
Global Center on Adaptation

State and Trends in Adaptation Report 2022



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Adaptation at the core of a prosperous
Africa in an uncertain and warming world

Covid-19 and the war in Ukraine have created a global humanitarian, food, and fuel crisis, threatening a prolonged economic downturn being especially felt in Africa.

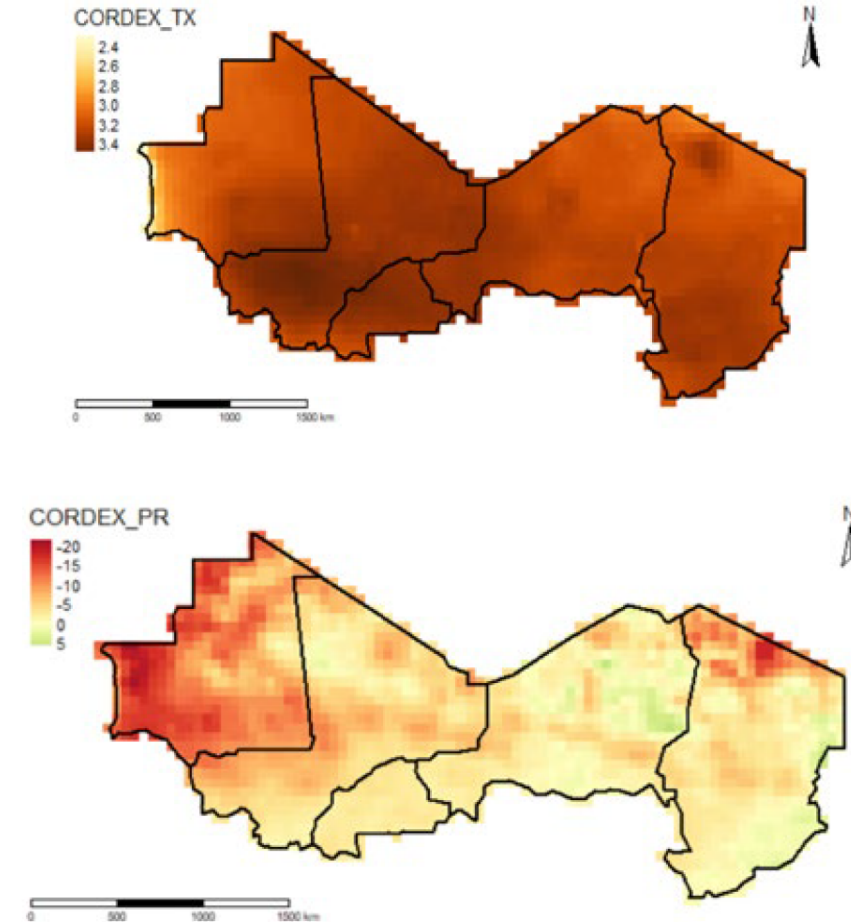
These shocks will only be further amplified by a climate crisis that is already hurting people and the economy, with no region more exposed than Africa.



The State and Trends series shows the stark reality: Africa is ground zero for the climate emergency. The climate is changing, and Africa needs to adapt.

It must adapt to rising temperatures, more extreme storms and floods, rising sea levels, more intense heatwaves, and longer and more severe droughts.

Projected Climate Change by 2100 in the G5 Sahel Region



Source: GCA with data from WMO and CORDEX

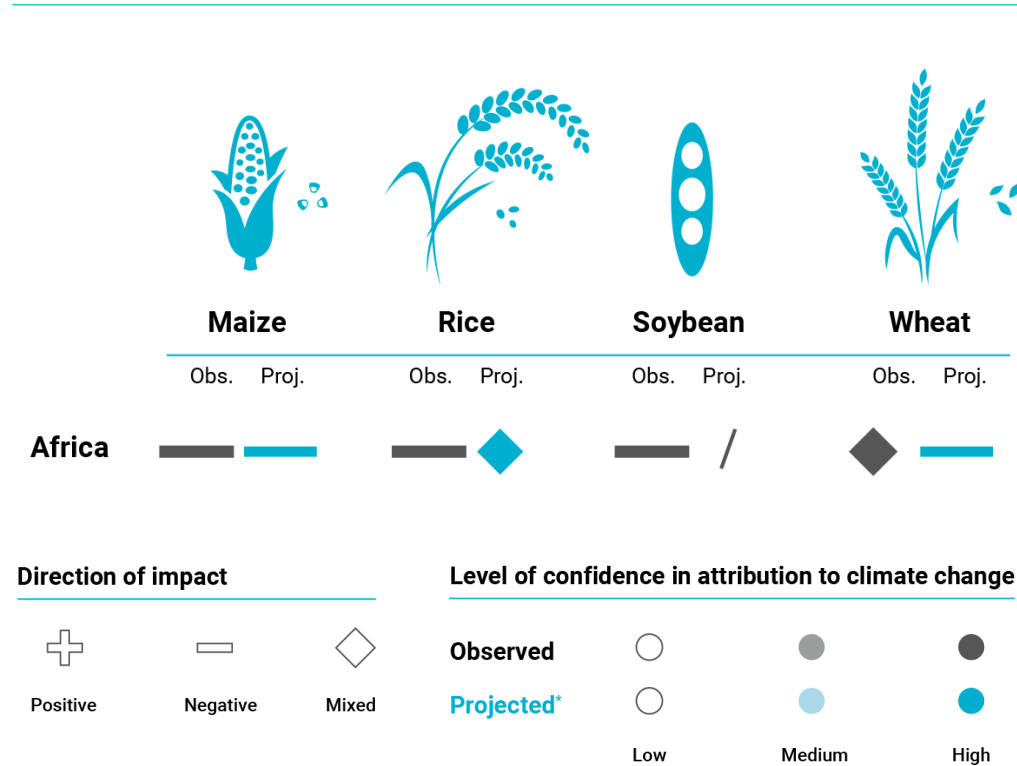
Summary of climate-related hazards and their impacts per region in Africa (January 2021 to September 2022)

	Disaster type					
	Storm	Drought	Wildfire	Flood	Landslide	Total impacted
Eastern Africa						
Total deaths	400	2,000	NA	200	NA	3,000
No. injured	600	NA	NA	100	NA	700
No. affected	1,967,000	30,455,000	NA	990,000	NA	33,411,000
Central Africa						
Total deaths	26	NA	NA	108	5	100
No. injured	NA	NA	NA	300	NA	300
No. affected	NA	2,100,000	30,000	820,000	100	2,950,000
Northern Africa						
Total deaths	NA	NA	100	200	NA	289
No. injured	NA	NA	200	500	NA	738
No. affected	16,000	18,000	44,000	1,377,000	NA	1,455,000
Southern Africa						
Total deaths	10	NA	NA	550	NA	600
No. injured	27	NA	NA	4	NA	30
No. affected	14,600	12,000,000	NA	125,000	NA	12,140,000
Western Africa						
Total deaths	17	NA	NA	300	NA	300
No. injured	100	NA	NA	300	NA	400
No. affected	17,000	4,446,000	NA	393,000	NA	4,856,000

Source: EM-DAT data for Africa, 1 January to 5 September 2022

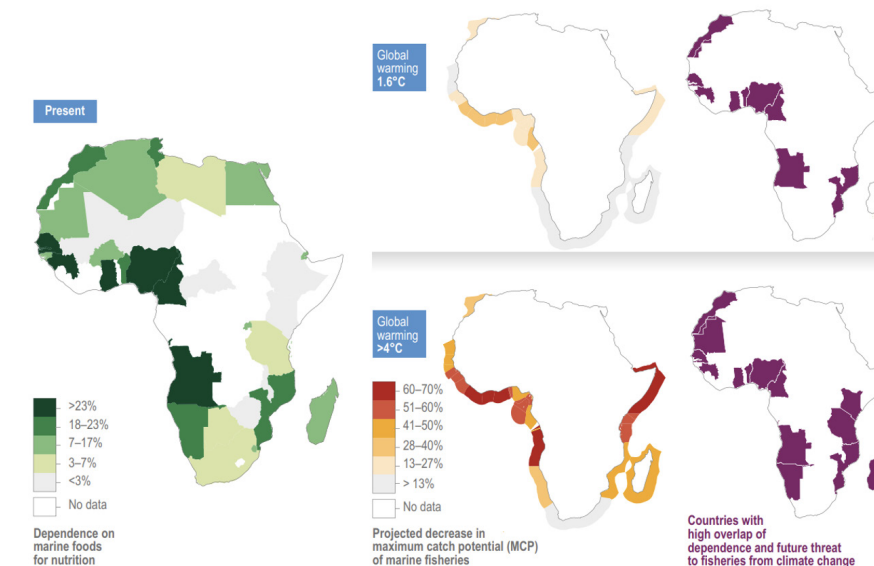
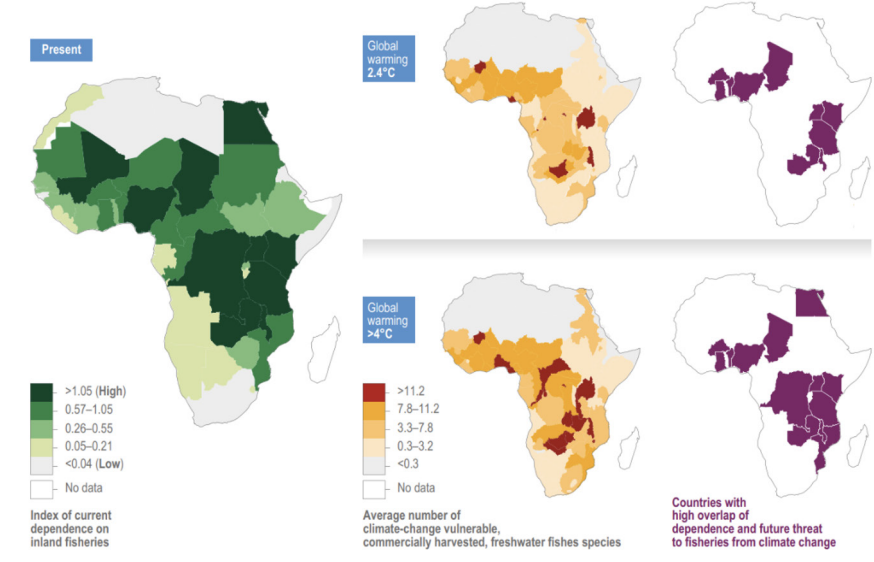
Food systems are particularly vulnerable

Observed and Projected Impacts from Climate Change to Crop Yield Productivity in Africa



Source: Adapted from a section of IPCC (2022) Figure AI.17
 Notes: / not observed or insufficient evidence; * mid-century at RCP4.5 (about 2°C global warming level).

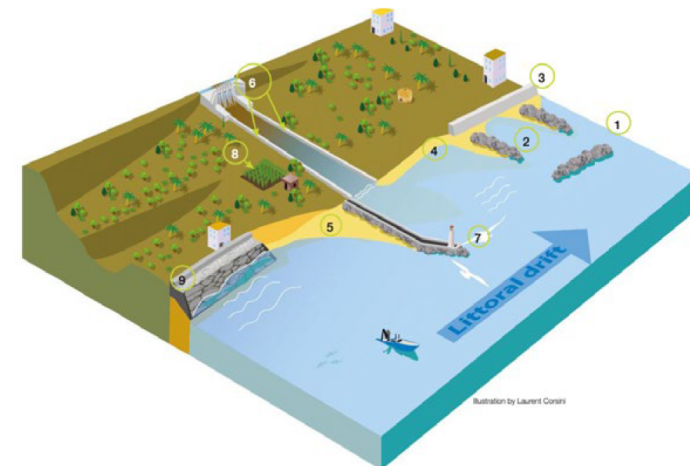
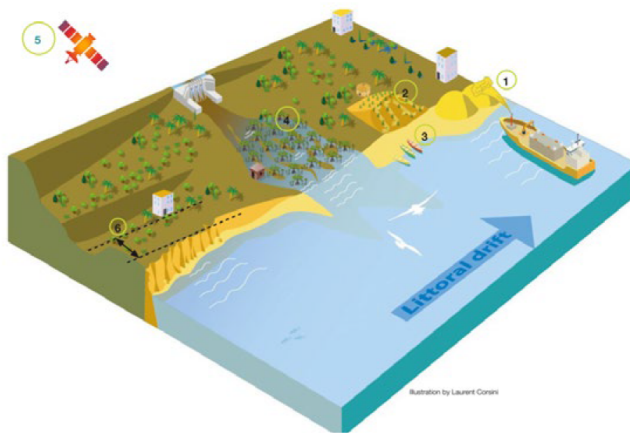
Climate Change Risks to Inland/Freshwater Fisheries (above) and Marine Fisheries (below) in Africa



Africa can still prosper and thrive in a world of climate change.

This landmark contribution to climate change and development policy maps out not only the impacts of climate change, but also the available adaptation solutions.

Soft Engineering, Coastal Planning, and Risk Management Solutions (left), and Hard Engineering Solutions (right)



1. Nourishment of the beach to give it back its natural shape
2. Dune restoration through the plantation of trees
3. The beach regains its width through the normal supply of sediment
4. Natural flooding in estuarine areas allows the traditional rice-crop system and the rehabilitation of the wetlands and mangroves
5. A flood early-warning system using satellites allows people to leave the agricultural camp in time in case of flooding
6. Setback and relocation to prevent the danger of building damage and collapses

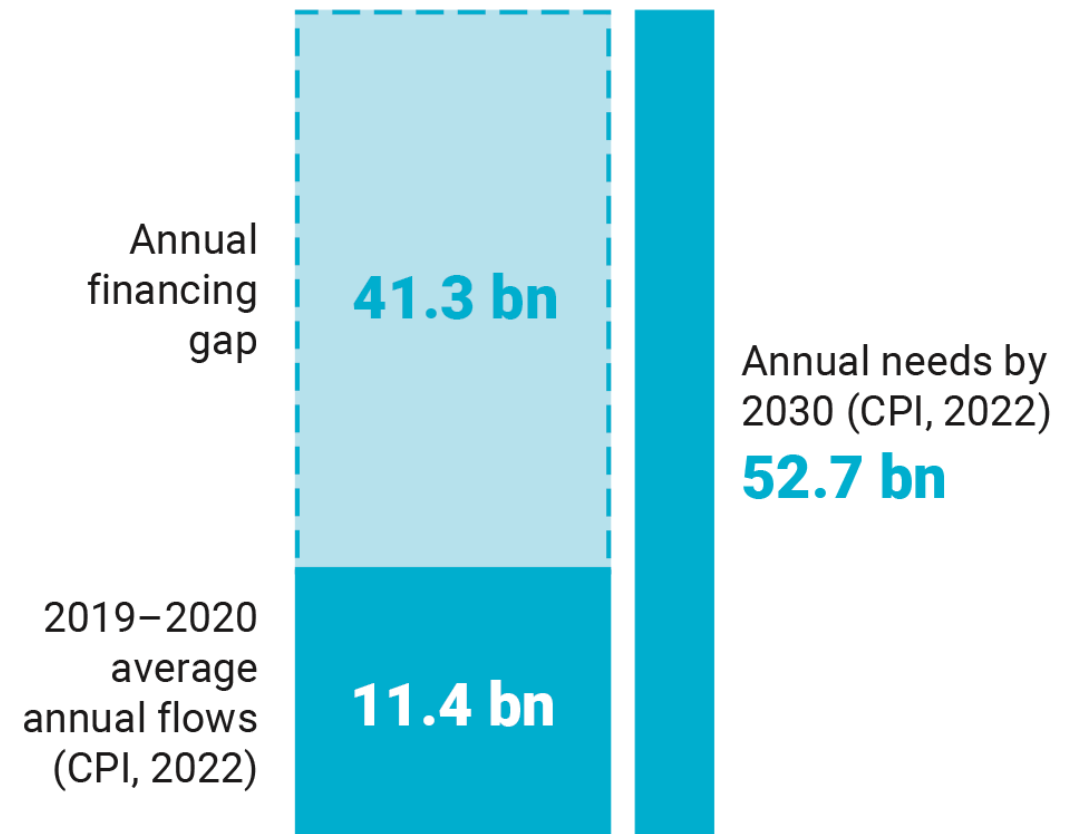
1. Breakwater
2. Groynes
3. Seawall preventing flooding event
4. Shrinking beaches due to lack of sediment supply
5. Accretion
6. River embankment
7. Jetty to prevent silting of the estuary
8. Water-controlled irrigated agriculture replaces flood agriculture and mangroves
9. Cliff stabilization

Source: World Bank Group (2022)

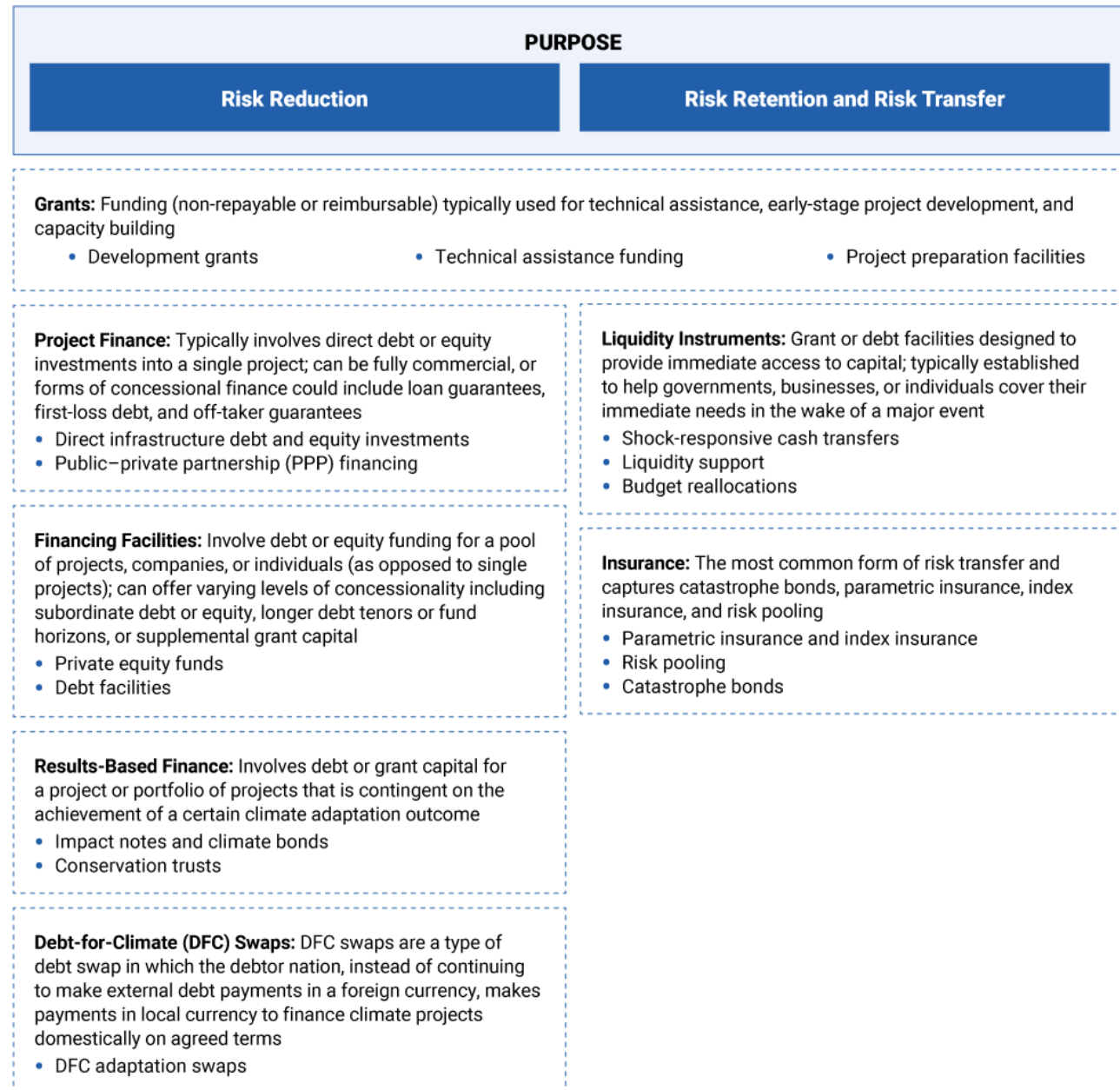
An enormous funding gap on adaptation is holding Africa back.

Our latest estimates show adaptation finance is flowing at \$11 billion a year, barely a fifth of the \$53 billion needed, leaving a \$41 billion funding gap each year. The private sector, currently only 3% of tracked finance, has a critical role in plugging this gap.

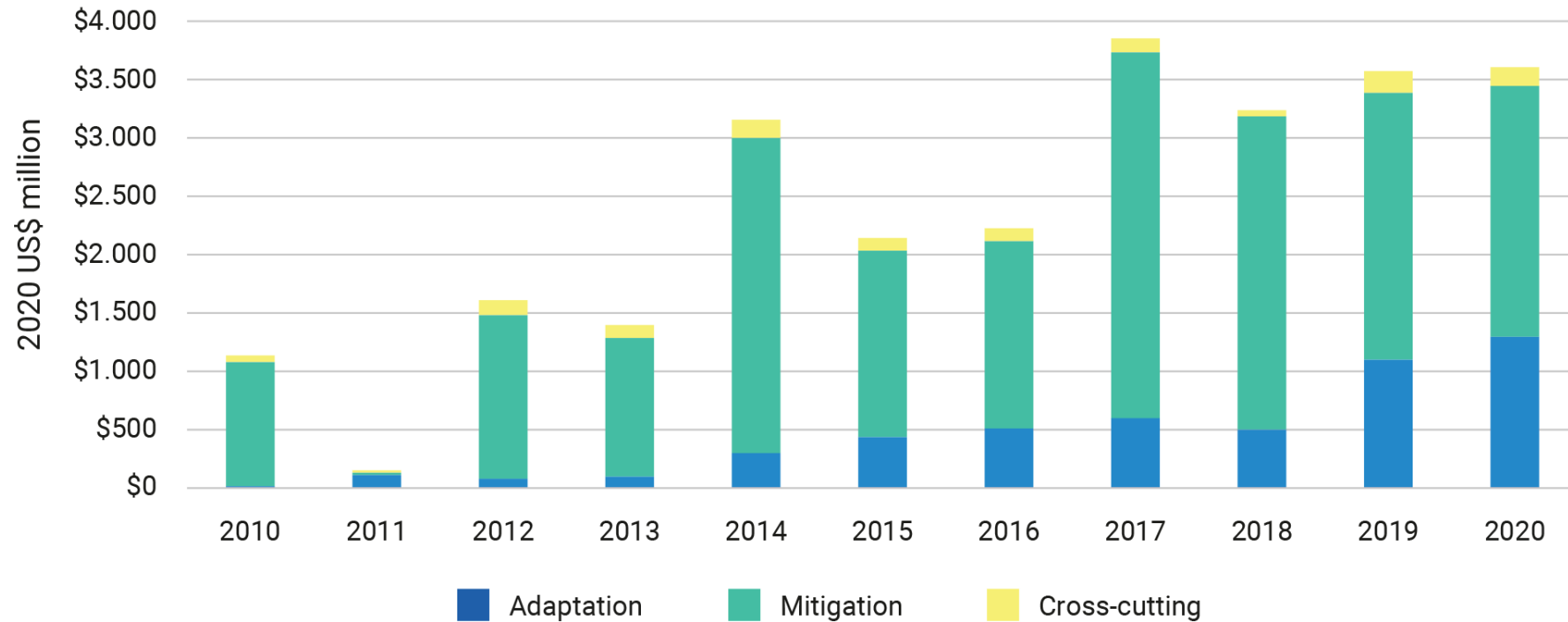
Adaptation Finance Commitments (US\$ billion) vs. Needs in Africa



Financial instrument types



Climate Finance Flows to North Africa by Purpose (2010-2020)



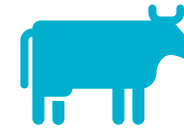
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cross-cutting	\$55.12	\$0.19	\$125.60	\$111.30	\$157.30	\$104.60	\$104.30	\$110.40	\$44.79	\$184.80	\$167.50
Mitigation	\$1,071	\$29.19	\$1,389	\$1,188	\$2,693	\$1,588	\$1,600	\$3,127	\$2,675	\$2,290	\$2,131
Adaptation	\$17.60	\$125.70	\$96.85	\$108.10	\$308.50	\$447.80	\$523.80	\$612.90	\$515.90	\$1,103	\$1,310

Source: ESCWA calculations based on OECD DAC data (recipient perspective)

No solution to Africa's food crisis without adaptation in the entire food system



60% of Sub-Saharan Africans are smallholder farmers
Nearly 1/4 of Africa's GDP comes from agriculture



Livestock:
55% of household income in pastoral communities
Cost of adaptation inaction in livestock: \$15-40B/year



Cost of adaptation inaction in agriculture \$200B/year

Cost of action: only \$15 B/year



Africa's "blue economy" worth \$300 billion per year, 49million jobs

Fish: more than 50% of animal protein in some coastal countries

Urban informality

- 79 of the world's fastest-growing cities are in Africa
- 60% of urban residents in sub-Saharan Africa live in slum areas
- Informal jobs, informal housing, and climate risk closely related

Case study: Accra, Ghana

- 60% living in informal housing ► 2/3 of these work in informal jobs
- 30% informal workers at home, 25% on the street
- Jobs, housing, and livelihoods at risk
- Adaptation in short-term:
 - ✓ Low-cost, in-situ investments
 - ✓ Coping actions
 - ✓ Land rights in safe areas
 - ✓ Locally-led adaptation





Youth and Entrepreneurship

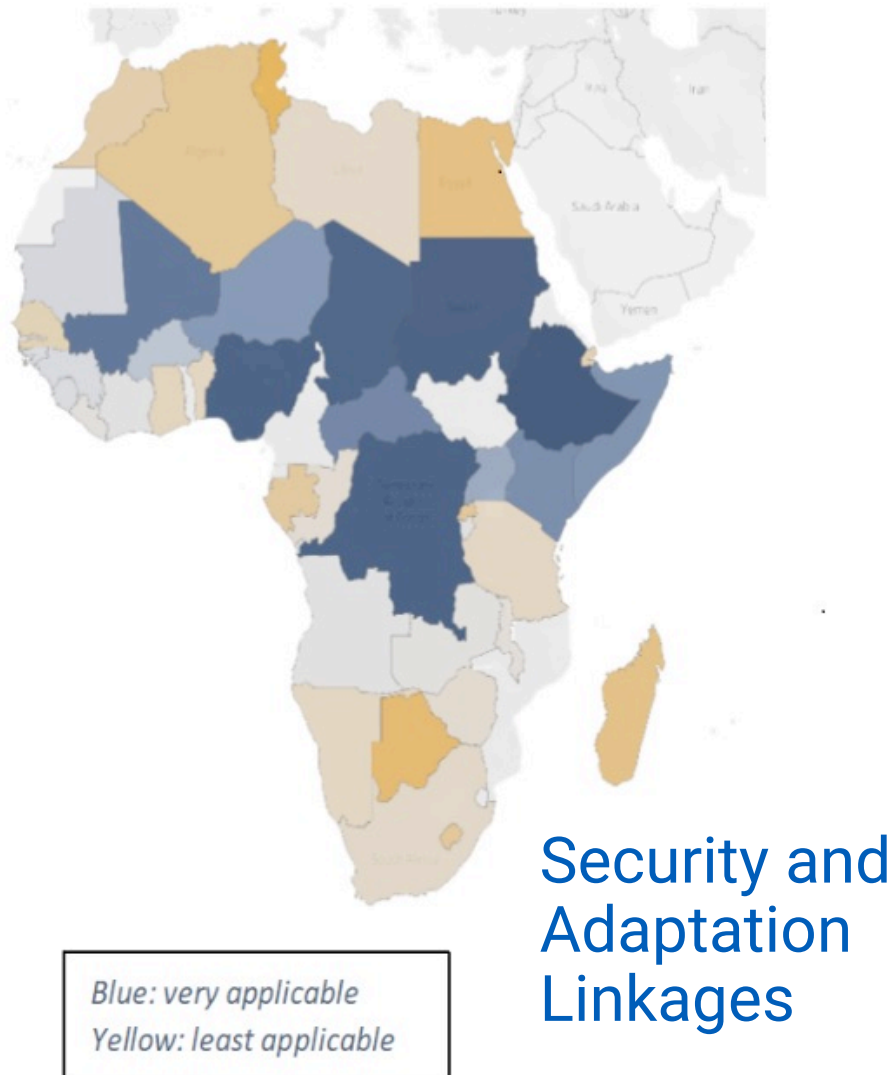
- SMEs: 95% of Africa's private sector; 80% of jobs
- Climate adaptation is a business opportunity
- YouthADAPT challenge supports young innovators and entrepreneurs
- Examples:
 - Drones to find trash clogging urban canals
 - Climate-smart digital agricultural services
 - Solar-powered smart irrigation

Education

- Major direct and indirect climate change impacts:
 - ✓ Damaged infrastructure
 - ✓ Heatwaves
 - ✓ Displacement
 - ✓ Household coping
- Adaptation at the core of educational achievements
- Education is part of adaptation action:
 - ✓ Human capital for resilience
 - ✓ Skills for adaptation



Security and Adaptation



- Climate change amplifies root causes of conflict
- Security and adaptation must work hand in hand:
 - ✓ Data
 - ✓ Joint early-warning systems
 - ✓ Joint prevention and preparedness
 - ✓ Transboundary and local action



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Read and explore more:
gca.org/reports/sta22

