

# CLIMATE CHANGE AND ENVIRONMENT IN THE ARAB WORLD PROGRAM

## Sustainable Transport Series

August 2014

Robert Wittkuhn and  
Danyel Reiche

### Sustainable Transportation and Mega Sporting Events in Arab Countries – the Case of Qatar

#### Summary

As a motive for hosting mega sporting events, Qatar is highlighting their catalyst effect for planned infrastructure developments. Qatar plans on building intra-city, inter-city and inter-state road and railway networks for the FIFA 2022 initially, and further national use. The planned transportation construction could potentially be sustainable, but the social and political buildup of Qatar hinders such a development; especially when considering Qatar's fuel based energy mix that induces political debates and contradicts the concept of sustainability and clean energy.

#### Recommendations

- Correct and transparent reporting, which is missing from previous events in Qatar, is of great importance to be able to assess success and failure of the described development strategies
- Through incentives, people can be motivated to give up mobility and autonomy, to live more sustainably instead. Providing positive incentives characterizes the distributive societal contract of a rentier state society. However, also "negative" incentives should be exercised to achieve the most sustainable development. Examples of negative incentives could include:
  - » Introduction of car-free zones
  - » Reduction of parking space
  - » Higher taxation of undesired forms of traffic usage, such as road tolls, as well as higher taxation of fossil energy usage
  - » Tax incentives for the use of renewable energy
- Sustainable development concepts should include social approaches, for example education, that would start with raising awareness of concepts like the ecological footprint
- Accompanying Qatar's gas extraction with full use of Qatar's solar and wind power potential could prevent the lock-in effect of natural gas usage
  - » The development and production of technology and systems that are necessary for renewable energy usage,
  - » Large-scale solar test facility

The Climate Change and Environment in the Arab World Program aims to understand the climate change and environment policy process in the region and define the most appropriate policy recommendations by linking development in applied sciences on issues related to climate change and environment to social sciences.

Nadim Farajalla *Faculty Research Director*

Rana El Hajj *Program Coordinator*

Patricia Haydamous *Program Research Assistant*

Sustainable Transport - Policy Brief # 5

- There is an urgent need for the determination of the ecological footprint of natural gas usage (i.e. from its transport and from its burning) (WWF 2013, 6)
- Qatar should use its potential to become a leader in using CCS technology

## Problem Statement and Key Messages

The paper evaluates the sustainability and permanence of Qatar's transport strategies, which are being developed in connection to hosting mega-sporting events, especially the FIFA 2022. The assessment was done based on the clarification of the term *sustainability*, regarding transportation in particular, a differentiation between the short-term sustainability performance of a mega-sporting event and the long-term performance of a sustainable transport development concept, and on the identification of the indicators of sustainability.

The defined framework under which the assessment was done included the identification of the involved actors (besides the Qatari government) and their influence on the understanding of sustainability, as well as the determination of the boundaries of the observed phenomenon, enabling a comparison of different concepts as well as the compliance with the developed sustainability definition.

As part of this development, Qatar is leading the worldwide ecological and carbon footprint rankings.

## Background

Qatar has grown significantly over the last two decades and is expecting a continuation of this development. The Emirate has hardly any unemployment and the largest Gross Domestic Product per capita in the world; the main reasons for its wealth are revenues from its fossil fuels. It holds the highest natural gas reserves among the Gulf Cooperation Council (GCC) members and possesses the third-largest proven supply of natural gas in the world. As part of this development, Qatar is leading the worldwide ecological and carbon footprint rankings (General Secretariat for Development Planning 2009, 104, Cdiac.ornl.gov 2010).

The concepts for Qatar's transport sector developments deserve special attention as big parts of the planned infrastructure are being built from scratch (the new railway network will cover more than 500 kilometers of track (Qr.com.qa 2014a/b/c/d)) and are significantly changing the country's approach to various transport types (unique provision of railway and cycle path network (Arabianbusiness.com 2009, Ryan 2014)). Sustainable transportation is an important topic of the future, given the worldwide constant urbanization and the increasing share that transport represents of the global carbon footprint.

These developments and challenges must be seen against the background of Qatar being an authoritarian state, providing its citizens (225.000 out of a population of over two million) with subsidies for an exchange of citizenry's compliance to the rule of the royal family (Reiche 2010a, 2397). Qatar formulated an almost all-encompassing National Development Strategy until the year 2030 (General Secretariat for Development Planning, 2011), which includes a transport concept. Furthermore, Qatar is becoming an international hub for various mega-sporting events, raising the question for the motives behind it. Additionally, and potentially more significant, there are other motives such as its use as a domestic policy tool for developing a healthy society and, as a foreign policy tool, for building relations with as many countries and people in the world to gain soft power and for national security reasons (Reiche forthcoming).

## Research results

The aim of mega-sporting event bidders has become to host carbon-neutral, sustainable events; thus carbon offsetting is an essential tool for realizing this goal. In return, part of Qatar's development strategy regarding sustainability is motivated by the requirements of International Sport Governing Bodies (ISGB) on mega-sporting event hosts. The motives are represented by strategies in which environmental awareness is perceived as a necessary feature for being competitive when bidding on hosting mega-sporting events.

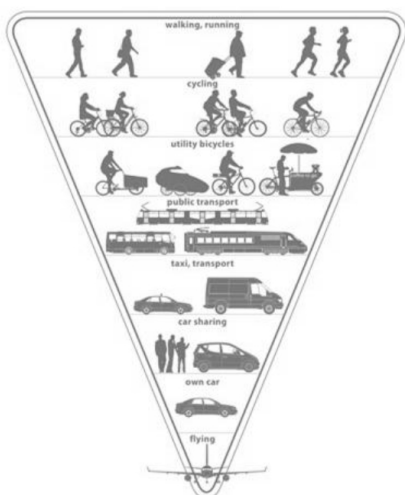
Qatar's public transport concept can be sustainable by 2022, pending the realization of the current infrastructure plans, as it is rail-based and will use electricity as an energy carrier. A possible reduction of mobility and individual freedom will be compensated by an optimization of transport concepts through a hierarchical combination of various types of public and non-motorized transport. The main features of attractiveness are the shortest possible travel time and a minimum distance between public transport stops and the travellers' individual points of departure and arrival.

Facilitated by its authoritarian form of government, Qatar created necessary administrative capacities to make its national development efficient and possibly sustainable, as shown by the complexity and inclusiveness of the Qatar National Development Strategy 2030 and its Transport Master Plan for Qatar (PTV AG 2007a/b/c).

The Qatari government considers diversification as the primary means by which it will be able to sustainably develop its economy. The transport sector can contribute to that as shown by the promotion of various kinds of natural gas products, such as gas-to-liquid (GTL) products for vehicles and planes (Marhaba.com.qa 2012, Qatarairways.com undated).

As a consequence, investments in solar technology, such as the Ras Laffan factory providing polysilicium for the solar panel production (Milz 2014, 70-1) and the large-scale solar test facility operated by GreenGulf and Chevron Qatar (James 2013), might contribute to the development of a mobility sector based on electricity.

Figure 1. Traffic pyramid. \*Source: Bicycle innovation lab (2012).



The Qatari government considers diversification as the primary means by which it will be able to sustainably develop its economy.

**The Issam Fares Institute for Public Policy and International Affairs (IFI) at the American University of Beirut (AUB)**

was inaugurated in 2006 to harness the policy-related research of AUB's internationally respected faculty and other scholars, in order to contribute positively to Arab policy-making and international relations. IFI is a neutral, dynamic, civil, and open space that brings together people representing all viewpoints in society. It aims to: raise the quality of public policy-related debate and decision-making in the Arab World and abroad; enhance the Arab World's input into international affairs; and, enrich the quality of interaction among scholars, officials and civil society actors in the Middle East and abroad.

## Policy Options (and Evaluation of Existing Policies)

- The 2022 FIFA World Cup could be a sustainable mega sporting event due to its historically unique compactness (high geographic concentration of event locations) and because of Qatar's promoted sustainable development concepts (emphasis on rail-based public transport).
- Requirements on mega-sporting event infrastructure by ISGBs do not necessarily conform to the demands on long-term sustainability and permanence of concepts, but rather to short-term effectiveness.
- Despite the possibility of greenwashing, Qatar has the opportunity and probably the intent to host mega-sporting events with minimal carbon footprints, as the electricity-powered public transport will most likely be produced from natural gas.
- Combined tickets for event access and free public transport usage will be an effective incentive to promote and support the use of public transport during mega-sporting events.
- Sustainability is not only a technological and economic issue that can be achieved by providing the necessary infrastructure, but also a political matter, by giving positive and negative incentives (carrot and stick). Ideally, a combination of public and non-motorized transport with an incentive-based transport policy will make the former more attractive than travelling by car. However, due to Qatar's openness towards the creation of infrastructure overcapacity, possible leverage of incentive tools is reduced.
- Qatar's development strategies are potentially causing the feared lock-in effect, represented by a maximum extraction of natural gas. This would slow down the energy paradigm shift towards renewable energy sources, thereby dangerously hindering the necessary slow-down of global warming. At the same time, Qatar has the chance to become the provider of the transitional energy resources necessary for a global energy paradigm shift towards renewable energy usage.
- Qatar is investing in solar technology, although it remains to be seen whether the quality and quantity of these investments are sufficient enough to produce a meaningful contribution or if it is simply greenwashing.
- Public transport cannot make transportation accessible and affordable for the whole population of Qatar. Given that Qatar is often separated between blue and white collar workers and between locals and non-Qatari, sustainable public transport can be one way to bring people of different backgrounds together in one space and create a sense of community.
- The more complex and inclusive a development strategy is, the more uncertainties are linked to it due to interconnected construction schedules (the metro links the city center with the long-distance railway), the large scope of necessary investments, and the interdependence among the involved states.



**Issam Fares Institute for Public Policy and International Affairs**  
**American University of Beirut**

Issam Fares Institute Building  
PO Box 11–0236, Riad el Solh  
Beirut 1107 2020, Lebanon  
Tel: 961–1–350000, x 4150  
Fax: 961–1–737627  
e-mail: ifi@aub.edu.lb



**Website**  
[www.aub.edu.lb/ifi](http://www.aub.edu.lb/ifi)

**Youtube Channel**  
[www.youtube.com/AUBatLebanon](http://www.youtube.com/AUBatLebanon)

**Facebook:** aub.ifi

**Twitter:** @ifi\_aub