



Cities as Forces for good

# Insight



## Growing Blue to Grow Rainbow

October 2012



**Copyright**

Cities as Forces for Good Network (CFG)

October 2012

[www.cfgnet.org](http://www.cfgnet.org)

**Author**

**M Bruce Beck** - Professor and Eminent Scholar at the University of Georgia, Director and Founder of the International Network on Cities as Forces for Good (CFG) in the Environment, and Chair, Management Board, Sustainability Group, International Water Association (IWA).

# GROWING BLUE TO GROW RAINBOW

["Blue Is The New Green"](#) argues Laurent Auguste in his blog of 5 July, 2012. Can we go yet further, Growing Blue as the fastest and most effective path to Growing Rainbow?

## FOCUS ON BLUE — FROM THE PERSPECTIVE OF THE WORLD ECONOMIC FORUM

For more than two decades there has been a concerted effort to propel water to the forefront of the global political agenda. If water is the central thread of life, argues a recent book from the World Economic Forum (WEF), then security in Man's access to water is likewise security in Man's access to food and energy, not least under the prospect of climate change. Thus derives the title of the book: ["\*Water Security: the Water-Food-Energy-Climate Security Nexus\*"](#). The essential thrusts of its argument are twofold. First, water is *primus inter pares* amongst the flows of materials and energy in the complex webs of the Man-Environment relationship. Second, the book is the culmination of an integrated response to the question: How does this life-sustaining thread of water pass through agriculture, industry, energy, trade, and climate, thus to reach the personal and local spaces of each and every one of us — in terms of water to drink and water for food, energy, lifestyle, and so on?

The nub of the water security challenge is this: in 2030 a 40% gap between the global demand and supply of water is forecast. This is according to work carried out by the [Water Resources Group](#) of McKinsey and Company on behalf of WEF's [Water Initiative](#). Increases in water supply under a business-as-usual (BaU) scenario, i.e., one that merely extrapolates past trends, will be very modest. So too will be BaU increases in the efficiency (or productivity) of water use as it flows through the system of agriculture, industry, and trade, hence to reach people. The threatening insecurity of a sizeable gap is forecast to remain.

## SCREW BUSINESS AS USUAL

The Forum's book devotes one of its two closing chapters to what it calls "New Economic Frameworks for Decision-Making" (Chapter 10), which frameworks are intended to address the key question of what technical options for supply and water productivity exist to close the "water gap"? Significantly, in commenting on a case study in responding to this question (for India), the book observes:

This [technical] analysis does not take into account implementation and institutional barriers, or the impact on labor markets, GDP, or other economic metrics.

Given that the global “water crisis” has long and widely been perceived as a crisis of governance, it is unsurprising that Chapter 10 should be followed by a final Chapter 11, entitled “Innovative Partnerships”. These are to be of the form of Public-Private-Community Partnerships (PPCPs). And they are strongly redolent of those advocated by Sir Richard Branson in his recently published book [Screw Business as Usual](#).

## SOMEWHERE ... OVER THE RAINBOW

We all try to grab the headlines. Non-water specialists do their bit for their focal interests. For some, the 21st Century will be a “[Nitrogen Economy](#)”. What would that be? GrowingYellow? For others it will be the Century in which “[Peak Phosphorus](#)” will render “Peak Oil” a mere bump in the global economic super-highway. GrowingRed, perhaps? And this is without even thinking of a suitable color for growing towards our low-carbon futures.

Cities are the engines of the global economy. They are nodes of concentrated, intensively manipulated, and deeply intertwined global flows of resources — red, yellow, green, blue — all required to sustain the social, economic and industrial metabolism of the city. Flows of water *and* energy *and* carbon (C), nitrogen (N), *and* phosphorus (P) are all vital. GrowingRainbow, then.

## FROM GROWINGBLUE TO GROWINGRAINBOW

Too dominant a hue of blue may risk blinding us to an adequate and commensurate perception of the other colors of Man’s appropriation of global resource-energy flows. Blue, blue, everywhere, including even the recovery of but water from the wastewater on the downside of the city’s metabolism.

C, N, and P are also co-mobilized with the (largely virtual) water incorporated into the food we eat. What is their fate thereafter? For it is not sequestration in the standing stock of all we people on Earth. Nor should it be in the fate of these resources to become just the “waste” in wastewater and dogged forever thereafter as the great drain on the public purse of more and more comprehensive water pollution control.

We can conceive of technologies (innovations) that use less water in the city, hence consume less energy; recover for profit the N and P of (local) human metabolism, hence reduce the costly C and

energy footprints of first-manufacture, first-extraction, and (global) transport of fertilizers. We can even utilize these recovered N and P materials to remove C from the atmosphere in producing bio-fuels (from algae) — again for profit.

It would be a regretful missed opportunity were optimizing GrowingBlue to pessimize GrowingRainbow, which it very well might. In fact, should it better be GrowingYellow or GrowingRed that pips GrowingBlue to the post in kick-starting GrowingRainbow? Anglers and underwater ocean film crews make use of copper-tan polarizing lenses to reconstruct less blue images, all the better to see the radiant other colors of the rainbow. Bring them on! Put them on?