



Sustainable water management - perspectives for tourism development in north-eastern Morocco



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ABSTRACT

The objective of this article is to evaluate the regional development risk for the luxury tourism sector in Saidia, north-eastern Morocco. The study aims to provide input for tourism-related water management and governance. Based on a thematic literature review from different disciplinary angles key pressures for regional water resources are categorized. The identified key problems and pressures related to the critical regional water situation are contrasted with Moroccan tourism policy strategies which emphasize a sustainable pathway of regional tourism. Further, the state of practical implementation of sustainability principles in the hotel management standards were assessed. The opposing perspectives of science and policy on prospects and problems provide the basis for a destination-specific SWOT analysis to assess and discuss risks and opportunities of current tourism development. Core strategies and related measures are derived to provide impulses for sustainable water management and governance and as a support for concrete policy implementation.

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1. Introduction

VISION 2020, the national tourism strategy of Morocco, anchored in the country's overall development policy, was developed to make Morocco one of the world's top twenty destinations and at the same time to become a role model for sustainable tourism in the Mediterranean (Roudies, 2013). As well as at the global level, tourism is a fast-growing industry in Morocco (UNWTO, 2014). The tourism sector has continued to develop favourably, increasingly contributing to Moroccan GDP (direct contribution: 8.6% of GDP in 2013) and employment (direct jobs: 7.6% of total employment in 2013) (WTTC, 2014). Tourism thus has become a very important non-agricultural sector of robust growth, it is expected to continue its positive performance, and it is regarded as an important component of the promoted sectoral diversification of the national economy (UNWTO, 2014; Royaume du Maroc, 2014).

Main socio-economic purposes of this development realignment are the lessening of the dependence on fluctuating agricultural market prices which might become even more volatile under climate change, and the reduction of unemployment and poverty (Spilanis, Tellier, & Vayanni, 2012; Royaume du Maroc, 2001, 2010). Positive economic effects and an improvement in the return on investment (ROI) by direct and indirect revenues from tourism are expected to result in jobs and increasing incomes. In general, this sectorial transformation is to effectuate an economic catch-up process mainly of structurally weak regions such as the north-eastern part of the country (region l'Oriental) with a

focus on locational advantages of particular regions (Royaume du Maroc, 2010).

In the officially formulated programme objectives 'sustainability' constitutes the normative guiding principle: tourism development must be "socially fair", "cultural compatible", "environmentally friendly", and investment decisions and infrastructure projects should be "resource-adequate" (Roudies, 2013). This official sustainability rhetoric adds political legitimacy to a resource-intense, precisely because a highly water-consuming, development strategy. But is this understanding of sustainability reflected in a readjusted, adequate water management in tourism operations, e.g. in binding environmental standards for hotel companies.

Water resources in Morocco are very limited: the total actual renewable water resources per capita and year are below 900 m³ (for the year 2012, compared to the global average of 6000 m³, UNWATER 2015)¹ and water deficit situations occur frequently (Doukkali, 2005). In north-eastern Morocco, in the recent decades and due to high agricultural demand, water availability has already been compromised and led to water scarcity (Snoussi, 2004; UNEP, 2009). Thus, the establishment of an additional industrial water consumer such as tourism could foster a constant water shortage crisis unless countermeasures are taken. Otherwise, the envisaged positive economic effects could be superimposed by severe environmental degradation and associated socio-economic implications or even water conflicts (Schilling, Freier,

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¹ See <http://www.unwater.org/kwip> (Accessed 2 March 2015).

Hertig, & Scheffran, 2012). It is thus a crucial question how continuous water supply for all sectors could be ensured taken into consideration the limited regional water resources.

With this article we follow up on earlier work on the vulnerability of regional water resources in north-eastern Morocco under climate change (Tekken, Costa, & Kropp, 2013; Tekken & Kropp, 2012; ACCMA research project²) (Fig. 1).

In this context and in the light of the results of a previous risk perception survey with regional decision makers of the north-eastern Moroccan provinces Nador and Berkane, focusing local development risks resulting from climate change and the current tourism-based development pathway, existing water scarcity was identified as a serious regional problem which has not been adequately taken into consideration in the realigned development program. From this the following question inferred: if and how are water scarcity strategies addressed, integrated, implemented, and monitored in current development activities in north-eastern Morocco? To find answers a research study was conducted to analyse water-related sustainability criteria and their effectiveness. The aim of the present study is an iterative review concerning how sustainability is anchored in the national tourism strategy for north-eastern Morocco with a particular emphasis given to the consideration of the critical water situation. Is *sustainability* a guiding principle for tourism development or only a catchword for marketing purposes?

The paper will begin with the clarification of the term *sustainability* in the tourism context. This will be followed by an inventory of scientific knowledge relating to regional key problems related to the freshwater situation in north-eastern Morocco. In order to detect if and how sustainable tourism development is reflected in concrete implementation we analyse tourism-related development plans: the Plan AZUR and its follow-up VISION 2020 (Roudies, 2010, 2013), and PROSPECTIVE Maroc 2030: Tourisme 2030 - Quelles ambitions pour le Maroc.³

By a qualitative comparison we investigate if the current water situation and efforts to avoid problems are adequately addressed in the tourism development plans for the region.

The actual implementation of sector-specific sustainable water management measures and the setting of sustainability standards (e.g. compliance with sustained corporate management practices) are reviewed through a website evaluation of hotel companies in Saidaia. We use this as input for a qualitative SWOT analysis (Strengths-Weaknesses-Opportunities-Threats) to discuss water-related risks and opportunities of the tourism industry. The article concludes with recommendations for a sustainable tourism agenda with an emphasis on water-related efficiency improvements for Saidaia. Subsequently, recommendations for the tourism sector in two coastal provinces in north-eastern Morocco are derived, which could support the achievement of an eco-anthropocentric or sustainable development pathway.

2. Background and study area

In the context of the project "Adaptation aux Changements Climatiques au Maroc", ACCMA, 2007–2011) an (anonymous) survey among ca. 30 regional decision makers of the coastal provinces Nador and Berkane, region L'Oriental in north-eastern Morocco, in the year 2008 was conducted (number of returned filled-in questionnaires: 13). Questions addressed (a) the awareness and risk perception regarding potential regional climate change impacts (open question), and (b) the collection of opinions on potential constraints for regional development (open question). Existing "water scarcity" aggravated by climate change

was ranked highest as a limiting factor for development, concurring with structural problems like "bad governance", "corruption", and "conflicts between interest groups". In further discussions at a project workshop with decision-makers and stakeholders criticism was expressed with regard to the construction of a luxury tourism mega complex ('Saidaia Mediterranea' with an area of ca. 700 ha, hotel bed capacity: ca. 30,000) close to the coastal village of Saidaia (province Berkane, region l'Oriental) which was already ongoing. The area and in particular the coastal plain and its groundwater were known as being strongly affected in water quality and quantity caused by the current agricultural over-exploitation. The expected additional increase of tourism-related water requirements in the region was viewed critically. Doubts were expressed regarding the sufficient availability of water resources to enable this new approach to regional development, and the question was raised whether economic growth will materialize or if the newly established tourism industry will create more problems than it intends to solve.

In the official representations of the national tourism development agenda the sustainability aspect is strongly emphasized (Roudies, 2010, 2013; Royaume du Maroc, 2010; Prospective Maroc 2030 - Tourisme 2030: quelles ambitions pour le Maroc⁴). However despite a generally high awareness towards water problems and scientifically substantiated warnings made by academics including Falkenmark (1989); Rijsberman (2006); Gössling, Hansson, Horstmeier, and Saggel (2002) and concrete regional studies highlighting the critical regional water situation (Snoussi, Haida, & Imassi, 2002; Kadi, 2004; Doukkali, 2005; Hoekstra & Chapagain, 2007) binding sustainability criteria and the monitoring of compliance for water use had hardly been established prior to the construction of the huge tourism complex in Saidaia. This resource pragmatism, defined as an expectation of a constant availability of freshwater resources without the implementation of adequate compensation measures and effective water management, is in contrast to the regional resource reality (current over-abstraction of freshwater resources despite the transgression of critical limits and already frequently occurring water shortfalls) (Schyns & Hoekstra, 2014; Tekken & Kropp, 2012). The lack of political will to properly implement environmental laws and objectives despite a serious risk of water shortage is due to the economic importance of the tourism sector and the lack of compromise solutions. Environmental protection thus is often expressed in "ecological rhetoric, symbolic gestures and laissez-faire" only (Wöhlcke, 1991, 1993). In this context, we want to give suggestions for criteria that could support a sustainable form of tourism without compromising future water availability in the region, not only for tourism.

2.1. Sustainable tourism

Sustainable tourism is based on the concept of sustainable development which raised the need for a respectful, equitable, responsible and preserving interaction of humans and the environment. The publication of the concept "Limits to Growth" by the Club of Rome in 1972 resulted from an intense discourse regarding the conflict of resource use and good environmental quality under the paradigm of economic growth (Meadows, Meadows, Randers, & Behrens, 1992; Lee, 2011). Continued and expanded by the Brundtland Report (1987) the agreed definition of sustainable development was then based on the two concepts of *needs* (in particular the essential needs of the world's poor, to which overriding priority should be given) and *limitations* (the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs), taking into account the perpetual conflict between ecological conservation and economic development (WCED, 1987). Today, the terms *sustainable*

² The project "ACCMA-Adaptation to Climate Change in Morocco", runtime 2007–2011 was part of the program 'Adaptation aux Changements Climatiques en Afrique (ACCA)', financed by the International Development Research Centre Canada (IDRC) and the UK Department for International Development (DFID).

³ See URL: <http://www.hcp.ma/file/104423/> (Accessed 2 March 2015).

⁴ See webpage of Haut Commissariat au Plan du Maroc, URL: http://www.hcp.ma/downloads/Maroc-2030_t11885.html (Accessed 26 July 2015).

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