THE ROLE OF GROUNDWATER DEVELOPMENT FOR AFRICA'S WATER AND CLIMATE FUTURES

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World Water Week

Every drop counts Count every drop
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African Ministers' Council on Water

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Groundwater in Africa: *Known Facts*

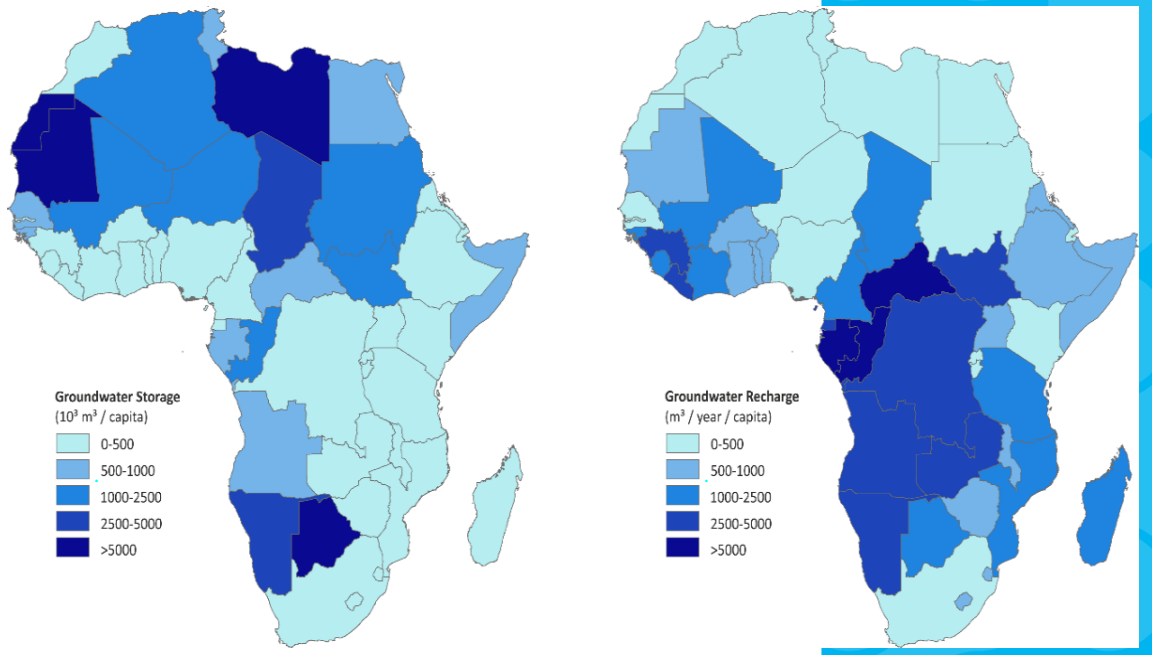
- In most parts of Africa (esp. SSA), groundwater doesn't much attention with regional WRM tilted in favour of surface water development.
- Groundwater is by far the largest regional water resource by volume with annual renewable GW equivalent to 15 years of average total flow of the Nile River.
- GW potential for sustainable uses in driving socio-economic development is huge, as only less than 5% of the Africa's renewable groundwater is being currently utilized.
- Groundwater stored in aquifers offers sustainable, decentralised, cost-effective solutions for climate-change adaptation in rural and urban communities
- The abundant and relatively untapped GW resource is key to accelerate the "green recovery" strategies (esp. in agriculture and food security) in Africa.

Climate Change in Africa: *Known Facts*

- Africa is home to 14% of the world's population and contributes only 3.8% of total Greenhouse Gas (GHG) emissions
- Africa is impacted by climate change more than other continents due to its weaker resiliency, weaker adaptive, capacity and greater reliance on climate-sensitive sectors like agriculture.
- In Africa, a temperature rise of 2.5-5ºC would trigger flooding and sea-level rise (of 15 and 95 cm), leading to forced migration and disruption in agricultural production.
- Despite Africa's minimal contribution to global greenhouse gas emissions, impacts across the continent have been significant.
- Between 1.5°C and 2°C of global warming, climate risks will pose significant challenges

Africa Context: Untapped Groundwater Potentials

- Water resources are unevenly distributed across the continent
- Groundwater comprises the **largest freshwater resource** in Africa
- Groundwater is more **resilient** to rainfall variability than surface water



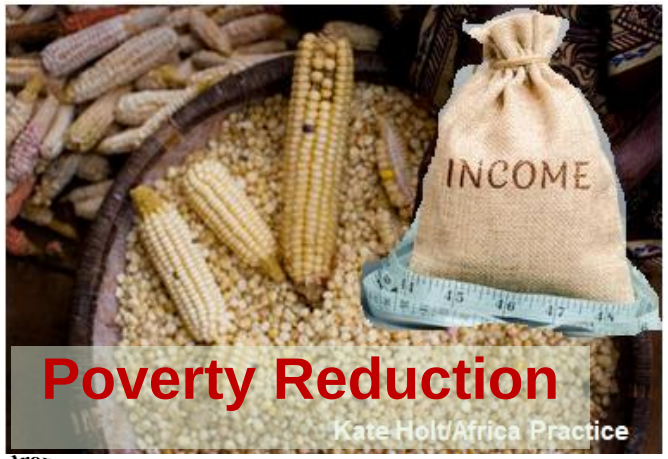
high recharge + high storage => significant potential for increased **water security**

low recharge + low storage => low potential for increased water security

BUT **small-scale local development** still important

TAPPING the Untapped GW Potentials

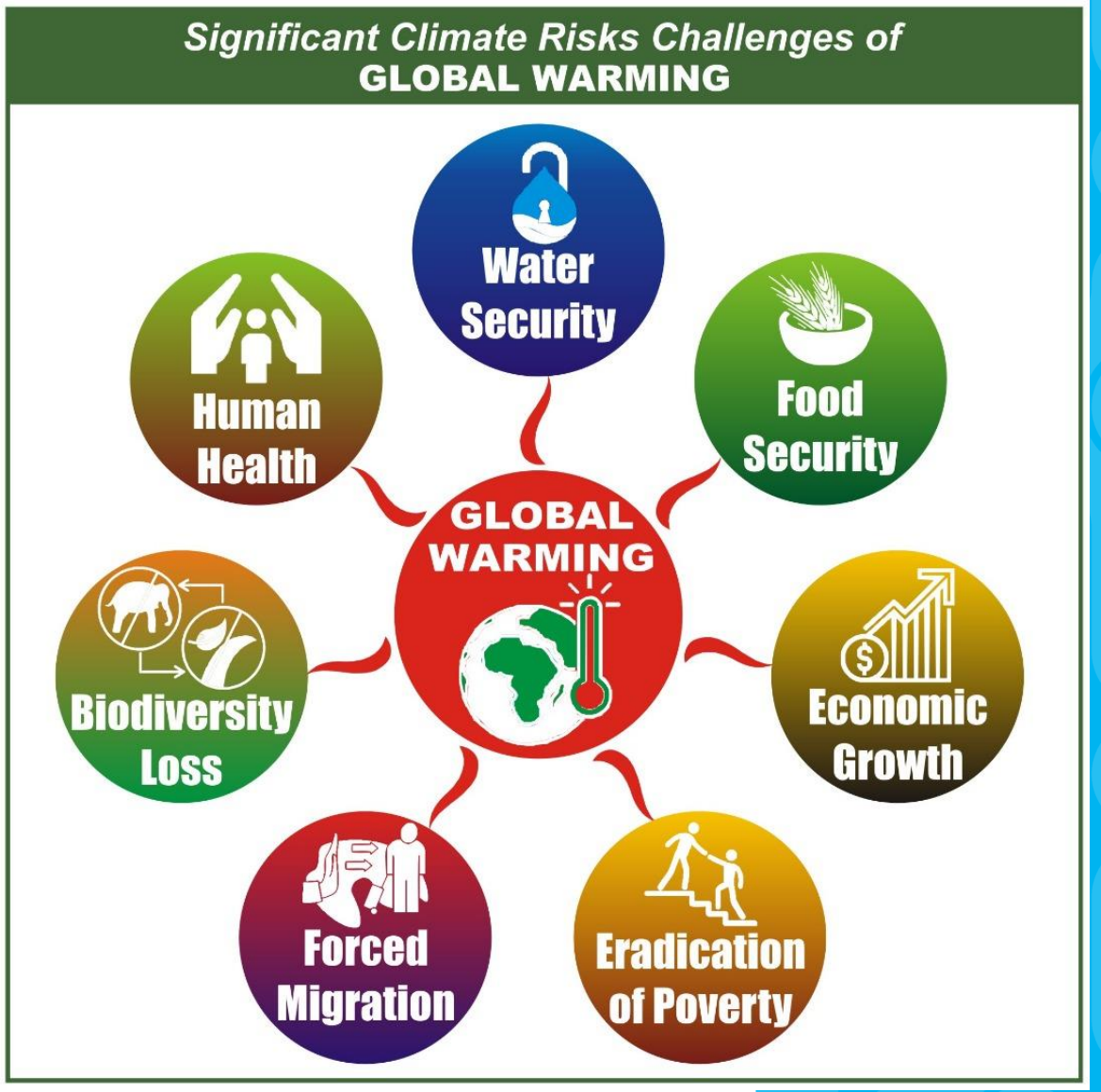
Groundwater provides significant untapped potential to contribute to **water security** with positive impacts across multiple sectors



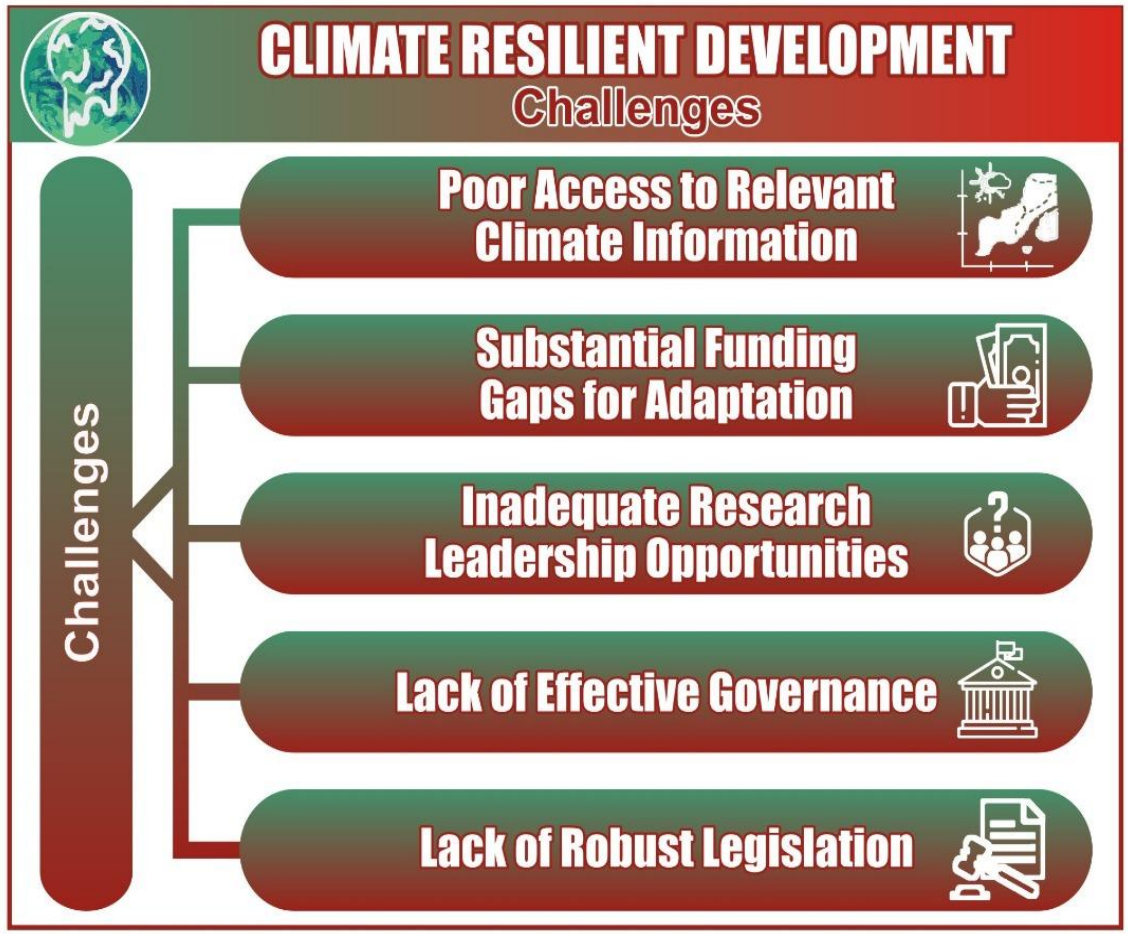
Africa Context: Climate Change Risks / Challenges

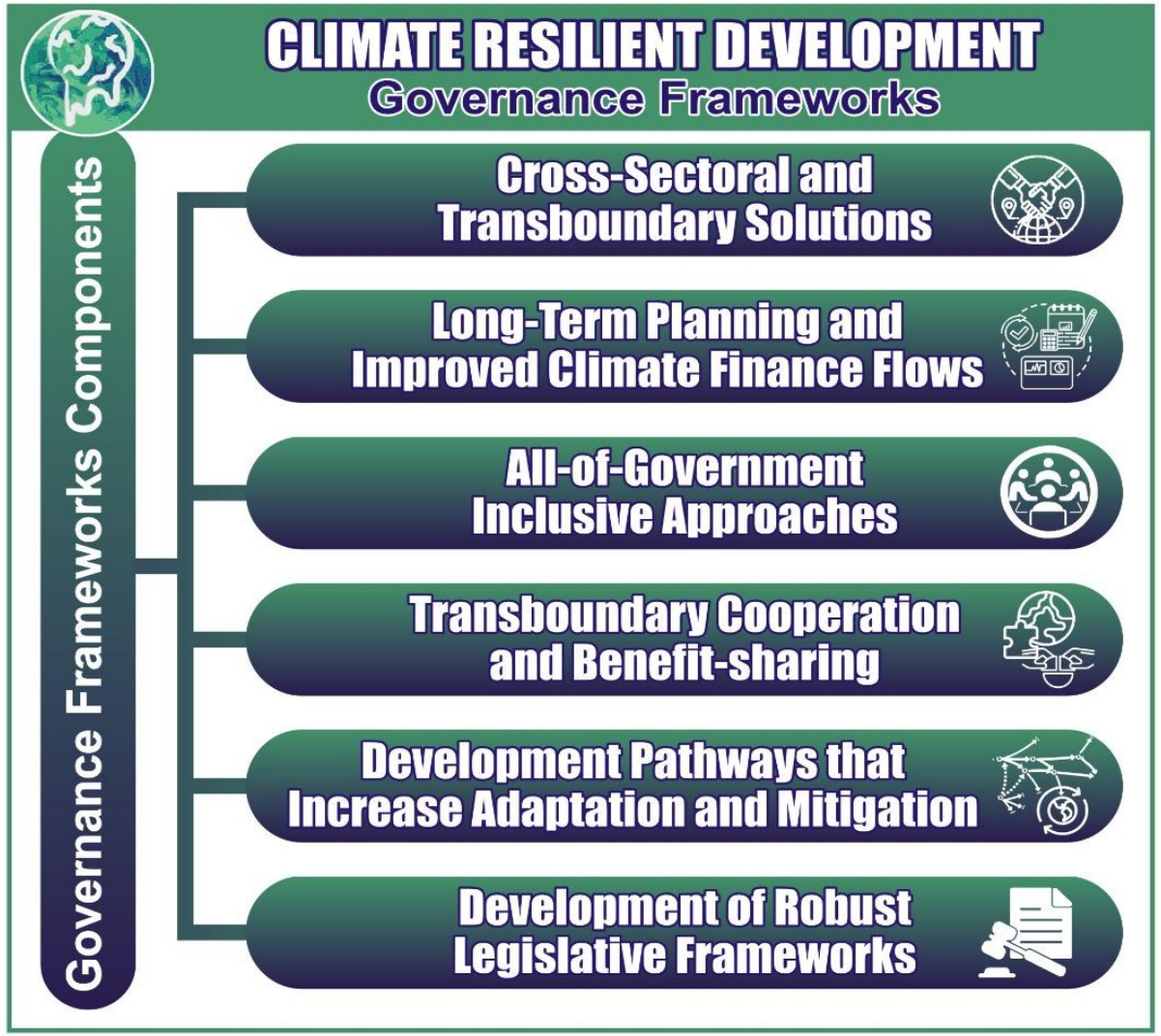
Despite Africa's minimal contribution to global greenhouse gas emissions:

- Impacts across the continent have been significant.
- Between 1.5°C and 2°C of global warming, climate risks will pose significant challenges



Effective Climate Resilient Development





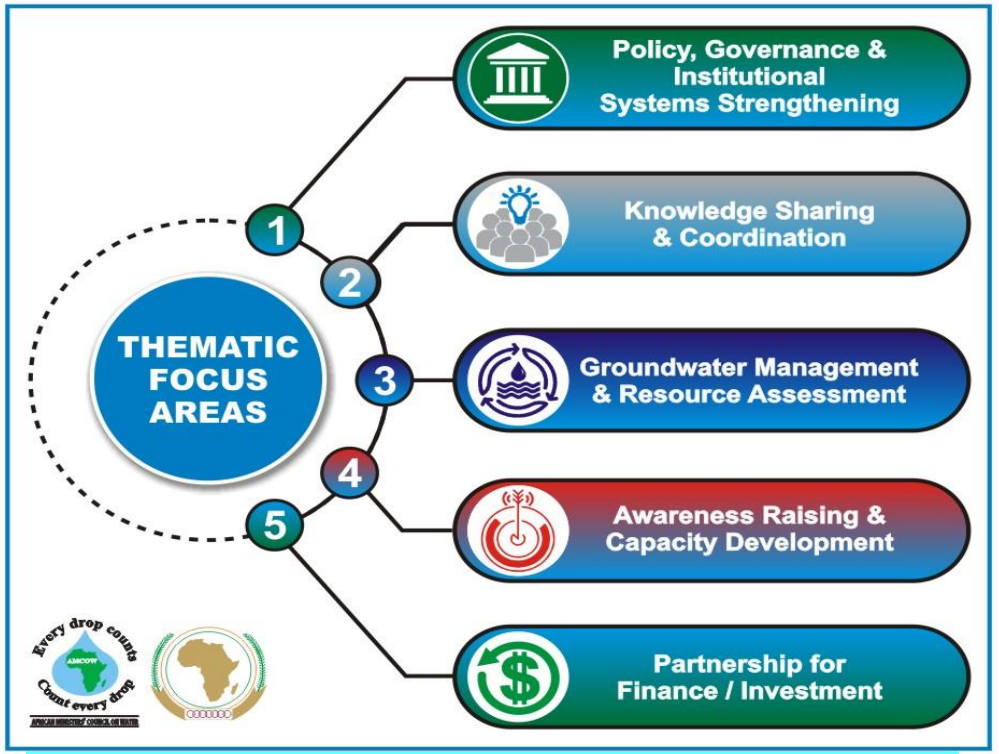
Effectiveness of Adaptation Interventions

In order to combat the threats posed by climate change;

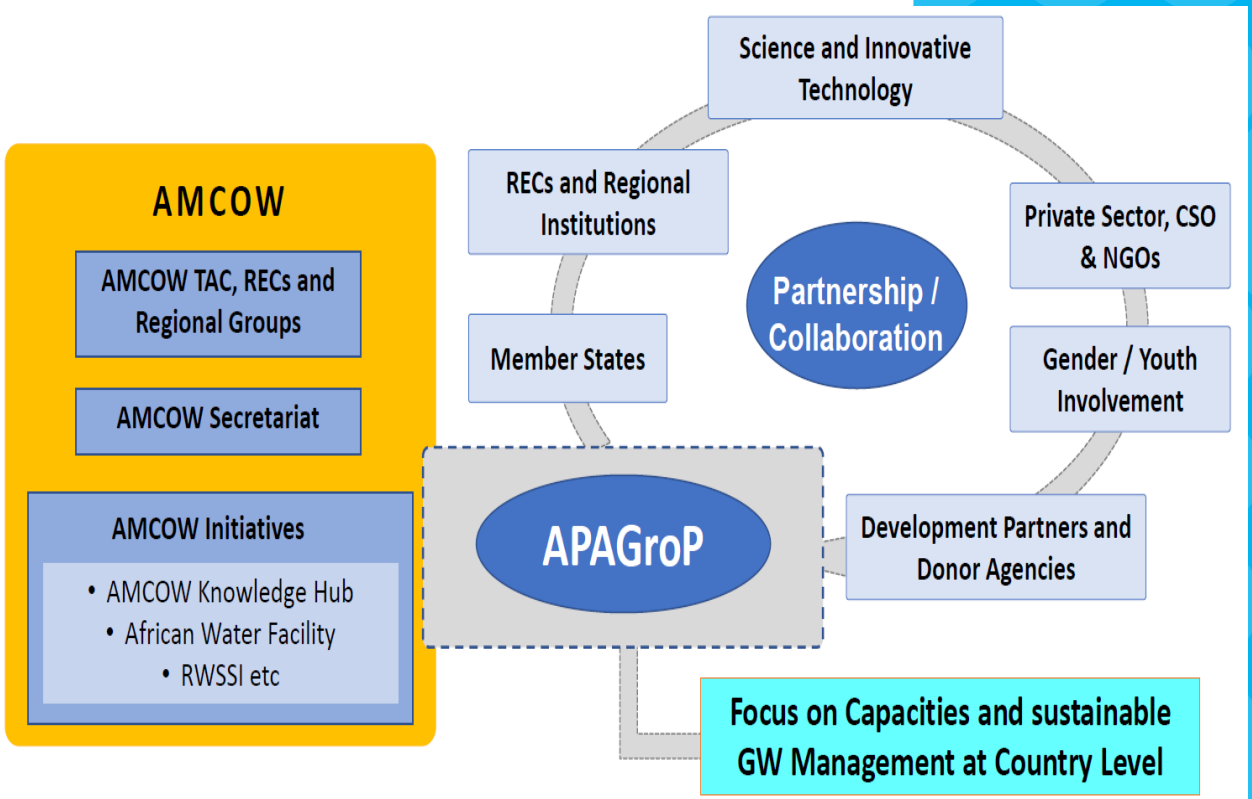
- ADAPTATION is needed to reduce the risks posed to humans and nature.
- To upscale and accelerate adaptation in Africa various elements are essential

AMCOW Intervention

AMCOW recognizes **GROUNDWATER** as a priority intervention area and thus set-up APAGroP's with the aim to leverage on science and to advance groundwater policy and practice in Africa.



Schematic representation of APAGroP thematic focus areas



Moving Forward: Tapping GW for SDGs

Sustainable Groundwater Development could support critical sectors across Africa (Hiller, 2022):

- Increase the Africa's irrigated land area beyond the current 3%, thus enhancing food security.
- Provide buffer against shocks of climate change and lessen the impacts droughts.
- GW could contribute to alleviate poverty and greater regional prosperity in Africa through improved irrigated agricultural productivity.
- GW can support broad economic, humanitarian and social development in sub-Saharan Africa.

Policy Recommendations

- Raise awareness on the multiple values and importance of Ground-water among policy and decision makers.
- Inclusiveness in the governance and management of groundwater involving private sector, civil societies, youth and gender.
- Promote collaborative action of key parties at national and local governments on valuing GW and TB aquifers at regional level.
- Identifying opportunities for climate mitigation and adaptation including attracting climate funding flow / regime.
- Understanding Africa's water and climate challenges is an essential to instituting changes to advance:
  - sustainable management of water resources and water supply services.
  - effective and smart climate resilient development.

Thank You!

Thank You to all AMCOW Partners and Collaborators!

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