

Climate change in the Persian Gulf – regional security, sustainability strategies and research needs

***Paper for the Conference: “Climate Change, Social Stress and
Violent Conflict”, Hamburg, 19 & 20.11.2009***

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Structure of the Presentation



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Introduction

- Many Western governments have integrated climate change in their national security agendas
 - US and French national security strategies
 - new NATO strategy; UN General Assembly Resolution 2009 & UN SC Resolution 2007
- Situation in the Gulf States:
 - The region will be directly & indirectly affected by CC in the next decades
 - Governments are yet to spell out climate change related policies & develop related capacities

The Gulf States

Common Features

- Strong, centralized (authoritarian) governance structures
- High income amongst (few) nationals through carbon rents
- Arid territories and sensitive ecosystems



Climate change and the Gulf region - Internal Effects

- Anthropogenic CC in the Gulf is already noticeable:
 - Bleaching and death of coral reefs (Riegl 2003: “glimpse into the future of the Gulf”)
 - Projected sea level rise: up to 1m by 2100 (discounting global climactic tipping points)
 - Large problems for man-made islands & claimed land at the Lower Gulf
 - Danger for up to 15 km of Bahrain’s coast line

Climate change and the Gulf region - Internal Effects

- Decrease in precipitation & higher average land temperatures
 - up to +3.6° by 2070 (UK Met Office 2009)
 - More severe water shortages, higher salinity levels in ground water and disappearance of desert springs
 - “desertification of the desert” (Richer 2008) – larger areas will be unfit for agriculture and a non-nomad lifestyle
 - Currently, the domestic water use in the Gulf is about 6 times above the natural renewal rate; we will witness:
 - Accelerated drop of water tables
 - Depletion of non-renewable aquifers
 - A growing demand of desalinated water

Climate change and the Gulf region - Internal Effects

- Effects of an increased demand of desalinated water:
 - Substantial growth in energy demand (desalination is highly energy intensive)
 - Need for major investments (KSA will spend US\$ 50bn on desalination until 2020)
 - Adverse environmental effects to marine environment (release of hot brine, chemicals & trace elements)

Climate change and the Gulf region - External Effects

- External effects on the Gulf might be more severe than internal ones
 - North and East African states will
 - Be hit more severely hit by CC-related events (draughts, floods)
 - Have developed less adaptive capacities and less financial resource to mitigate CC effects
 - Potentially produce large numbers of refugees heading to the Gulf States

Climate change and the Gulf region - Selected Scenarios

- Egypt:
 - 3-4 degrees temperature rise could lead to 6m migrants from the Nile Delta region & US\$35bn economic losses (UNDP 2009)
 - More drastic scenario: 10.7m refugees for a sea level rise of 2m (CARE 2009)
- Central Sudan:
 - 1.5 degree temp. rise would lead to a decrease in agriculture & a drop of maize production by 70%
 - Severe challenges to human security, mass migration could be expected
 - 1) To national urban zones
 - 2) To the Gulf region

Investments in agro-industry

Background:

- Global rise of food prices 2008
 - Double inflation in GCC states (domestic liquidity & weak US\$)
 - Rise of import costs for staple foods
 - Severe problems for low-income groups in Gulf
- KSA will phase out its subsidized wheat production programme by 2016
 - Not entirely abandoning domestic food production but
 - Rise up in value chain from staples to fruits etc (more \$ per unit of water)

Investments in agro-industry

Available Arable Land

	% of total land
Poland	40
United Kingdom	24
USA	19
Philippines	19
Indonesia	13
China	11
Argentina	10
Australia	6
Saudi Arabia	2
UAE	1
Iraq	13
Iran	10
Yemen	3

Source: World Bank

- GCC-wide agreement to outsource food production to reliable external food producers
- Decision to purchase or lease large areas of farmland in:
 - Sudan & Pakistan, Southeast Asia, Africa & Central Asia
- Details of GCC Policies will be announced in early 2010

Investments in agro-industry

Problems:

- “Oil for food” programmes stress mutually beneficial nature of undertaking – what are tangible gains for the host countries? (→ Chinese development model?)
- How to secure are FDI in potentially unstable countries?
 - armed protection to ensure the GCC’s vital interests/
Pakistan offered own special forces for protection (Reuters, 2 September 2008)
- Great concerns within the UN Food and Agriculture Organisation: “I have no problem in Arabs doing the investment, but land is a political hot potato” (Jacques Diouf, Director, FAO)

Future fault lines & the case of Yemen

Future fault lines are already visible:

- Rapidly growing populations erode rentier system & ruling bargain
- Growing divide between beneficiaries and marginalized local groups
- In the smaller Gulf states
 - Large non-native majorities in the resident population
 - pockets of energy shortages
- Yemen as example for a negative Gulf future:
 - Depleted hydrocarbon resources, dropping water tables (Qat)
 - Political & security situation close to a failed state
 - Armed hostilities with Saudi Arabia in November 2009
 - Is the fortification of the Saudi-Yemeni border the optimal solution?

Sustainability Policy Initiatives

- Problem of defining sustainability (economic, ecological etc.) results to a large variety of proposed solutions
- Gulf countries have followed an industrial growth model
 - Investments in infrastructure, transport, petrochemical industry
 - Higher education
 - Abu Dhabi's Masdar Initiative remains the Gulf's only major investment focussing on renewable energies
- However, developing a low-carbon future remains a key issue for all Gulf States

How to trigger socio-technological transitions?

Gulf development models have so far

- Implicitly followed concepts of strategic niche management and created “islands of efficiency” (Hertog/Luciani 2009) in various focus areas
- These are characterized by
 - Specialist teams of expatriates working in protected environments
 - Sponsorship of members of ruling elite
 - Bypassing inefficient local governance structures and
 - Guaranteeing a robust financial backing

How to trigger socio-technological transitions?

The question remains:

- Can these niches translate into structural change of socio-technical regimes and inform policy processes or:
- Do they contain innovation as the “handmaiden of control of the elites” (O’Riordan)?

Further Research Agendas

1) Climate Change

- Reliable downscaling of CC predications for decision-makers
- More research about climate changes impacts on Gulf economies, industries, and urban centres
 - *Excellent field for the newly established Gulf universities to put themselves on the map
 - *Financial support should be available through
 - Gulf governments wishing brush up their profiles (Masdar-style projects)
 - Sovereign Wealth Funds ambitious to fund Stern Report-like studies
- Finding a way to integrate the oil-wealthy Arab States into a global climate deal

2) Research about climate change related migrants

- Work about their legal status and a sketch of a related international agreement is key
- Mapping out possible patterns of migration and human trafficking into the Gulf region in case of large-scale population movements

Further Research Agendas

- 3) Investments in agriculture and land purchases
 - Research needs to enhance transparency in global agro-investments
 - Work on the legal status of these territories: is this part of a foreign national territory (“vital interests”)? Who defends them in case of conflict? Which legal system has precedence?
 - Can investments in more developed markets (EU, Latin America) be recommended? Gulf investors need to avoid another Dubai Ports fiasco!
- 4) Internal security and climate change dynamics in Yemen
 - How to integrate Yemen into a comprehensive regional umbrella in order to avoid a “Gulf Afghanistan/Yugoslavia”
 - How to empower the GCC to take a more proactive role in regional and global governance

Further Research Agendas

- 5) Low-carbon innovations and renewable energy
- Develop strategies to remove barriers for innovation and transitions in the Gulf
 - Adapt Western-style sustainability models to Gulf governance structures
 - A possible way: stress importance of personal appeals to leading figures in the ruling elite instead of public pressure
 - Why are Gulf SWFs are not more active in promoting regional development of any kind → potential key instruments in spearheading technology innovations

Thank you for your attention!

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