Global and Planetary Change 64 (2008) 244–252

Contents lists available at ScienceDirect

Global and Planetary Change

journal homepage: www.elsevier.com/locate/gloplacha

Developing adaptive capacity for responding to environmental change in the Arab Gulf States: Uncertainties to linking ecosystem conservation, sustainable development and society in authoritarian rentier economies

Andy Spiess *

GCC Network for Drylands Research and Development (NDRD), Germany

ARTICLE INFO

Article history:
Received 21 October 2008
Accepted 27 October 2008
Available online 30 October 2008

Keywords:
desertification
adaptive capacity
institutional framework
policy
Gulf Cooperation Council (GCC)

ABSTRACT

The recent assessment by the Intergovernmental Panel on Climate Change (IPCC) has emphasized that understanding the institutional context in which policies are made and implemented is critical to define sustainable development paths from a climate change perspective. Nevertheless, while the importance of social, political and cultural factors is getting more recognition in some parts of the world, little is known about the human dimensions or the contexts in which they operate in the affluent oil economies of the Arabian Peninsula. Policies that implicitly subsidize or support a wasteful and environmentally destructive use of resources are still pervasive, while noteworthy environmental improvements still face formidable political and institutional constraints to the adaptation of the necessary far reaching and multisectoral approach. The principal aim of this paper is to identify some of the major shortcomings within the special context of the Arab Gulf states' socio-cultural environment in support of appropriate development pathways. Conclusions highlight that past and current policy recommendations for mitigating environmental threats are likely to be ineffective. This is because they are based on the unverified assumption that Western-derived standards of conduct, specifically the normative concept of "good governance" and "democracy", will be adopted in non-Western politico-cultural contexts.

1. Introduction

Global Environmental Change, of which desertification is only one key vulnerability (Schellnhuber, 2006), will not only alter living conditions for future generations, but present a serious threat to human well being as well as to social justice, and therefore remain a crucial contemporary policy issue. While a set of biophysical transformations, driven both by human activities and natural processes, affects the quality of human life on a worldwide scale, the socioeconomic and environmental consequences of progressive resource degradation in the Gulf Cooperation Council (GCC) member states[1] are profound. Predictions for the region's outlook show that the vulnerability to further desertification will be enhanced due to the indicated increase in the incidence of severe drought globally (UNEP, 2006; Burke et al., 2006) and that novel 21st century climates are projected for the eastern Arabian Peninsula (Williams et al., 2007). Furthermore, the region will be confronted with severe water shortages as global temperatures rise (Al Kolibi, 2002). The Millennium Ecosystem Assessment (MEA) on the human consequences of dryland ecologies shows that they are due at least as much to the social systems that produce vulnerability as to environmental changes themselves (Millennium Ecosystem Assessment, 2005). Generally it has been demonstrated that anthropogenic causes of ecosystem change, such as overexploitation of natural resources, are determined by population growth, demographic shifts, economic and technological development, cultural forces, values and beliefs, institutions and governance structures as well as the interactions among all these underlying driving factors (Nelson, et. al., 2006). A more integrated understanding of the complex interactions of human societies and ecosystems is therefore essential if we are to identify vulnerable systems, pursue options that take advantage of opportunities and enhance adaptive capacities (Folke et al., 2005; Young et al., 2006). Understanding these mechanisms and conditions, including both past and possible future evolution, is a prerequisite for developing successful mitigation as well as viable adaptation policies that will reach their stated objectives. Yet, experiences from the past have shown that the mere existence of capacity is not itself a guarantee that it will be used. Adaptation will therefore not only depend upon the capacity of systems to adapt, but also on the will or intent to deploy

* Tel.: +971 50 7307274.
E-mail address: spiess@ndrd.org.
URL: http://www.ndrd.org.

[1] The Gulf Cooperation Council (GCC) was established in 1981 with the main objective 'to bring about integration, coordination, and cooperation in economic, social, defence, and political affairs among Arab Gulf states'. Its members include the six Arab states of the Persian Gulf, namely Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Oman actually opted for remarkably different and more sustainable development pathways and will thus not be considered in this analysis.

0921-8181/$ – see front matter © 2008 Elsevier B.V. All rights reserved.
doi:10.1016/j.gloplacha.2008.10.008

adaptive capacity to reduce vulnerability (Burton et al., 2002; Moser, 2005; Adger et al., 2007).[2]

National indicators regularly fail to capture various processes and contextual factors that influence the ability to adapt, and thus provide little insight on adaptive capacity at the level where most adaptations will occur (Eriksen and Kelly, 2007). Hence unambiguous determinants of adaptive capacity at the national level represent an area of contested scholarly discourse. Some studies relate adaptive capacity to levels of national development, including political stability, economic wellbeing, human and social capital as well as effective institutional and regulatory frameworks (Stern, 2007). The human dimensions approach presumes that the overall adaptive capacity can be increased by enhancing the ability of both individuals and organizations to withstand and recover from negative climate impacts or shocks to the system (Janssen and Ostrom, 2006; Lemos et al., 2007). Developing adaptive capacity is thus primarily a function of promoting the creation and dissemination of knowledge, the existence of power structures that are responsive and consider the needs of all the involved stakeholders and generating a creative flexibility in decision making and conflict solving (Burton et al., 2006; McGray et al., 2007).

Especially when it comes to the oil monarchies in the Gulf region, little is known about their human dimensions, or the contexts in which they operate. Undeniably gradual environmental governance in some of the GCC states is taking place. However, general consensus has also stressed that the extent of these changes is somewhat limited and perhaps subject to suspension or reversal as a result of potential changes in domestic, regional or international circumstances (Vrolijk, 2003; Launay, 2006; Raouf, 2008). Policies that implicitly subsidize or support a wasteful and environmentally destructive use of resources are still pervasive (Elhadj, 2006), while noteworthy environmental improvements still face formidable political and institutional constraints to the adaptation of the necessary far reaching and multi-sectoral approach (El-Sayed, 2004; Brown et al., 2006).[3] The situation is further aggravated by typical institutional weaknesses, such as multiplication, overlap and low level of integration of various state agencies, absence of effective coordination and participatory decision-making processes, lack of collaboration and partnerships, shortsighted budgetary planning, dysfunctional legal frameworks, lack of well-defined national research strategies as well as inadequate institutional capacity building and enabled society (Labaronne and Ben-Abdelkader, 2006; ESCWA, 2006). Despite considerable fiscal resources, sufficient physical infrastructure and a large state apparatus, the region is moreover still characterized by an extremely low monitoring and information-gathering capacity (Van Vierssen, 2005; Butler, 2006; Hoodbhoy, 2007). Procedures often lose momentum when they are transmitted to lower levels of the administration, over which the leadership only has very indirect control (Bertelsmann, 2008). Yet policy, institutional and administrative failures have the effect of reducing the value of environmental resources to society through wastage, poor pricing and outright lack of means of conservation (Dawoud, 2005).

Most international organizations recognize that the political and socioeconomic framework conditions largely determine the degradation of natural resources and understand that the local socio-cultural context must be considered in finding appropriate policy recommendations. Yet, few efforts have been made to adjust the latter to the practical realities of many countries in the developing world. Policy recommendations for mitigating environmental threats such as desertification are conceptualized around Western-derived standards of conduct. In other words, the normative concept of "good governance" and "democracy", are assumed to be adopted by and applicable in non-Western politico-cultural contexts.

The principal aim of this paper is to identify some of the major political and institutional constraints within the special context of the GCC socio-cultural environment in respect to developing adaptive capacities to the vulnerabilities of climate change. Underscoring a few outstanding peculiarities of this region will be sufficient to show that the prevailing political ideology currently has little chance of sustainable success in the region.

2. Political ideology in conflict with sustainable development

Adaptation and capacity development strategies must be acceptable and realistic within the context of a particular society, so information on cultural and political peculiarities is essential for a comprehensive assessment. Since there is a correlation between gross domestic product (GDP) per capita and certain human development indicators, the assumption that economic growth is an important factor in generating the resources necessary for human well-being and environmental protection prevails. However, selective examples from developing nations show that economic growth alone does not guarantee sustainable human development (Pfaff et al., 2004; Scherr and Gregg, 2006).[4] While rapid economic development has brought widespread prosperity to the GCC member states, augmentation was achieved at the cost of greater inequity, unemployment, intensive human rights violations and general oppression, lack of education & research, loss of cultural identity and the intense over-consumption of resources needed by future generations. Its unchecked nature has especially introduced a variety of anthropogenic stress factors which have challenged the ecological integrity and sustainability of the burgeoning population in the region (Khan et al., 2002). Despite the fact that four out of the six GCC member states are rated among the 10 most water scarce countries in the world[5], prolonged overexploitation of fossil water reserves over the past decades threatens the remaining reserves from saltwater intrusion. Continuous water extraction, production, as well as utilization, particularly in the municipal, industrial and highly subsidized agricultural sectors has not only led to severe groundwater depletion in both quantity and quality, but in soil and water salinization, thermal and chemical pollution, loss of habitat and biological diversity, declining productivity, and irreversible ecosystem degradation, such as topical destruction of rangeland vegetation (Abahussain et al., 2002; Amer et al., 2006). Failures of resource management policies are aggravated by overgrazing, over-exploitation of water and land resources and the use of inappropriate technologies. Inadequate irrigation practices, persecution and socio-economic changes, the latter apparent in the decline of traditional

[2] At a recent conference entitled " Living with Climate Change: Are there limits to adaptation?" organized by the inter alia Tyndall Centre for Climate Change Research, Susanne Moser approached this issue of the actual barriers to climate change adaptation in her keynote lecture, which is available online along with the other contributions of the event as a podcast under http://www.tyndall.ac.uk/research/programme3/adaptation2008/index_outputs.html In her opinion we must ask "how" to foster and employ the human and social capital necessary to actually and effectively move technical, economic, institutional, and policy levers for adaptation to climate change, not only focus on "what potentially could be done" (Moser, 2008).

[3] The 2005 Environmental Sustainability Index (ESI) benchmarks the ability of 146 nations to protect their environment over the next several decades by comparing five fundamental components of sustainability: Environmental Systems; Environmental Stresses; Human Vulnerability to Environmental Stresses; Societal Capacity to Respond to Environmental Challenges; and Global Stewardship. While there was insufficient data for Qatar and Bahrain, Kuwait ranked 138, Saudi Arabia 136 und the UAE 110 (Yale Center for Environmental Law and Policy / Center for International Earth Science Information Network, 2005). Newer reports are available, but unfortunately the indicators changed.

[4] Consistent with the agreements of the 2002 Johannesburg Summit (that defines environmental protection and social and economic development as fundamental to sustainable development) many developing countries today still face the growing "implementation gap" between governmental commitments and action. Notorious examples, besides the Arab oil economies, include for instance Pakistan, Egypt and Nigeria.

[5] According to Amer et al. (2006), Kuwait (10 m p/a), the UAE (58 m), Qatar (94 m) and Saudi Arabia (118 m) rank as the first, third, fifth and eighth water deficient countries, respectively.