

Towards a sustainable future

by Fouad Hamdan

THE International Energy Agency has warned of a global crunch in the supply of oil in five years because economic growth is still linked to rising oil and gas consumption and because emerging economies like China and India are hungry for energy. In addition, population growth and ambitious plans for development in the Gulf have seen consumption skyrocket there too.

The Gulf's real estate sector aims to deliver about \$500 billion of developments over the next seven years. These new buildings will require an additional two million cubic metres of water per day and 75 million additional megawatt hours of energy a year, about double what the region consumes now.

Given its reliance on fossil fuels such as oil, gas and coal, the way the world economy is ticking along today is unsustainable. The result is an increase in emissions of climate-damaging carbon dioxide (CO₂). Moreover, the consequences of climate change are already having a global impact, creating more floods and droughts as well as environmental refugees.

Arab states can learn from Abu Dhabi. In early 2008, construction began on Masdar City, the world's first zero-carbon and zero-waste urban center. The city will house clean technology companies and a research and development institution run in cooperation with the Massachusetts Institute of Technology. Masdar City will have a photovoltaic power plant and a solar power plant, and some \$2 billion will be invested

in photovoltaic research in projects in Abu Dhabi and Germany.

Investing in solar power is the path to follow. Most Arab states have the potential not only to produce solar energy but to export it. From Morocco to Iraq, and from Syria to Yemen, the Middle East is blessed with large uninhabited areas that could produce more than enough solar energy. To help avert climate change, much less oil and gas should be consumed, thus enabling future generations to profit from their reserves.

So this should not be interpreted by oil-producing nations as an economic disaster in the waiting. On the contrary: it is a chance to guarantee themselves a better future. It is a solution that could stretch the lifespan of oil and gas reserves by lowering production while dramatically increasing the output of solar energy.

At present, humanity's ecological footprint is about a quarter larger than our planet is capable of regenerating. In other words, it takes roughly one year and three months for the Earth to regenerate what it used to generate in a single year. Global Footprint Network has calculated that Saudi Arabia and other oil-producing states in the Gulf are "overshooting" themselves. When humanity demands more than nature can supply, we move into what is known as "ecological overshoot". Examples of this include collapsing fisheries, climate change, the extinction of animal species, deforestation and the loss of groundwater.

Take the planned expansion in Saudi Arabia. New roads, power plants and cities could last 20 or even 50 years.

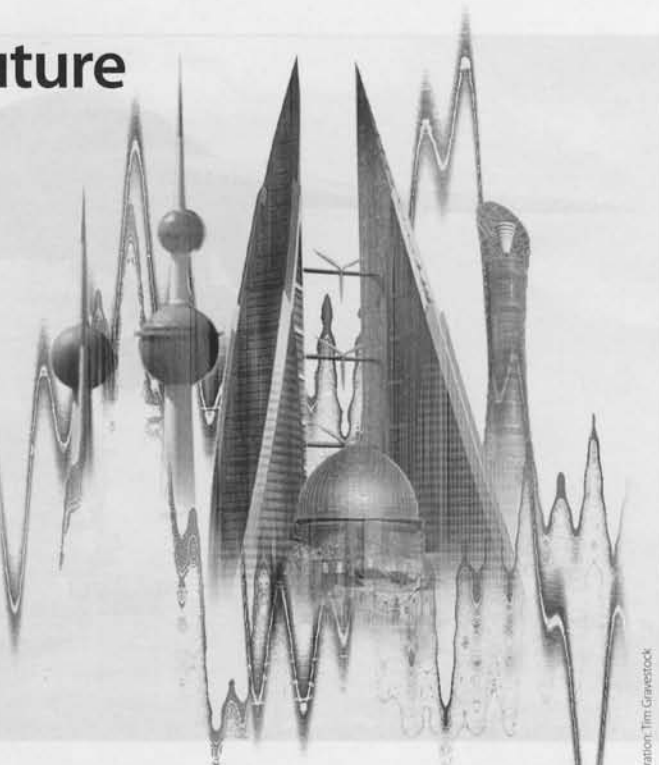


Illustration: Tim Gravestock

Such decisions determine for decades to come the level of consumption of oil, gas or water. Consuming energy at the rate they have will inevitably drive countries like Saudi Arabia into an ecological and economic dead end. Officials in the Gulf should ask themselves, when deciding on each and every development, whether they are creating traps or generating opportunities.

If Gulf nations want to take the sustainable path, they need to calculate their ecological footprint. No nation can develop sustainable policies without doing so. The footprint is a tool that measures how much land and water – in terms of area – a human population requires in order to produce the resources it consumes and to absorb its waste using current technology. By measuring the footprint of a nation, authorities can assess a country's "overshoot" and then manage ecological assets in a sustainable way.

All nations rely on gross domestic product (GDP) to

measure their progress, wealth and well-being. But to do so effectively, the ecological footprint needs to be considered in parallel with GDP, a) because it is more inclusive than GDP and b) because it incorporates social and environmental issues.

The way Arab nations shape and build their cities will make or break their future. Can Arab states develop and at the same time allow their citizens to fulfil one of their basic human rights: to live within the means of our planet without destroying its foundations for future generations? As an economic and political heavyweight, Saudi Arabia could lead the Arab region into a sustainable future. ■

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