pertinent as in Jordan at this time. With the large refugee population and the ever more complex regional environment, food exports, energy imports and economic growth are all inter-dependent. Jordan requires a broader vision on this nexus which includes working with its neighbouring countries on inter-dependency, which would also be a very strong stimulus for peace and cooperation in the region.

6] https://www.usaid.gov/jordan/energy-resources-management

Ranking of main result areas

Based on the above analysis, the following result areas can be considered to be most promising for intervention. This ranking is indicative only. It is based on the country needs, complementarity to interventions by other donors, and match with The Netherlands' development policy, knowledge and experience.

Two ideas stand out. Both ideas concern a nexus approach to IGG themes, and cannot easily be subdivided. If taken on, results can potentially be gained in all result areas.

Policy (sub) result areas IGG

Topics are integrated around objectives rather than split into sub-result areas.

FNS	SUGGESTED DIRECTION	DESCRIPTION
• Malnutrition • Agricultural growth • Sustainable food systems		
Enabling environment	**Continue to support reductions in water use, energy use and increasing returns from agriculture. But look critically at what NL can contribute.**	The current approach of the Embassy in Amman in terms of providing support to reductions in water use, energy use and increasing returns from agriculture is useful and deserves to be supported. However more effort needs to be made to build on previous work. KfW, GiZ, USAID, SIDA, IFAD, FAO and many others have already invested in these topics in Jordan for the past 20 years. The support that The Netherlands is currently envisaging through the 3x3x3 project (three times less water, three times less energy and three times more return) and the establishment of a centre of excellence on waste water management (in cooperation with IHE) should be framed through efforts to tackle key questions as to whether the agricultural sector in Jordan is a viable sector for economic development, how food imports can continue to be secured in the volatile region, what technological and research support is really required in light of the massive support that Jordan has already received, coupled to the fact that it is in fact a middle-income country with significant financial means, and whether a more regional approach to addressing some of the key nexus issues is not more promising.

WATER	SUGGESTED DIRECTION	DESCRIPTION
Improved water resources management		
Transboundary river basins management	**Broadening the vision for tackling nexus issue by supporting civil society**	Jordan has a number of vibrant NGOs such as IUCN WESCANA, EcoPeace Middle East and RSCN. These NGOs are solid organisations with a strong knowledge base, long and sturdy track records in the region, and a well-developed focus on the nexus issues of water, renewable energy/climate and agriculture. These NGOs have developed visions on solving these problems that are based on civil society consultations, research and data. The Netherlands, as a vocal supporter of civil society organisations, gender and nature based solutions is a natural partner for these organisations to broaden the vision of tackling these issues. It might yield more results than relying solely on governmental silos to act in manners befitting the described nexus.
• Increased water productivity • Access to safe drinking water and sanitation		

CLIMATE* RENEWABLE ENERGY	SUGGESTED DIRECTION	DESCRIPTION
• Access to renewable energy • Sustainable forestry management and related practices		See above

* The result areas under climate are partly integrated in the resilience components under the Water and Food and Nutrition Security results areas.

Colofon

Country profile: This country profile is part of a series of 12 countries in the Sahel, Horn of Africa, and MENA regions, covering per country the themes of Food & Nutrition Security, Water, Climate and Renewable Energy. Commissioned by the Netherlands Ministry of Foreign Affairs (Department of Inclusive Green Growth, IGG), and implemented by Wageningen Centre for Development Innovation (WCDI), as part of the Support Facility of Food & Nutrition Security.

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Photo's: vvoennyy, www.nl.123rf.com
Design: http://rco.design

Methodology
These country profiles are considered a first reconnaissance for IGG in countries that currently do not have bilateral programmes on food, water, climate or energy. As a consequence, the design of these profiles is light and pragmatic. The consultants based these country profiles primarily on focus group discussions and interviews with staff of the Ministry of Foreign Affairs, Ministry of Agriculture, and RVO.

This data was augmented by interviews with country experts, databases from UN and World Bank Group, and IATI (a voluntary, multi-stakeholder initiative aiming to improve the transparency of aid and development resources. The Netherlands is committed to sharing data on its programmes and target areas in IATI).

Based on this data, the consultants offer for each country several result areas for consideration. These should be seen as general directions towards possible actions which (1) are needed and requested by the country, (2) are complementary to what others are doing already, and (3) present an opportunity to cooperate on areas of Dutch expertise and interest. These possible result areas are not recommendations for specific programmes to be developed.

Special thanks
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Documents consulted
Besides internal Ministry of Foreign Affairs documentation and public documents from other agencies (such as WBG, FAO, WFP, USAID, DFID), specific references are footnoted in the text.

Sources for metrics
General country statistics: sourced from CIA World Factbook, UNFPA, UNDESA, IMF, and Wikipedia.
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